10100238

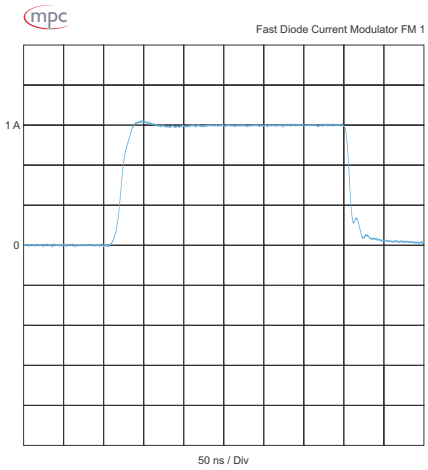
FM 1
Fast Diode Current Modulator

Features

Drives arbitrary current waveforms into laser diodes
CW, pulsed, modulated or mixed
Short rise and fall time
Frequency up to 30 MHz
Excellent dynamic performance
Two analog inputs
Small dimensions

Specification

Diode current	0 ... 1 A
Diode current pulsed	0 ... 2 A
Diode voltage	0 ... 4.5 V
Output power	10 W max
Power dissipation	30 W max allowed
Supply voltage	3 V ... 6 V
Supply current	1.5 A max
Rise time	18 ns
Fall time	18 ns
Frequency	30 MHz max
Inputs	
Diode current set point 1	0 ... 500 mV (50 Ohm input)
Diode current set point 2	0 ... 5 V (high impedance)
Enable	TTL
Reset	TTL
Outputs	
Diode current monitor	0 ... 50 mV (into 50 Ohm)
Temperature	0 ... 4 V for 0 ... 80°C
Ready	TTL
Excess Temperature	TTL



General specifications

Ambient temperature	0 ... +45 °C
Cooling	Required
Dimensions	95 x 61 x 20 mm
Weight	250 g
Ordering Code	10100238

Description

The fast diode current modulator FM 1 is a linear modulator which is well suited for driving arbitrary current waveforms into laser diodes.
Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 30 MHz and currents up to 1 A for CW and 2 A for pulsed waveforms.
The FM 1 is small and compact and it is designed for mounting it with low inductance directly at laser diodes or for integrating it in laser diode modules.
The FM 1 has two analogue inputs for the current setpoint, a high frequency input (50 Ohm input impedance) with a bandwidth of 30 MHz and a low frequency input with a bandwidth of 100 KHz. Both inputs cover the full current range.
Additionally there is a 10 turns potentiometer for generating a CW-current (bias current).
All set points are added and build the effective current set point.

For detailed information see operating manual or visit our website.

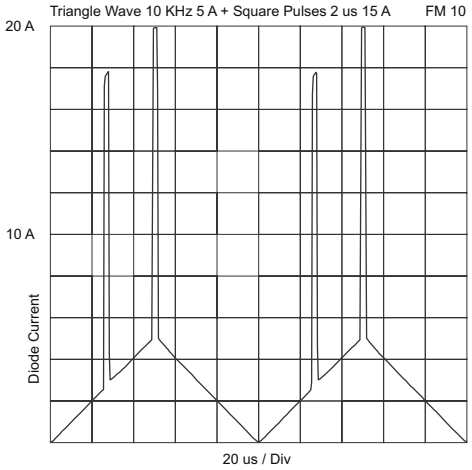
10100327

FM 10
Fast Diode Current Modulator

Features
Drives arbitrary current waveforms into laser diodes
CW, pulsed, modulated or mixed
Short rise and fall time
Frequency up to 20 MHz
Excellent dynamic performance
Two analog inputs
Small dimensions

Specification

Diode current	0 ... 10 A
Diode current pulsed	0 ... 20 A (short pulses)
Diode voltage	0 ... 4.5 V
Output power	45 W max
Power dissipation	30 W max allowed
Supply voltage	3 V ... 6 V
Supply current	10 A max
Rise time	16 ns
Fall time	9 ns
Frequency	20 MHz max
Inputs	
Diode current set point 1	0 ... 500 mV (50 Ohm input)
Diode current set point 2	0 ... 5 V (high impedance)
Enable	TTL
Reset	TTL
Outputs	
Diode current monitor	0 ... 50 mV (into 50 Ohm)
Temperature	0 ... 4 V for 0 ... 80°C
Ready	TTL
Excess Temperature	TTL



General specifications

Ambient temperature	0 ... +45 °C
Cooling	Required
Dimensions	95 x 61 x 20 mm
Weight	250 g
Ordering Code	10100327

Description
The fast diode current modulator FM 10 is a linear modulator which is well suited for driving arbitrary current waveforms into laser diodes.
Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 20 MHz and currents up to 10 A for CW and 20 A for pulsed waveforms.
The FM 10 is small and compact and it is designed for mounting it with low inductance directly at laser diodes or for integrating it in laser diode modules.
The FM 10 has two analogue inputs for the current setpoint, a high frequency input (50 Ohm input impedance) with a bandwidth of 20 MHz and a low frequency input with a bandwidth of 100 KHz. Both inputs cover the full current range.
Additionally there is a 10 turns potentiometer for generating a CW-current (bias current).
All set points are added and build the effective current set point.

For detailed information see operating manual or visit our website.

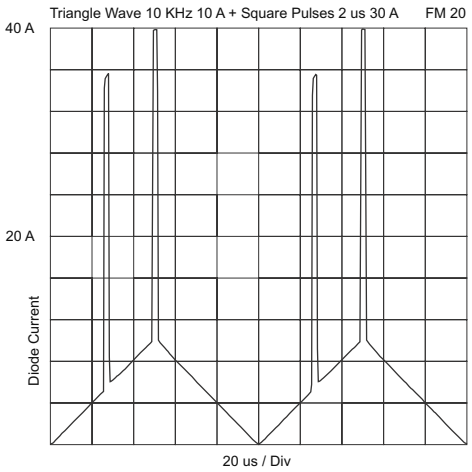
10100240

FM 20
Fast Diode Current Modulator

Features
Drives arbitrary current waveforms into laser diodes
CW, pulsed, modulated or mixed
Short rise and fall time
Frequency up to 20 MHz
Excellent dynamic performance
Two analog inputs
Small dimensions

Specification

Diode current	0 ... 20 A
Diode current pulsed	0 ... 40 A (short pulses)
Diode voltage	0 ... 4.5 V
Output power	90 W max
Power dissipation	30 W max allowed
Supply voltage	3 V ... 6 V
Supply current	20 A max
Rise time	16 ns
Fall time	9 ns
Frequency	20 MHz max
Inputs	
Diode current set point 1	0 ... 500 mV (50 Ohm input)
Diode current set point 2	0 ... 5 V (high impedance)
Enable	TTL
Reset	TTL
Outputs	
Diode current monitor	0 ... 50 mV (into 50 Ohm)
Temperature	0 ... 4 V for 0 ... 80°C
Ready	TTL
Excess Temperature	TTL



General specifications

Ambient temperature	0 ... +45 °C
Cooling	Required
Dimensions	95 x 61 x 20 mm
Weight	250 g
Ordering Code	10100240

Description
The fast diode current modulator FM 20 is a linear modulator which is well suited for driving arbitrary current waveforms into laser diodes.
Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 20 MHz and currents up to 20 A for CW and 40 A for pulsed waveforms.
The FM 20 is small and compact and it is designed for mounting it with low inductance directly at laser diodes or for integrating it in laser diode modules.
The FM 20 has two analogue inputs for the current setpoint, a high frequency input (50 Ohm input impedance) with a bandwidth of 20 MHz and a low frequency input with a bandwidth of 100 KHz. Both inputs cover the full current range.
Additionally there is a 10 turns potentiometer for generating a CW-current (bias current).
All set points are added and build the effective current set point.

For detailed information see operating manual or visit our website.

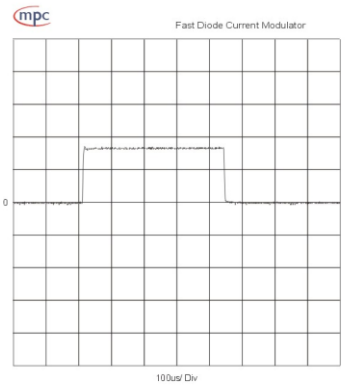
MESSTEC Power Converter GmbH

Data Sheet
Fast Modulator FM 40-06

Features
Drives arbitrary current waveforms into laser diodes
CW, pulsed, modulated or mixed curves
Very short rise and fall time
Excellent dynamic performance
Two analog inputs plus BIAS current
Small dimensions, low weight

Specification

Diode current CW	0 ... 40 A
Diode current pulsed	0 ... 80 A
Diode voltage	0 ... 4,5 V
Output power	180 W max
Power dissipation	60 W max allowed
Supply voltage	1 V ... 6 V
Supply current	40 A max
Rise time	16 ns
Fall time	9 ns
Frequency (set point 1)	20 MHz max
Frequency (set point 2)	100 kHz max



Inputs

Diode current set point 1	0 ... 500 mV (50 Ohm input)
Diode current set point 2	0 ... 5 V (high impedance)
Enable	TTL
Reset	TTL

Outputs

Diode current monitor	0 ... 50 mV (into 50 Ohm)
Temperature	0 ... 4 V for 0 ... 80°C
Ready	TTL
Excess temperature	TTL

General specifications

Ambient temperature	0 ... +45 °C
Cooling	Required
Dimensions	95 x 61 x 20 mm
Weight	240 g
Ordering Code	10100253

Description
The fast diode current modulator FM 40-6 is a linear modulator with improved properties for driving arbitrary current waveforms or fast pulses into laser diodes. Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 20 MHz and currents up to 40 A for CW and 80A for pulsed waveforms. The modulator is small and compact and it is designed for mounting with low inductance directly at laser diodes or for integrating in laser diode modules. It has two analogue inputs for the current set point: a high frequency input (50 Ohm input impedance) with a bandwidth of 20 MHz and a low frequency input with a bandwidth of 100 KHz. Additionally there is a 10 turns potentiometer for generating a CW-current (bias current). All set points are added and build the effective current set point.

Technical subjects to change without notice.

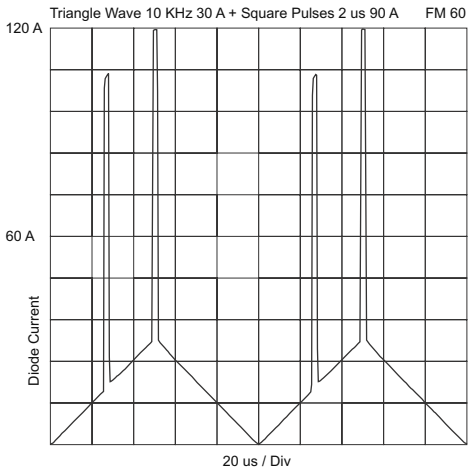
10100241

FM 60
Fast Diode Current Modulator

Features
Drives arbitrary current waveforms into laser diodes
CW, pulsed, modulated or mixed
Short rise and fall time
Frequency up to 20 MHz
Excellent dynamic performance
Two analog inputs
Small dimensions

Specification

Diode current	0 ... 60 A
Diode current pulsed	0 ... 120 A (short pulses)
Diode voltage	0 ... 4.5 V
Output power	270 W max
Power dissipation	90 W max allowed
Supply voltage	3 V ... 6 V
Supply current	60 A max
Rise time	16 ns
Fall time	9 ns
Frequency	20 MHz max
Inputs	
Diode current set point 1	0 ... 500 mV (50 Ohm input)
Diode current set point 2	0 ... 5 V (high impedance)
Enable	TTL
Reset	TTL
Outputs	
Diode current monitor	0 ... 50 mV (into 50 Ohm)
Temperature	0 ... 4 V for 0 ... 80°C
Ready	TTL
Excess Temperature	TTL



General specifications

Ambient temperature	0 ... +45 °C
Cooling	Required
Dimensions	95 x 61 x 20 mm
Weight	260 g
Ordering Code	10100241

Description
The fast diode current modulator FM 60 is a linear modulator which is well suited for driving arbitrary current waveforms into laser diodes.
Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 20 MHz and currents up to 60 A for CW and 120 A for pulsed waveforms.
The FM 60 is small and compact and it is designed for mounting it with low inductance directly at laser diodes or for integrating it in laser diode modules.
The FM 60 has two analogue inputs for the current setpoint, a high frequency input (50 Ohm input impedance) with a bandwidth of 20 MHz and a low frequency input with a bandwidth of 100 KHz. Both inputs cover the full current range.
Additionally there is a 10 turns potentiometer for generating a CW-current (bias current).
All set points are added and build the effective current set point.

For detailed information see operating manual or visit our website.

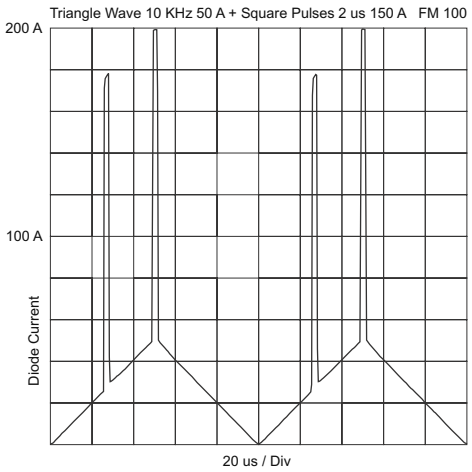
10100242

FM 100
Fast Diode Current Modulator

Features
Drives arbitrary current waveforms into laser diodes
CW, pulsed, modulated or mixed
Short rise and fall time
Frequency up to 20 MHz
Excellent dynamic performance
Two analog inputs
Small dimensions

Specification

Diode current	0 ... 100 A
Diode current pulsed	0 ... 200 A (short pulses)
Diode voltage	0 ... 4.5 V
Output power	450 W max
Power dissipation	150 W max allowed
Supply voltage	3 V ... 6 V
Supply current	100 A max
Rise time	16 ns
Fall time	9 ns
Frequency	20 MHz max
Inputs	
Diode current set point 1	0 ... 500 mV (50 Ohm input)
Diode current set point 2	0 ... 5 V (high impedance)
Enable	TTL
Reset	TTL
Outputs	
Diode current monitor	0 ... 50 mV (into 50 Ohm)
Temperature	0 ... 4 V for 0 ... 80°C
Ready	TTL
Excess Temperature	TTL



General specifications

Ambient temperature	0 ... +45 °C
Cooling	Required
Dimensions	95 x 61 x 20 mm
Weight	275 g
Ordering Code	10100242

Description
The fast diode current modulator FM 100 is a linear modulator which is well suited for driving arbitrary current waveforms into laser diodes.
Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 20 MHz and currents up to 100 A for CW and 200 A for pulsed waveforms.
The FM 100 is small and compact and it is designed for mounting it with low inductance directly at laser diodes or for integrating it in laser diode modules.
The FM 100 has two analogue inputs for the current setpoint, a high frequency input (50 Ohm input impedance) with a bandwidth of 20 MHz and a low frequency input with a bandwidth of 100 KHz. Both inputs cover the full current range.
Additionally there is a 10 turns potentiometer for generating a CW-current (bias current).
All set points are added and build the effective current set point.

For detailed information see operating manual or visit our website.

MESSTEC Power Converter GmbH

Data Sheet
Fast Modulator FM 1-25

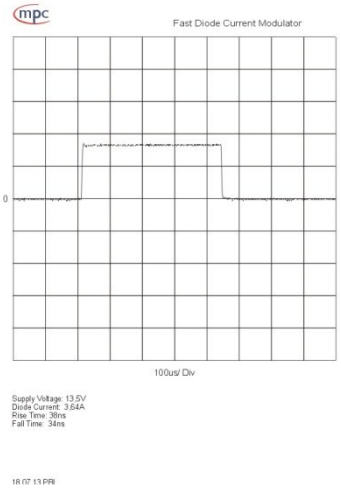
Features

Drives arbitrary current waveforms into laser diodes
CW, pulsed, modulated or mixed curves
Very short rise and fall time
Excellent dynamic performance
Two analog inputs plus BIAS current
Small dimensions, low weight

Specification

Diode current CW	0 ... 1 A
Diode current pulsed	0 ... 2 A
Diode voltage	0 ... 24 V
Output power	24 W max
Power dissipation	30 W max allowed
Supply voltage	1 V ... 24 V
Supply current	1 A max
Supply voltage*	3 V ... 6 V
Rise time	30 ns
Fall time	27 ns
Frequency (set point 1)	15 MHz max
Frequency (set point 2)	10 kHz max
Inputs	
Diode current set point 1	0 ... 500 mV (50 Ohm input)
Diode current set point 2	0 ... 5 V (high impedance)
Enable	TTL
Reset	TTL
Outputs	
Diode current monitor	0 ... 50 mV (into 50 Ohm)
Temperature	0 ... 4 V for 0 ... 80°C
Ready	TTL
Excess temperature	TTL
General specifications	
Ambient temperature	0 ... +45 °C
Cooling	Required
Dimensions	95 x 61 x 20 mm
Weight	240 g
Ordering Code	10100334

* for internal electronics



Description

The fast diode current modulator FM 1-25 is a linear modulator with improved properties for driving arbitrary current waveforms or fast pulses into laser diodes. Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 15 MHz and currents up to 1 A for CW and 2 A for pulsed waveforms. The modulator is small and compact and it is designed for mounting with low inductance directly at laser diodes or for integrating in laser diode modules. It has two analogue inputs for the current set point: a high frequency input (50 Ohm input impedance) with a bandwidth of 15 MHz and a low frequency input with a bandwidth of 100 KHz. Additionally there is a 10 turns potentiometer for generating a CW-current (bias current). All set points are added and build the effective current set point. Technical subjects to change without notice.

Warning!
Risk of exposure of hazardous laser radiation
in combination with laser light emitting devices!

MESSTEC Power Converter GmbH

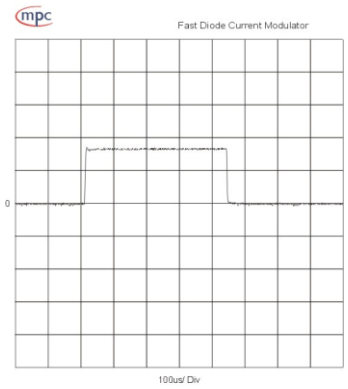
Data Sheet
Fast Modulator FM 10-25

Features

Drives arbitrary current waveforms into laser diodes
CW, pulsed, modulated or mixed curves
Very short rise and fall time
Excellent dynamic performance
Two analog inputs plus BIAS current
Small dimensions, low weight

Specification

Diode current CW	0 ... 10 A
Diode current pulsed	0 ... 20 A
Diode voltage	0 ... 24 V
Output power	240 W max
Power dissipation	30 W max allowed
Supply voltage	1 V ... 24 V
Supply current	10 A max
Supply voltage*	3 V ... 6 V
Rise time	16 ns
Fall time	9 ns
Frequency (set point 1)	20 MHz max
Frequency (set point 2)	100 kHz max



Inputs

Diode current set point 1	0 ... 500 mV (50 Ohm input)
Diode current set point 2	0 ... 5 V (high impedance)
Enable	TTL
Reset	TTL

Outputs

Diode current monitor	0 ... 50 mV (into 50 Ohm)
Temperature	0 ... 4 V for 0 ... 80°C
Ready	TTL
Excess temperature	TTL

General specifications

Ambient temperature	0 ... +45 °C
Cooling	Required
Dimensions	95 x 61 x 20 mm
Weight	240 g
Ordering Code	10100330

* for internal electronics

Description

The fast diode current modulator FM 10-25 is a linear modulator with improved properties for driving arbitrary current waveforms or fast pulses into laser diodes. Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 20 MHz and currents up to 10 A for CW and 20 A for pulsed waveforms. The modulator is small and compact and it is designed for mounting with low inductance directly at laser diodes or for integrating in laser diode modules. It has two analogue inputs for the current set point: a high frequency input (50 Ohm input impedance) with a bandwidth of 20 MHz and a low frequency input with a bandwidth of 100 KHz. Additionally there is a 10 turns potentiometer for generating a CW-current (bias current). All set points are added and build the effective current set point.

Technical subjects to change without notice.

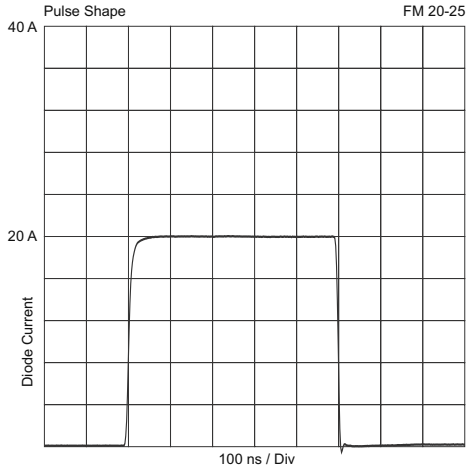
10100340

FM 20-25
High Voltage Fast Diode Current Modulator

Features
Drives arbitrary current waveforms into high voltage, high power laser diodes
CW, pulsed, modulated or mixed
Short rise and fall time
Frequency up to 20 MHz
Excellent dynamic performance
Two analog inputs
Small dimensions

Specification

Diode current	0 ... 20 A
Diode current pulsed	0 ... 40 A (short pulses)
Diode voltage	0 ... 24 V
Output power	480 W max
Power dissipation	30 W max allowed
Supply voltage	1 V ... 25 V
Supply current	20 A max
Supply voltage*	3 V ... 6 V
Rise time	16 ns
Fall time	9 ns
Frequency	20 MHz max
Inputs	
Diode current set point 1	0 ... 500 mV (50 Ohm input)
Diode current set point 2	0 ... 5 V (high impedance)
Enable	TTL
Reset	TTL
Outputs	
Diode current monitor	0 ... 50 mV (into 50 Ohm)
Temperature	0 ... 4 V for 0 ... 80°C
Ready	TTL
Excess Temperature	TTL



General specifications

Ambient temperature	0 ... +45 °C
Cooling	Required
Dimensions	95 x 61 x 20 mm
Weight	250 g
Ordering Code	10100340

* for internal electronics

Description
The fast diode current modulator FM 20-25 is a linear modulator for driving arbitrary current waveforms into high voltage, high power laser diodes.
Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 20 MHz and currents up to 20 A for CW and 40 A for pulsed waveforms.
The FM 20-25 is small and compact and it is designed for mounting it with low inductance directly at laser diodes or for integrating it in laser diode modules.
The FM 20-25 has two analogue inputs for the current setpoint, a high frequency input (50 Ohm input impedance) with a bandwidth of 20 MHz and a low frequency input with a bandwidth of 100 KHz. Both inputs cover the full current range.
Additionally there is a 10 turns potentiometer for generating a CW-current (bias current).
All set points are added and build the effective current set point.

For detailed information see operating manual or visit our website.

MESSTEC Power Converter GmbH

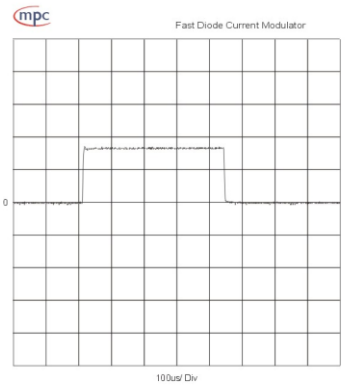
Data Sheet
Fast Modulator FM 40-25

Features

Drives arbitrary current waveforms into laser diodes
CW, pulsed, modulated or mixed curves
Very short rise and fall time
Excellent dynamic performance
Two analog inputs plus BIAS current
Small dimensions, low weight

Specification

Diode current CW	0 ... 40 A
Diode current pulsed	0 ... 80 A
Diode voltage	0 ... 23 V
Output power	920 W max
Power dissipation	60 W max allowed
Supply voltage	1 V ... 25 V
Supply current	40 A max
Rise time	16 ns
Fall time	9 ns
Frequency (set point 1)	20 MHz max
Frequency (set point 2)	100 kHz max



Inputs

Diode current set point 1	0 ... 500 mV (50 Ohm input)
Diode current set point 2	0 ... 5 V (high impedance)
Enable	TTL
Reset	TTL

Outputs

Diode current monitor	0 ... 50 mV (into 50 Ohm)
Temperature	0 ... 4 V for 0 ... 80°C
Ready	TTL
Excess temperature	TTL

General specifications

Ambient temperature	0 ... +45 °C
Cooling	Required
Dimensions	95 x 61 x 20 mm
Weight	240 g
Ordering Code	10100335

Description

The fast diode current modulator FM 40-25 is a linear modulator with improved properties for driving arbitrary current waveforms or fast pulses into laser diodes. Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 20 MHz and currents up to 40 A for CW and 80A for pulsed waveforms. The modulator is small and compact and it is designed for mounting with low inductance directly at laser diodes or for integrating in laser diode modules. It has two analogue inputs for the current set point: a high frequency input (50 Ohm input impedance) with a bandwidth of 20 MHz and a low frequency input with a bandwidth of 100 KHz. Additionally there is a 10 turns potentiometer for generating a CW-current (bias current). All set points are added and build the effective current set point.

Technical subjects to change without notice.

10100341

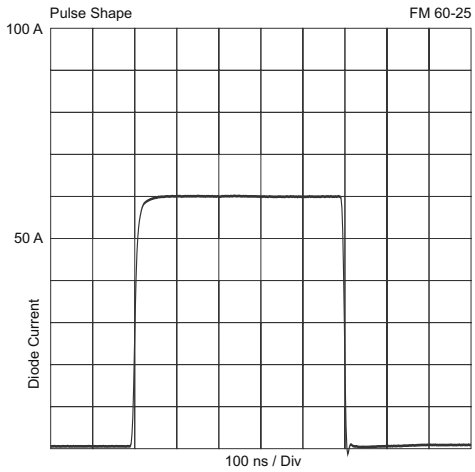
FM 60-25
High Voltage Fast Diode Current Modulator

Features

Drives arbitrary current waveforms into high voltage, high power laser diodes
CW, pulsed, modulated or mixed
Short rise and fall time
Frequency up to 20 MHz
Excellent dynamic performance
Two analog inputs
Small dimensions

Specification

Diode current	0 ... 60 A
Diode current pulsed	0 ... 120 A (short pulses)
Diode voltage	0 ... 24 V
Output power	1440 W max
Power dissipation	90 W max allowed
Supply voltage	1 V ... 25 V
Supply current	60 A max
Supply voltage*	3 V ... 6 V
Rise time	16 ns
Fall time	9 ns
Frequency	20 MHz max
Inputs	
Diode current set point 1	0 ... 500 mV (50 Ohm input)
Diode current set point 2	0 ... 5 V (high impedance)
Enable	TTL
Reset	TTL
Outputs	
Diode current monitor	0 ... 50 mV (into 50 Ohm)
Temperature	0 ... 4 V for 0 ... 80°C
Ready	TTL
Excess Temperature	TTL



General specifications

Ambient temperature	0 ... +45 °C
Cooling	Required
Dimensions	95 x 61 x 20 mm
Weight	260 g
Ordering Code	10100341

* for internal electronics

Description

The fast diode current modulator FM 60-25 is a linear modulator for driving arbitrary current waveforms into high voltage, high power laser diodes.
Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 20 MHz and currents up to 60 A for CW and 120 A for pulsed waveforms.
The FM 60-25 is small and compact and it is designed for mounting it with low inductance directly at laser diodes or for integrating it in laser diode modules.
The FM 60-25 has two analogue inputs for the current setpoint, a high frequency input (50 Ohm input impedance) with a bandwidth of 20 MHz and a low frequency input with a bandwidth of 100 KHz. Both inputs cover the full current range.
Additionally there is a 10 turns potentiometer for generating a CW-current (bias current).
All set points are added and build the effective current set point.

For detailed information see operating manual or visit our website.

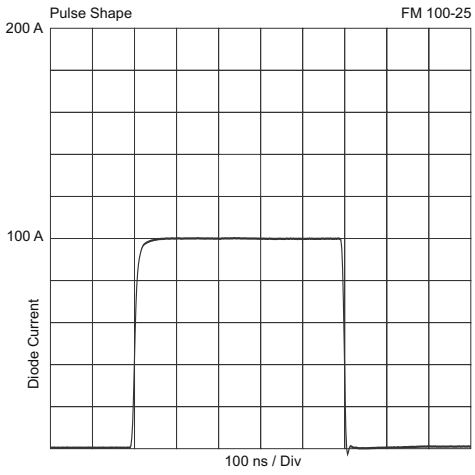
10100342

FM 100-25
High Voltage Fast Diode Current Modulator

Features
Drives arbitrary current waveforms into high voltage, high power laser diodes
CW, pulsed, modulated or mixed
Short rise and fall time
Frequency up to 20 MHz
Excellent dynamic performance
Two analog inputs
Small dimensions

Specification

Diode current	0 ... 100 A
Diode current pulsed	0 ... 200 A (short pulses)
Diode voltage	0 ... 24 V
Output power	2400 W max
Power dissipation	150 W max allowed
Supply voltage	1 V ... 25 V
Supply current	100 A max
Supply voltage*	3 V ... 6 V
Rise time	16 ns
Fall time	9 ns
Frequency	20 MHz max
Inputs	
Diode current set point 1	0 ... 500 mV (50 Ohm input)
Diode current set point 2	0 ... 5 V (high impedance)
Enable	TTL
Reset	TTL
Outputs	
Diode current monitor	0 ... 50 mV (into 50 Ohm)
Temperature	0 ... 4 V for 0 ... 80°C
Ready	TTL
Excess Temperature	TTL



General specifications

Ambient temperature	0 ... +45 °C
Cooling	Required
Dimensions	95 x 61 x 20 mm
Weight	275 g
Ordering Code	10100342

* for internal electronics

Description
The fast diode current modulator FM 100-25 is a linear modulator for driving arbitrary current waveforms into high voltage, high power laser diodes.
Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 20 MHz and currents up to 100 A for CW and 200 A for pulsed waveforms.
The FM 100-25 is small and compact and it is designed for mounting it with low inductance directly at laser diodes or for integrating it in laser diode modules.
The FM 100-25 has two analogue inputs for the current setpoint, a high frequency input (50 Ohm input impedance) with a bandwidth of 20 MHz and a low frequency input with a bandwidth of 100 KHz. Both inputs cover the full current range.
Additionally there is a 10 turns potentiometer for generating a CW-current (bias current).
All set points are added and build the effective current set point.

For detailed information see operating manual or visit our website.

MESSTEC Power Converter GmbH

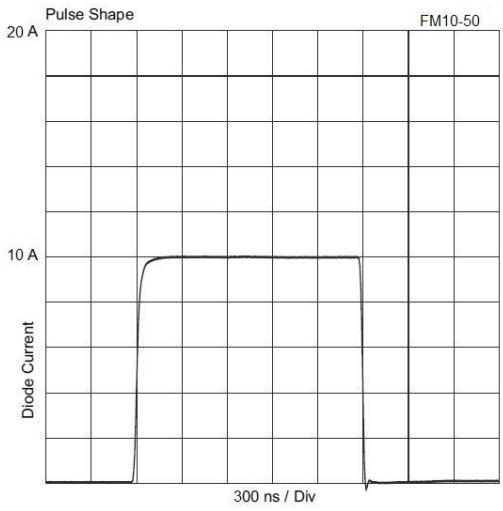
Data Sheet
Fast Modulator FM 10-50

Features

Drives arbitrary current waveforms into laser diodes
CW, pulsed, modulated or mixed curves
Very short rise and fall time
Excellent dynamic performance
Two analog inputs plus BIAS current
Small dimensions, low weight

Specification

Diode current CW	0 ... 10 A
Diode current short pulses	0 ... 20 A
Diode voltage	0 ... 49 V
Output power	490 W max
Power dissipation	30 W max allowed
Supply voltage	1 V ... 50 V
Supply current	10 A max
Supply voltage*	3 V ... 6 V
Rise time	50 ns
Fall time	50 ns
Frequency (set point 1)	10 MHz max
Frequency (set point 2)	100 kHz max



Inputs

Diode current set point 1	0 ... 500 mV (50 Ohm input)
Diode current set point 2	0 ... 5 V (high impedance)
Enable	TTL
Reset	TTL

Outputs

Diode current monitor	0 ... 50 mV (into 50 Ohm)
Temperature	0 ... 4 V for 0 ... 80°C
Ready	TTL
Excess temperature	TTL

General specifications

Ambient temperature	-5°C ... +65 °C
Cooling	Required
Dimensions	95 x 61 x 20 mm
Weight	240 g
Ordering Code	10100312

* for internal electronics

Description

The fast diode current modulator FM 10-50 is a linear modulator with improved properties for driving arbitrary current waveforms or fast pulses into laser diodes. Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 10 MHz and currents up to 10 A for CW and 20 A for pulsed waveforms. The modulator is small and compact and it is designed for mounting with low inductance directly at laser diodes or for integrating in laser diode modules. It has two analogue inputs for the current set point: high frequency input (50 Ohm input impedance) with a bandwidth of 10 MHz and a low frequency input with a bandwidth of 100 KHz. Additionally there is a 10 turns potentiometer for generating a CW-current (bias current). All set points are added and build the effective current set point. Technical subjects to change without notice.

Warning!
Risk of exposure of hazardous laser radiation
in combination with laser light emitting devices!

MESSTEC Power Converter GmbH

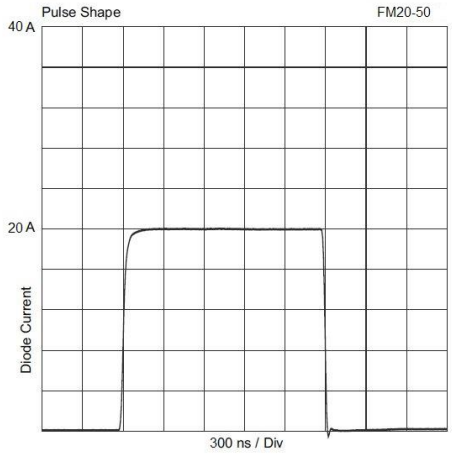
Data Sheet
Fast Modulator FM 20-50

Features

Drives arbitrary current waveforms into laser diodes
CW, pulsed, modulated or mixed curves
Very short rise and fall time
Excellent dynamic performance
Two analog inputs plus BIAS current
Small dimensions, low weight

Specification

Diode current CW	0 ... 20 A
Diode current short pulses	0 ... 40 A
Diode voltage	0 ... 49 V
Output power	980 W max
Power dissipation	90 W max allowed
Supply voltage	1 V ... 50 V
Supply current	20 A max
Supply voltage*	3 V ... 6 V
Rise time	50 ns
Fall time	50 ns
Frequency (set point 1)	10 MHz max
Frequency (set point 2)	100 kHz max



Inputs

Diode current set point 1	0 ... 500 mV (50 Ohm input)
Diode current set point 2	0 ... 5 V (high impedance)
Enable	TTL
Reset	TTL

Outputs

Diode current monitor	0 ... 50 mV (into 50 Ohm)
Temperature	0 ... 4 V for 0 ... 80°C
Ready	TTL
Excess temperature	TTL

General specifications

Ambient temperature	-5°C ... +65 °C
Cooling	Required
Dimensions	95 x 61 x 20 mm
Weight	240 g
Ordering Code	10100314

* for internal electronics

Description

The fast diode current modulator FM 20-50 is a linear modulator with improved properties for driving arbitrary current waveforms or fast pulses into laser diodes. Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 10 MHz and currents up to 20 A for CW and 40 A for pulsed waveforms. The modulator is small and compact and it is designed for mounting with low inductance directly at laser diodes or for integrating in laser diode modules. It has two analogue inputs for the current set point: high frequency input (50 Ohm input impedance) with a bandwidth of 10 MHz and a low frequency input with a bandwidth of 100 KHz. Additionally there is a 10 turns potentiometer for generating a CW-current (bias current). All set points are added and build the effective current set point. Technical subjects to change without notice.

Warning!
Risk of exposure of hazardous laser radiation
in combination with laser light emitting devices!

MESSTEC Power Converter GmbH

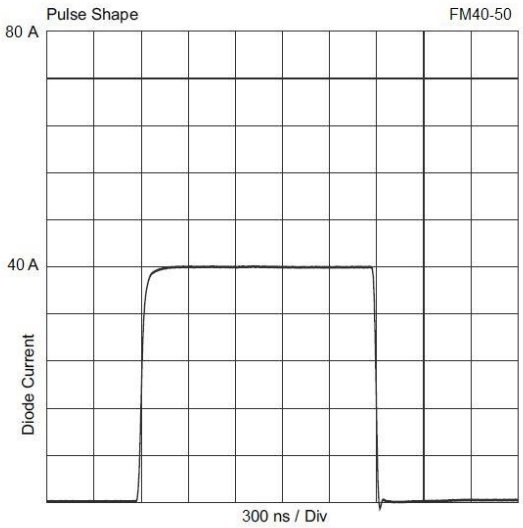
Data Sheet
Fast Modulator FM 40-50

Features

Drives arbitrary current waveforms into laser diodes
CW, pulsed, modulated or mixed curves
Very short rise and fall time
Excellent dynamic performance
Two analog inputs plus BIAS current
Small dimensions, low weight

Specification

Diode current CW	0 ... 40 A
Diode current short pulses	0 ... 80 A
Diode voltage	0 ... 49 V
Output power	1960 W max
Power dissipation	60 W max allowed
Supply voltage	1 V ... 50 V
Supply current	40 A max
Supply voltage*	3 V ... 6 V
Rise time	50 ns
Fall time	50 ns
Frequency (set point 1)	10 MHz max
Frequency (set point 2)	100 kHz max



Inputs

Diode current set point 1	0 ... 500 mV (50 Ohm input)
Diode current set point 2	0 ... 5 V (high impedance)
Enable	TTL
Reset	TTL

Outputs

Diode current monitor	0 ... 50 mV (into 50 Ohm)
Temperature	0 ... 4 V for 0 ... 80°C
Ready	TTL
Excess temperature	TTL

General specifications

Ambient temperature	-5°C ... +65 °C
Cooling	Required
Dimensions	95 x 61 x 20 mm
Weight	240 g
Ordering Code	10100316

* for internal electronics

Description

The fast diode current modulator FM 40-50 is a linear modulator with improved properties for driving arbitrary current waveforms or fast pulses into laser diodes. Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 10 MHz and currents up to 40 A for CW and 80 A for pulsed waveforms. The modulator is small and compact and it is designed for mounting with low inductance directly at laser diodes or for integrating in laser diode modules. It has two analogue inputs for the current set point: high frequency input (50 Ohm input impedance) with a bandwidth of 10 MHz and a low frequency input with a bandwidth of 100 KHz. Additionally there is a 10 turns potentiometer for generating a CW-current (bias current). All set points are added and build the effective current set point. Technical subjects to change without notice.

Warning!
Risk of exposure of hazardous laser radiation
in combination with laser light emitting devices!

MESSTEC Power Converter GmbH

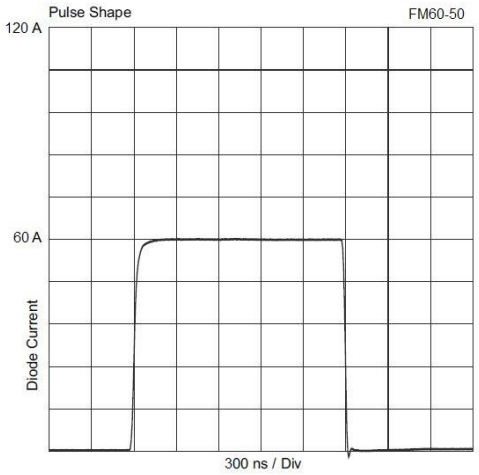
Data Sheet
Fast Modulator FM 60-50

Features

Drives arbitrary current waveforms into laser diodes
CW, pulsed, modulated or mixed curves
Very short rise and fall time
Excellent dynamic performance
Two analog inputs plus BIAS current
Small dimensions, low weight

Specification

Diode current CW	0 ... 60 A
Diode current short pulses	0 ... 120 A
Diode voltage	0 ... 49 V
Output power	2940 W max
Power dissipation	90 W max allowed
Supply voltage	1 V ... 50 V
Supply current	60 A max
Supply voltage*	3 V ... 6 V
Rise time	50 ns
Fall time	50 ns
Frequency (set point 1)	10 MHz max
Frequency (set point 2)	100 kHz max



Inputs

Diode current set point 1	0 ... 500 mV (50 Ohm input)
Diode current set point 2	0 ... 5 V (high impedance)
Enable	TTL
Reset	TTL

Outputs

Diode current monitor	0 ... 50 mV (into 50 Ohm)
Temperature	0 ... 4 V for 0 ... 80°C
Ready	TTL
Excess temperature	TTL

General specifications

Ambient temperature	-5°C ... +65 °C
Cooling	Required
Dimensions	95 x 61 x 20 mm
Weight	240 g
Ordering Code	10100317

* for internal electronics

Description

The fast diode current modulator FM 60-50 is a linear modulator with improved properties for driving arbitrary current waveforms or fast pulses into laser diodes. Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 10 MHz and currents up to 60 A for CW and 120 A for pulsed waveforms. The modulator is small and compact and it is designed for mounting with low inductance directly at laser diodes or for integrating in laser diode modules. It has two analogue inputs for the current set point: high frequency input (50 Ohm input impedance) with a bandwidth of 10 MHz and a low frequency input with a bandwidth of 100 KHz. Additionally there is a 10 turns potentiometer for generating a CW-current (bias current). All set points are added and build the effective current set point. Technical subjects to change without notice.

Warning!
Risk of exposure of hazardous laser radiation
in combination with laser light emitting devices!

MESSTEC Power Converter GmbH

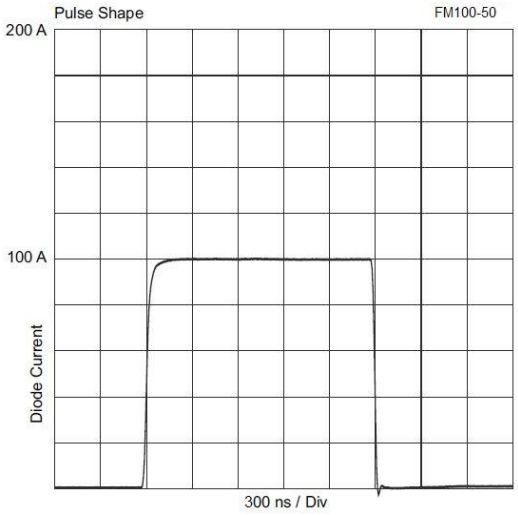
Data Sheet
Fast Modulator FM 100-50

Features

Drives arbitrary current waveforms into laser diodes
CW, pulsed, modulated or mixed curves
Very short rise and fall time
Excellent dynamic performance
Two analog inputs plus BIAS current
Small dimensions, low weight

Specification

Diode current CW	0 ... 100 A
Diode current short pulses	0 ... 200 A
Diode voltage	0 ... 49 V
Output power	4900 W max
Power dissipation	150 W max allowed
Supply voltage	1 V ... 50 V
Supply current	100 A max
Supply voltage*	3 V ... 6 V
Rise time	50 ns
Fall time	50 ns
Frequency (set point 1)	10 MHz max
Frequency (set point 2)	100 kHz max



Inputs

Diode current set point 1	0 ... 500 mV (50 Ohm input)
Diode current set point 2	0 ... 5 V (high impedance)
Enable	TTL
Reset	TTL

Outputs

Diode current monitor	0 ... 50 mV (into 50 Ohm)
Temperature	0 ... 4 V for 0 ... 80°C
Ready	TTL
Excess temperature	TTL

General specifications

Ambient temperature	-5°C ... +65 °C
Cooling	Required
Dimensions	95 x 61 x 20 mm
Weight	240 g
Ordering Code	10100318

* for internal electronics

Description

The fast diode current modulator FM 100-50 is a linear modulator with improved properties for driving arbitrary current waveforms or fast pulses into laser diodes. Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 4 MHz and currents up to 100 A for CW and 200 A for pulsed waveforms. The modulator is small and compact and it is designed for mounting with low inductance directly at laser diodes or for integrating in laser diode modules. It has two analogue inputs for the current set point: a high frequency input (50 Ohm input impedance) with a bandwidth of 4 MHz and a low frequency input with a bandwidth of 100 KHz. Additionally there is a 10 turns potentiometer for generating a CW-current (bias current). All set points are added and build the effective current set point. Technical subjects to change without notice.

Warning!
Risk of exposure of hazardous laser radiation
in combination with laser light emitting devices!

10100440

MSM 20-06
Medium Speed Current Modulator

Features
Drives arbitrary current waveforms into laser diodes
CW, pulsed, modulated or mixed
Excellent dynamic performance
Two analog inputs
Small dimensions

Specification

Diode current	0 ... 20 A
Diode voltage	0 ... 5 V
Output power	100 W max
Power dissipation	30 W max allowed
Supply voltage	3 V ... 6 V
Supply current	21 A max
Rise time	9 µs
Fall time	11 µs
Bandwidth	50 KHz
Inputs	
Diode current set point 1	0 ... 500 mV (50 Ohm input)
Diode current set point 2	0 ... 5 V (high impedance input)
Enable	TTL
Reset	TTL
Outputs	
Diode current monitor	0 ... 50 mV (into 50 Ohm)
Temperature	0 ... 4 V for 0 ... 80°C
Ready	TTL
Excess Temperature	TTL

General specifications

Ambient temperature	0 ... +45 °C
Cooling	Required
Dimensions	95 x 61 x 20 mm
Weight	275 g
Ordering Code	10100440

Description
The medium speed current modulator MSM 20-06 is a linear modulator which is well suited for driving arbitrary current waveforms into laser diodes.
Current waveforms can be CW, pulsed, modulated or mixed with a bandwidth of up to 50 KHz and currents up to 20 A.
The MSM 20-06 is small and compact and it is designed for mounting it with low inductance directly at laser diodes or for integrating it in laser diode modules.
The MSM 20-06 has two analogue inputs for the current setpoint, a 50 Ohm input with a bandwidth of 50 KHz and a high impedance input with a bandwidth of 50 KHz. Both inputs cover the full current range.
Additionally there is a 10 turns potentiometer for generating a CW-current (bias current).
All set points are added and build the effective current set point.

For detailed information see operating manual or visit our website.

10100441

MSM 40-06
Medium Speed Current Modulator

Features
Drives arbitrary current waveforms into laser diodes
CW, pulsed, modulated or mixed
Excellent dynamic performance
Two analog inputs
Small dimensions

Specification

Diode current	0 ... 40 A
Diode voltage	0 ... 5 V
Output power	200 W max
Power dissipation	30 W max allowed
Supply voltage	3 V ... 6 V
Supply current	41 A max
Rise time	6 µs
Fall time	10 µs
Bandwidth	50 KHz
Inputs	
Diode current set point 1	0 ... 500 mV (50 Ohm input)
Diode current set point 2	0 ... 5 V (high impedance input)
Enable	TTL
Reset	TTL
Outputs	
Diode current monitor	0 ... 50 mV (into 50 Ohm)
Temperature	0 ... 4 V for 0 ... 80°C
Ready	TTL
Excess Temperature	TTL

General specifications

Ambient temperature	0 ... +45 °C
Cooling	Required
Dimensions	95 x 61 x 20 mm
Weight	275 g
Ordering Code	10100441

Description
The medium speed current modulator MSM 40-06 is a linear modulator which is well suited for driving arbitrary current waveforms into laser diodes.
Current waveforms can be CW, pulsed, modulated or mixed with a bandwidth of up to 50 KHz and currents up to 40 A.
The MSM 40-06 is small and compact and it is designed for mounting it with low inductance directly at laser diodes or for integrating it in laser diode modules.
The MSM 40-06 has two analogue inputs for the current setpoint, a 50 Ohm input with a bandwidth of 50 KHz and a high impedance input with a bandwidth of 50 KHz. Both inputs cover the full current range.
Additionally there is a 10 turns potentiometer for generating a CW-current (bias current).
All set points are added and build the effective current set point.

For detailed information see operating manual or visit our website.

10100442

MSM 60-06
Medium Speed Current Modulator

Features
Drives arbitrary current waveforms into laser diodes
CW, pulsed, modulated or mixed
Excellent dynamic performance
Two analog inputs
Small dimensions

Specification

Diode current	0 ... 60 A
Diode voltage	0 ... 5 V
Output power	300 W max
Power dissipation	90 W max allowed
Supply voltage	3 V ... 6 V
Supply current	61 A max
Rise time	3.5 µs
Fall time	4.8 µs
Bandwidth	50 KHz
Inputs	
Diode current set point 1	0 ... 500 mV (50 Ohm input)
Diode current set point 2	0 ... 5 V (high impedance input)
Enable	TTL
Reset	TTL
Outputs	
Diode current monitor	0 ... 50 mV (into 50 Ohm)
Temperature	0 ... 4 V for 0 ... 80°C
Ready	TTL
Excess Temperature	TTL

General specifications

Ambient temperature	0 ... +45 °C
Cooling	Required
Dimensions	95 x 61 x 20 mm
Weight	275 g
Ordering Code	10100442

Description
The medium speed current modulator MSM 60-06 is a linear modulator which is well suited for driving arbitrary current waveforms into laser diodes.
Current waveforms can be CW, pulsed, modulated or mixed with a bandwidth of up to 50 KHz and currents up to 60 A.
The MSM 60-06 is small and compact and it is designed for mounting it with low inductance directly at laser diodes or for integrating it in laser diode modules.
The MSM 60-06 has two analogue inputs for the current setpoint, a 50 Ohm input with a bandwidth of 50 KHz and a high impedance input with a bandwidth of 50 KHz. Both inputs cover the full current range.
Additionally there is a 10 turns potentiometer for generating a CW-current (bias current).
All set points are added and build the effective current set point.

For detailed information see operating manual or visit our website.

10100444

MSM 100-06
Medium Speed Current Modulator

Features
Drives arbitrary current waveforms into laser diodes
CW, pulsed, modulated or mixed
Excellent dynamic performance
Two analog inputs
Small dimensions

Specification

Diode current	0 ... 100 A
Diode voltage	0 ... 5 V
Output power	500 W max
Power dissipation	150 W max allowed
Supply voltage	3 V ... 6 V
Supply current	101 A max
Rise time	9 µs
Fall time	11. µs
Bandwidth	50 KHz
Inputs	
Diode current set point 1	0 ... 500 mV (50 Ohm input)
Diode current set point 2	0 ... 5 V (high impedance input)
Enable	TTL
Reset	TTL
Outputs	
Diode current monitor	0 ... 50 mV (into 50 Ohm)
Temperature	0 ... 4 V for 0 ... 80°C
Ready	TTL
Excess Temperature	TTL

General specifications

Ambient temperature	0 ... +45 °C
Cooling	Required
Dimensions	95 x 61 x 20 mm
Weight	275 g
Ordering Code	10100444

Description
The medium speed current modulator MSM 100-06 is a linear modulator which is well suited for driving arbitrary current waveforms into laser diodes.
Current waveforms can be CW, pulsed, modulated or mixed with a bandwidth of up to 50 KHz and currents up to 100 A.
The MSM 100-06 is small and compact and it is designed for mounting it with low inductance directly at laser diodes or for integrating it in laser diode modules.
The MSM 100-06 has two analogue inputs for the current setpoint, a 50 Ohm input with a bandwidth of 50 KHz and a high impedance input with a bandwidth of 50 KHz. Both inputs cover the full current range.
Additionally there is a 10 turns potentiometer for generating a CW-current (bias current).
All set points are added and build the effective current set point.

For detailed information see operating manual or visit our website.

10100450

MSM 20-25
Medium Speed Current Modulator

Features
Drives arbitrary current waveforms into hig voltage laser diodes
CW, pulsed, modulated or mixed
Excellent dynamic performance
Two analog inputs
Small dimensions

Specification

Diode current	0 ... 20 A
Diode voltage	0 ... 24 V
Output power	480 W max
Power dissipation	30 W max allowed
Supply voltage	1 V ... 25 V
Supply current	21 A max
Supply voltage*	3 V ... 6 V
Rise time	9 µs
Fall time	11. µs
Bandwidth	50 KHz
Inputs	
Diode current set point 1	0 ... 500 mV (50 Ohm input)
Diode current set point 2	0 ... 5 V (high impedance input)
Enable	TTL
Reset	TTL
Outputs	
Diode current monitor	0 ... 50 mV (into 50 Ohm)
Temperature	0 ... 4 V for 0 ... 80°C
Ready	TTL
Excess Temperature	TTL

General specifications

Ambient temperature	0 ... +45 °C
Cooling	Required
Dimensions	95 x 61 x 20 mm
Weight	275 g
Ordering Code	10100450

* for internal electronics

Description
The medium speed current modulator MSM 20-25 is a linear modulator which is well suited for driving arbitrary current waveforms into laser diodes.
Current waveforms can be CW, pulsed, modulated or mixed with a bandwidth of up to 50 KHz and currents up to 20 A.
The MSM 20-25 is small and compact and it is designed for mounting it with low inductance directly at laser diodes or for integrating it in laser diode modules.
The MSM 20-25 has two analogue inputs for the current setpoint, a 50 Ohm input with a bandwidth of 50 KHz and a high impedance input with a bandwidth of 50 KHz. Both inputs cover the full current range.
Additionally there is a 10 turns potentiometer for generating a CW-current (bias current).
All set points are added and build the effective current set point.

For detailed information see operating manual or visit our website.

MESSTEC Power Converter GmbH

Data Sheet
Fast Modulator MSM 40-25

Features
Drives arbitrary current waveforms into laser diodes
CW, pulsed, modulated or mixed curves
Short rise and fall time
Two analog inputs plus BIAS current
Small dimensions, low weight

Specification

Diode current CW	0 ... 40 A
Diode current pulsed	0 … 80 A
Diode voltage	0 ... 23 V
Output power	2300 W max
Power dissipation	60 W max allowed
Supply voltage	1 V ... 24 V
Supply current	60 A max
Supply voltage*	3 V ... 6 V
Rise time	5 µs
Fall time	7 µs
Frequency (set point 1)	100 kHz max
Frequency (set point 2)	100 kHz max

Inputs

Diode current set point 1	0 ... 500 mV (50 Ohm input)
Diode current set point 2	0 ... 5 V (high impedance)
Enable	TTL
Reset	TTL

Outputs

Diode current monitor	0 ... 50 mV (into 50 Ohm)
Temperature	0 ... 4 V for 0 ... 80°C
Ready	TTL
Excess temperature	TTL

General specifications

Ambient temperature	0 ... +45 °C
Cooling	Required
Dimensions	95 x 61 x 20 mm
Weight	240 g
Ordering Code	10100446

* for internal electronics

Description
The fast diode current modulator MSM 40-25 is a linear modulator with improved properties for driving arbitrary current waveforms or fast pulses into laser diodes. Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 100 kHz and currents up to 40 A for CW and 80 A for pulsed waveforms. The modulator is small and compact and it is designed for mounting with low inductance at laser diodes or for integrating in laser diode modules. It has two analogue inputs for the current set point: a high frequency input (50 Ohm input impedance) with a bandwidth of 100 kHz and a low frequency input with a bandwidth of 100 kHz. Additionally there is a 10 turns potentiometer for generating a CW-current (bias current). All set points are added and build the effective current set point.

Technical subjects to change without notice.

MESSTEC Power Converter GmbH

Data Sheet
Fast Modulator MSM 60-25

Features
Drives arbitrary current waveforms into laser diodes
CW, pulsed, modulated or mixed curves
Short rise and fall time
Two analog inputs plus BIAS current
Small dimensions, low weight

Specification

Diode current CW	0 ... 60 A
Diode current pulsed	0 ... 120 A (short pulses)
Diode voltage	0 ... 23 V
Output power	1440 W max
Power dissipation	90 W max allowed
Supply voltage	1 V ... 24 V
Supply current	60 A max
Supply voltage*	3 V ... 6 V
Rise time	5 µs
Fall time	7 µs
Frequency (set point 1)	100 kHz max
Frequency (set point 2)	100 kHz max

Inputs

Diode current set point 1	0 ... 500 mV (50 Ohm input)
Diode current set point 2	0 ... 5 V (high impedance)
Enable	TTL
Reset	TTL

Outputs

Diode current monitor	0 ... 50 mV (into 50 Ohm)
Temperature	0 ... 4 V for 0 ... 80°C
Ready	TTL
Excess temperature	TTL

General specifications

Ambient temperature	0 ... +45 °C
Cooling	Required
Dimensions	95 x 61 x 20 mm
Weight	240 g
Ordering Code	10100452

* for internal electronics

Description
The fast diode current modulator MSM 60-25 is a linear modulator with improved properties for driving arbitrary current waveforms or fast pulses into laser diodes. Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 100 kHz and currents up to 60 A for CW and 120 A for pulsed waveforms. The modulator is small and compact and it is designed for mounting with low inductance at laser diodes or for integrating in laser diode modules. It has two analogue inputs for the current set point: a high frequency input (50 Ohm input impedance) with a bandwidth of 100 kHz and a low frequency input with a bandwidth of 100 KHz. Additionally there is a 10 turns potentiometer for generating a CW-current (bias current). All set points are added and build the effective current set point.

Technical subjects to change without notice.

MESSTEC Power Converter GmbH

Data Sheet
Fast Modulator MSM 100-25

Features

Drives arbitrary current waveforms into laser diodes
CW, pulsed, modulated or mixed curves
Short rise and fall time
Two analog inputs plus BIAS current
Small dimensions, low weight

Specification

Diode current CW	0 ... 100 A
Diode current pulsed	0 … 200 A
Diode voltage	0 ... 23 V
Output power	2300 W max
Power dissipation	150 W max allowed
Supply voltage	1 V ... 24 V
Supply current	100 A max
Supply voltage*	3 V ... 6 V
Rise time	5 µs
Fall time	7 µs
Frequency (set point 1)	100 kHz max
Frequency (set point 2)	100 kHz max

Inputs

Diode current set point 1	0 ... 500 mV (50 Ohm input)
Diode current set point 2	0 ... 5 V (high impedance)
Enable	TTL
Reset	TTL

Outputs

Diode current monitor	0 ... 50 mV (into 50 Ohm)
Temperature	0 ... 4 V for 0 ... 80°C
Ready	TTL
Excess temperature	TTL

General specifications

Ambient temperature	0 ... +45 °C
Cooling	Required
Dimensions	95 x 61 x 20 mm
Weight	240 g
Ordering Code	10100458

* for internal electronics

Description

The fast diode current modulator MSM 100-25 is a linear modulator with improved properties for driving arbitrary current waveforms or fast pulses into laser diodes. Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 100 kHz and currents up to 100 A for CW and 200 A for pulsed waveforms. The modulator is small and compact and it is designed for mounting with low inductance at laser diodes or for integrating in laser diode modules. It has two analogue inputs for the current set point: a high frequency input (50 Ohm input impedance) with a bandwidth of 100 kHz and a low frequency input with a bandwidth of 100 kHz. Additionally there is a 10 turns potentiometer for generating a CW-current (bias current). All set points are added and build the effective current set point.

Technical subjects to change without notice.

MESSTEC Power Converter GmbH

Data Sheet
Fast Modulator MSM 120-25

Features
Drives arbitrary current waveforms into laser diodes
CW, pulsed, modulated or mixed curves
Short rise and fall time
Two analog inputs plus BIAS current
Small dimensions, low weight

Specification

Diode current CW	0 ... 120 A
Diode current pulsed	0 … 240 A
Diode voltage	0 ... 23 V
Output power	2880 W max
Power dissipation	150 W max allowed
Supply voltage	1 V ... 24 V
Supply current	120 A max
Supply voltage*	3 V ... 6 V
Rise time	5 µs
Fall time	7 µs
Frequency (set point 1)	100 kHz max
Frequency (set point 2)	100 kHz max

Inputs

Diode current set point 1	0 ... 500 mV (50 Ohm input)
Diode current set point 2	0 ... 5 V (high impedance)
Enable	TTL
Reset	TTL

Outputs

Diode current monitor	0 ... 50 mV (into 50 Ohm)
Temperature	0 ... 4 V for 0 ... 80°C
Ready	TTL
Excess temperature	TTL

General specifications

Ambient temperature	0 ... +45 °C
Cooling	Required
Dimensions	95 x 61 x 20 mm
Weight	240 g
Ordering Code	10100453

* for internal electronics

Description
The fast diode current modulator MSM 120-25 is a linear modulator with improved properties for driving arbitrary current waveforms or fast pulses into laser diodes. Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 100 kHz and currents up to 120 A for CW and 240 A for pulsed waveforms. The modulator is small and compact and it is designed for mounting with low inductance at laser diodes or for integrating in laser diode modules. It has two analogue inputs for the current set point: a high frequency input (50 Ohm input impedance) with a bandwidth of 100 kHz and a low frequency input with a bandwidth of 100 kHz. Additionally there is a 10 turns potentiometer for generating a CW-current (bias current). All set points are added and build the effective current set point.

Technical subjects to change without notice.

MESSTEC Power Converter GmbH

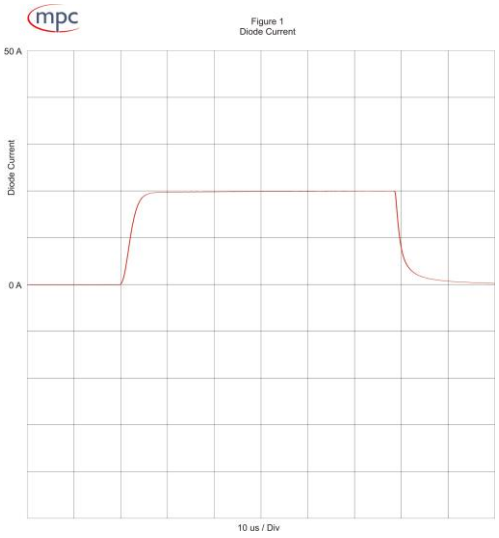
Data Sheet
Fast Modulator MSM 20-50

Features

Drives arbitrary current waveforms into laser diodes
CW, pulsed, modulated or mixed curves
Short rise and fall time
Two analog inputs plus BIAS current
Small dimensions, low weight

Specification

Diode current CW	0 ... 20 A
Diode current pulsed	0 ... 40 A (short pulses)
Diode voltage	0 ... 49 V
Output power	980 W max
Power dissipation	30 W max allowed
Supply voltage	1 V ... 50 V
Supply current	20 A max
Supply voltage*	3 V ... 6 V
Rise time	10 µs
Fall time	10 µs
Frequency (set point 1)	50 kHz max
Frequency (set point 2)	50 kHz max



Inputs

Diode current set point 1	0 ... 500 mV (50 Ohm input)
Diode current set point 2	0 ... 5 V (high impedance)
Enable	TTL
Reset	TTL

Outputs

Diode current monitor	0 ... 55 mV (into 50 Ohm)
Temperature	0 ... 4 V for 0 ... 80°C
Ready	TTL
Excess temperature	TTL

General specifications

Ambient temperature	0 ... +45 °C
Cooling	Required
Dimensions	95 x 61 x 20 mm
Weight	240 g
Ordering Code	10100514

* for internal electronics

Description

The fast diode current modulator MSM 20-50 is a linear modulator with improved properties for driving arbitrary current waveforms or fast pulses into laser diodes. Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 50 kHz and currents up to 20 A for CW and 40 A for pulsed waveforms. The modulator is small and compact and it is designed for mounting with low inductance at laser diodes or for integrating in laser diode modules. It has two analogue inputs for the current set point: a high frequency input (50 Ohm input impedance) with a bandwidth of 50 kHz and a low frequency input with a bandwidth of 50 KHz. Additionally there is a 10 turns potentiometer for generating a CW-current (bias current). All set points are added and build the effective current set point. Technical subjects to change without notice.

Warning!
Risk of exposure of hazardous laser radiation
in combination with laser light emitting devices!

MESSTEC Power Converter GmbH

Data Sheet
Fast Modulator MSM 40-50

Features

Drives arbitrary current waveforms into laser diodes
CW, pulsed, modulated or mixed curves
Short rise and fall time
Two analog inputs plus BIAS current
Small dimensions, low weight

Specification

Diode current CW	0 ... 40 A
Diode current pulsed	0 ... 80 A (short pulses)
Diode voltage	0 ... 49 V
Output power	1960 W max
Power dissipation	60 W max allowed
Supply voltage	1 V ... 50 V
Supply current	40 A max
Supply voltage*	3 V ... 6 V
Rise time	10 µs
Fall time	10 µs
Frequency (set point 1)	50 kHz max
Frequency (set point 2)	50 kHz max

Inputs

Diode current set point 1	0 ... 500 mV (50 Ohm input)
Diode current set point 2	0 ... 5 V (high impedance)
Enable	TTL
Reset	TTL

Outputs

Diode current monitor	0 ... 55 mV (into 50 Ohm)
Temperature	0 ... 4 V for 0 ... 80°C
Ready	TTL
Excess temperature	TTL

General specifications

Ambient temperature	0 ... +45 °C
Cooling	Required
Dimensions	95 x 61 x 20 mm
Weight	240 g
Ordering Code	10100516

* for internal electronics

Description

The fast diode current modulator MSM 40-50 is a linear modulator with improved properties for driving arbitrary current waveforms or fast pulses into laser diodes. Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 50 kHz and currents up to 40 A for CW and 80 A for pulsed waveforms. The modulator is small and compact and it is designed for mounting with low inductance at laser diodes or for integrating in laser diode modules. It has two analogue inputs for the current set point: a high frequency input (50 Ohm input impedance) with a bandwidth of 50 kHz and a low frequency input with a bandwidth of 50 KHz. Additionally there is a 10 turns potentiometer for generating a CW-current (bias current). All set points are added and build the effective current set point. Technical subjects to change without notice.

Warning!
Risk of exposure of hazardous laser radiation
in combination with laser light emitting devices!

MESSTEC Power Converter GmbH

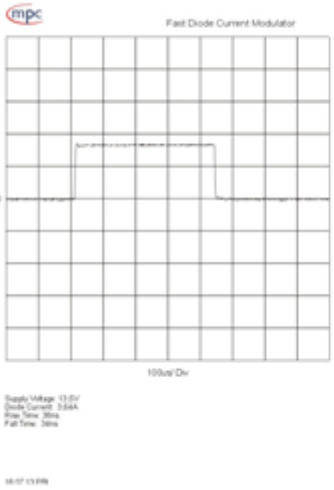
Data Sheet
Fast Modulator MSM 60-50

Features

Drives arbitrary current waveforms into laser diodes
CW, pulsed, modulated or mixed curves
Short rise and fall time
Two analog inputs plus BIAS current
Small dimensions, low weight

Specification

Diode current CW	0 ... 60 A
Diode current pulsed	0 ... 120 A (short pulses)
Diode voltage	0 ... 49 V
Output power	2940 W max
Power dissipation	90 W max allowed
Supply voltage	1 V ... 50 V
Supply current	60 A max
Supply voltage*	3 V ... 6 V
Rise time	10 µs
Fall time	10 µs
Frequency (set point 1)	50 kHz max
Frequency (set point 2)	50 kHz max



Inputs

Diode current set point 1	0 ... 500 mV (50 Ohm input)
Diode current set point 2	0 ... 5 V (high impedance)
Enable	TTL
Reset	TTL

Outputs

Diode current monitor	0 ... 55 mV (into 50 Ohm)
Temperature	0 ... 4 V for 0 ... 80°C
Ready	TTL
Excess temperature	TTL

General specifications

Ambient temperature	0 ... +45 °C
Cooling	Required
Dimensions	95 x 61 x 20 mm
Weight	240 g
Ordering Code	10100517

* for internal electronics

Description

The fast diode current modulator MSM 60-50 is a linear modulator with improved properties for driving arbitrary current waveforms or fast pulses into laser diodes. Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 50 kHz and currents up to 60 A for CW and 120 A for pulsed waveforms. The modulator is small and compact and it is designed for mounting with low inductance at laser diodes or for integrating in laser diode modules. It has two analogue inputs for the current set point: a high frequency input (50 Ohm input impedance) with a bandwidth of 50 kHz and a low frequency input with a bandwidth of 50 KHz. Additionally there is a 10 turns potentiometer for generating a CW-current (bias current). All set points are added and build the effective current set point. Technical subjects to change without notice.

Warning!
Risk of exposure of hazardous laser radiation
in combination with laser light emitting devices!

MESSTEC Power Converter GmbH

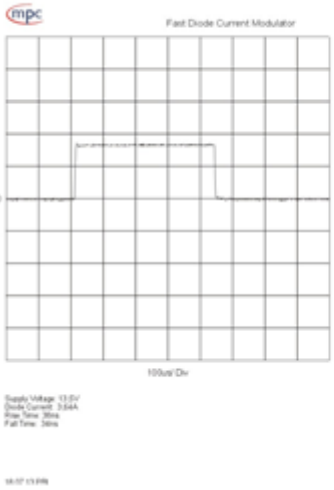
Data Sheet
Fast Modulator MSM 100-50

Features

Drives arbitrary current waveforms into laser diodes
CW, pulsed, modulated or mixed curves
Short rise and fall time
Two analog inputs plus BIAS current
Small dimensions, low weight

Specification

Diode current CW	0 ... 100 A
Diode current pulsed	0 ... 200 A (short pulses)
Diode voltage	0 ... 49 V
Output power	4900 W max
Power dissipation	150 W max allowed
Supply voltage	1 V ... 49 V
Supply current	100 A max
Supply voltage*	3 V ... 6 V
Rise time	10 µs
Fall time	10 µs
Frequency (set point 1)	50 kHz max
Frequency (set point 2)	50 kHz max



Inputs

Diode current set point 1	0 ... 500 mV (50 Ohm input)
Diode current set point 2	0 ... 5 V (high impedance)
Enable	TTL
Reset	TTL

Outputs

Diode current monitor	0 ... 55 mV (into 50 Ohm)
Temperature	0 ... 4 V for 0 ... 80°C
Ready	TTL
Excess temperature	TTL

General specifications

Ambient temperature	0 ... +45 °C
Cooling	Required
Dimensions	95 x 61 x 20 mm
Weight	240 g
Ordering Code	10100518

* for internal electronics

Description

The fast diode current modulator MSM 100-50 is a linear modulator with improved properties for driving arbitrary current waveforms or fast pulses into laser diodes. Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 50 kHz and currents up to 100 A for CW and 200 A for pulsed waveforms. The modulator is small and compact and it is designed for mounting with low inductance at laser diodes or for integrating in laser diode modules. It has two analogue inputs for the current set point: a high frequency input (50 Ohm input impedance) with a bandwidth of 50 kHz and a low frequency input with a bandwidth of 50 KHz. Additionally there is a 10 turns potentiometer for generating a CW-current (bias current). All set points are added and build the effective current set point. Technical subjects to change without notice.

Warning!
Risk of exposure of hazardous laser radiation
in combination with laser light emitting devices!

MESSTEC Power Converter GmbH

Data Sheet
Fast Modulator MSM 120-50

Features
Drives arbitrary current waveforms into laser diodes
CW, pulsed, modulated or mixed curves
Short rise and fall time
Two analog inputs plus BIAS current
Small dimensions, low weight

Specification

Diode current CW	0 ... 120 A
Diode current pulsed	0 ... 240 A (short pulses)
Diode voltage	0 ... 49 V
Output power	5880 W max
Power dissipation	150 W max allowed
Supply voltage	1 V ... 50 V
Supply current	120 A max
Supply voltage*	3 V ... 6 V
Rise time	9 µs
Fall time	11.5 µs
Frequency (set point 1)	50 kHz max
Frequency (set point 2)	50 kHz max

Inputs

Diode current set point 1	0 ... 500 mV (50 Ohm input)
Diode current set point 2	0 ... 5 V (high impedance)
Enable	TTL
Reset	TTL

Outputs

Diode current monitor	0 ... 50 mV (into 50 Ohm)
Temperature	0 ... 4 V for 0 ... 80°C
Ready	TTL
Excess temperature	TTL

General specifications

Ambient temperature	0 ... +45 °C
Cooling	Required
Dimensions	95 x 61 x 20 mm
Weight	240 g
Ordering Code	10100455

* for internal electronics

Description
The fast diode current modulator MSM 120-50 is a linear modulator with improved properties for driving arbitrary current waveforms or fast pulses into laser diodes. Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 50 kHz and currents up to 120 A for CW and 240 A for pulsed waveforms. The modulator is small and compact and it is designed for mounting with low inductance at laser diodes or for integrating in laser diode modules. It has two analogue inputs for the current set point: a high frequency input (50 Ohm input impedance) with a bandwidth of 50 kHz and a low frequency input with a bandwidth of 50 KHz. Additionally there is a 10 turns potentiometer for generating a CW-current (bias current). All set points are added and build the effective current set point.

Technical subjects to change without notice.

10100386

VFM 1,5-06
Fast Diode Current Modulator

Features
Drives arbitrary current waveforms into high voltage, high power laser diodes
CW, pulsed, modulated or mixed
Short rise and fall time
Bandwidth up to 15 MHz
Enhanced performance
Two analog inputs
Trigger input

Specification

Diode current	0 ... 1,5 A
Diode voltage	0 ... 4 V
Power dissipation	30 W max allowed
Supply voltage	3 V ... 6 V
Supply current	1.5 A max
Rise time	27 ns
Fall time	27 ns
Bandwidth	15 MHz
Inputs	
Diode current set point 1	0 ... 1 V (50 Ohm input)
Diode current set point 2	0 ... 5 V (high impedance)
Trigger	TTL
Enable	TTL
Reset	TTL
Outputs	
Diode current monitor	0 ... 82.5 mV (into 50 Ohm)
Temperature	0 ... 4 V for 0 ... 80°C
Ready	TTL

General specifications

Ambient temperature	0 ... +45 °C
Cooling	Required
Dimensions	95 x 61 x 20 mm
Weight	250 g
Ordering Code	10100386

Description
The fast diode current modulator VFM 1,5-06 is a linear modulator with improved properties for driving arbitrary current waveforms or fast pulses into laser diodes
Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 15 MHz and currents up to 1.5 A.
The VFM 1,5-06 is small and compact and it is designed for mounting it with low inductance directly at laser diodes.
The VFM 1,5-06 has two analogue inputs for the current setpoint, a high frequency input (50 Ohm input impedance) with a bandwidth of 15 MHz and a low frequency input with a bandwidth of 100 KHz. Both inputs cover the full current range.
Additionally there is a TTL-Trigger input which acts at the high frequency input for generating fast and clean pulses.

For detailed information see operating manual or visit our website.

MESSTEC Power Converter GmbH

Data Sheet
Fast Modulator VFM 10-06

Features

Drives arbitrary current waveforms into laser diodes
CW, pulsed, modulated or mixed curves
Very short rise and fall time
Enhanced optical performance
Two analog inputs plus BIAS current
Trigger input
Small dimensions, low weight

Specification

Diode current CW	0 ... 10 A
Diode current pulsed	0 ... 20 A
Diode voltage	0 ... 4 V
Output power	40 W max
Power dissipation	30 W max allowed
Supply current	11 A max
Supply voltage*	3 V ... 6 V
Rise time	28 ns
Fall time	32 ns
Frequency (set point 1)	20 MHz max
Frequency (set point 2)	100 kHz max

Inputs

Diode current set point 1	0 ... 500 mV (50 Ohm input)
Diode current set point 2	0 ... 5 V (high impedance)
Trigger	TTL
Enable	TTL
Reset	TTL

Outputs

Diode current monitor	0 ... 56 mV (into 50 Ohm)
Temperature	0 ... 4 V for 0 ... 80°C
Ready	TTL

General specifications

Ambient temperature	0 ... +45 °C
Cooling	Required
Dimensions	95 x 61 x 20 mm
Weight	240 g
Ordering Code	10100350

* for internal electronics

Description

The fast diode current modulator VFM 10-06 is a linear modulator with improved properties for driving arbitrary current waveforms or fast pulses into laser diodes. Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 20 MHz and currents up to 10 A for CW and 20A for pulsed waveforms. The modulator is small and compact and it is designed for mounting with low inductance directly at laser diodes or for integrating in laser diode modules. It has two analogue inputs for the current set point: a high frequency input (50 Ohm input impedance) with a bandwidth of 20 MHz and a low frequency input with a bandwidth of 100 KHz. Additionally there is a 10 turns potentiometer for generating a CW-current (bias current). All set points are added and build the effective current set point. A TTL-Trigger input generates fast and clean pulses at the high frequency set point 1.

Technical subjects to change without notice.

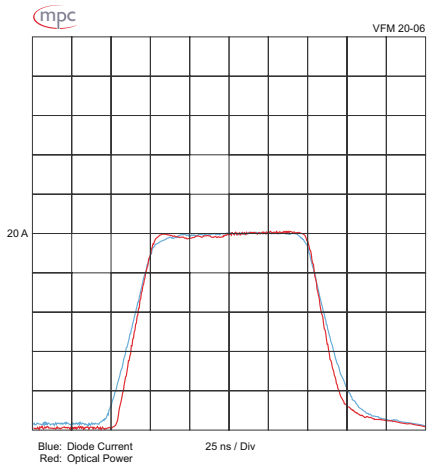
10100351

VFM 20-06
Fast Diode Current Modulator

Features
Drives arbitrary current waveforms into laser diodes
CW, pulsed, modulated or mixed
Short rise and fall time
Frequency up to 20 MHz
Enhanced optical performance
Two analog inputs
Trigger input
Small dimensions

Specification

Diode current	0 ... 20 A
Diode current pulsed	0 ... 40 A (short pulses)
Diode voltage	0 ... 4.5 V
Output power	90 W max
Power dissipation	30 W max allowed
Supply voltage	3 V ... 6 V
Supply current	20 A max
Rise time	28 ns
Fall time	32 ns
Frequency	20 MHz max
Inputs	
Diode current set point 1	0 ... 500 mV (50 Ohm input)
Diode current set point 2	0 ... 5 V (high impedance)
Trigger	TTL
Enable	TTL
Reset	TTL
Outputs	
Diode current monitor	0 ... 110 mV (into 50 Ohm)
Temperature	0 ... 4 V for 0 ... 80°C
Ready	TTL



General specifications

Ambient temperature	0 ... +45 °C
Cooling	Required
Dimensions	95 x 61 x 20 mm
Weight	250 g
Ordering Code	10100351

Description
The fast diode current modulator VFM 20-06 is a linear modulator with improved properties for driving arbitrary current waveforms or fast pulses into laser diodes.
Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 20 MHz and currents up to 20 A for CW and 40 A for pulsed waveforms.
The VFM 20-06 is small and compact and it is designed for mounting it with low inductance directly at laser diodes or for integrating it in laser diode modules.
The VFM 20-06 has two analogue inputs for the current setpoint, a high frequency input (50 Ohm input impedance) with a bandwidth of 20 MHz and a low frequency input with a bandwidth of 100 KHz. Both inputs cover the full current range.
Additionally there is a TTL-Trigger input which acts at the high frequency input for generating fast and clean pulses.

For detailed information see operating manual or visit our website.

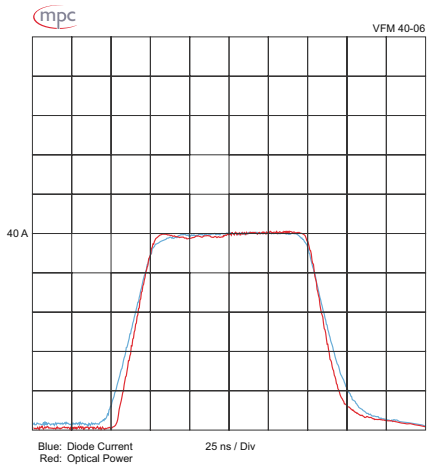
10100353

VFM 40-06
Fast Diode Current Modulator

Features
Drives arbitrary current waveforms into laser diodes
CW, pulsed, modulated or mixed
Short rise and fall time
Frequency up to 20 MHz
Enhanced optical performance
Two analog inputs
Trigger input
Small dimensions

Specification

Diode current	0 ... 40 A
Diode current pulsed	0 ... 80 A (short pulses)
Diode voltage	0 ... 4.5 V
Output power	180 W max
Power dissipation	60 W max allowed
Supply voltage	3 V ... 6 V
Supply current	40 A max
Rise time	28 ns
Fall time	32 ns
Frequency	20 MHz max
Inputs	
Diode current set point 1	0 ... 500 mV (50 Ohm input)
Diode current set point 2	0 ... 5 V (high impedance)
Trigger	TTL
Enable	TTL
Reset	TTL
Outputs	
Diode current monitor	0 ... 110 mV (into 50 Ohm)
Temperature	0 ... 4 V for 0 ... 80°C
Ready	TTL



General specifications

Ambient temperature	0 ... +45 °C
Cooling	Required
Dimensions	95 x 61 x 20 mm
Weight	255 g
Ordering Code	10100353

Description
The fast diode current modulator VFM 40-06 is a linear modulator with improved properties for driving arbitrary current waveforms or fast pulses into laser diodes.
Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 20 MHz and currents up to 40 A for CW and 80 A for pulsed waveforms.
The VFM 40-06 is small and compact and it is designed for mounting it with low inductance directly at laser diodes or for integrating it in laser diode modules.
The VFM 40-06 has two analogue inputs for the current setpoint, a high frequency input (50 Ohm input impedance) with a bandwidth of 20 MHz and a low frequency input with a bandwidth of 100 KHz. Both inputs cover the full current range.
Additionally there is a TTL-Trigger input which acts at the high frequency input for generating fast and clean pulses.

For detailed information see operating manual or visit our website.

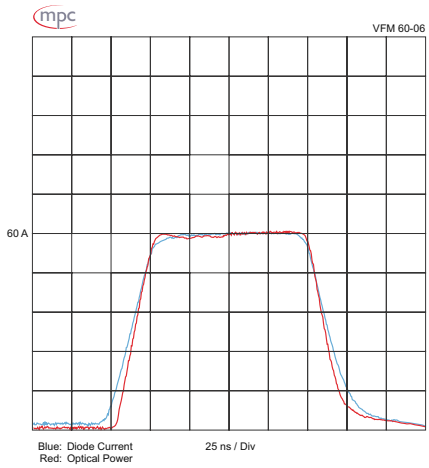
10100355

VFM 60-06
Fast Diode Current Modulator

Features
Drives arbitrary current waveforms into laser diodes
CW, pulsed, modulated or mixed
Short rise and fall time
Frequency up to 20 MHz
Enhanced optical performance
Two analog inputs
Trigger input
Small dimensions

Specification

Diode current	0 ... 60 A
Diode current pulsed	0 ... 120 A (short pulses)
Diode voltage	0 ... 4.5 V
Output power	270 W max
Power dissipation	90 W max allowed
Supply voltage	3 V ... 6 V
Supply current	60 A max
Rise time	28 ns
Fall time	32 ns
Frequency	20 MHz max
Inputs	
Diode current set point 1	0 ... 500 mV (50 Ohm input)
Diode current set point 2	0 ... 5 V (high impedance)
Trigger	TTL
Enable	TTL
Reset	TTL
Outputs	
Diode current monitor	0 ... 110 mV (into 50 Ohm)
Temperature	0 ... 4 V for 0 ... 80°C
Ready	TTL



General specifications

Ambient temperature	0 ... +45 °C
Cooling	Required
Dimensions	95 x 61 x 20 mm
Weight	260 g
Ordering Code	10100355

Description
The fast diode current modulator VFM 60-06 is a linear modulator with improved properties for driving arbitrary current waveforms or fast pulses into laser diodes.
Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 20 MHz and currents up to 60 A for CW and 120 A for pulsed waveforms.
The VFM 60-06 is small and compact and it is designed for mounting it with low inductance directly at laser diodes or for integrating it in laser diode modules.
The VFM 60-06 has two analogue inputs for the current setpoint, a high frequency input (50 Ohm input impedance) with a bandwidth of 20 MHz and a low frequency input with a bandwidth of 100 KHz. Both inputs cover the full current range.
Additionally there is a TTL-Trigger input which acts at the high frequency input for generating fast and clean pulses.

For detailed information see operating manual or visit our website.

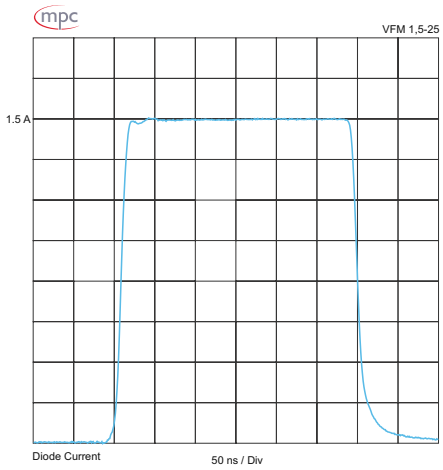
10100368

VFM 1,5-25
Fast Diode Current Modulator

Features
Drives arbitrary current waveforms into high voltage, high power laser diodes
CW, pulsed, modulated or mixed
Optimized for diodes in TO56 package, especially for OSRAM's TB450 diode
Short rise and fall time
Bandwidth up to 27 MHz
Enhanced performance
Two analog inputs
Trigger input

Specification

Diode current	0 ... 1,5 A
Diode voltage	0 ... 24 V
Power dissipation	30 W max allowed
Supply voltage	1 V ... 25 V
Supply current	1.5 A max
Supply voltage*	3 V ... 6 V
Rise time	14 ns
Fall time	23 ns
Bandwidth	27 MHz
Inputs	
Diode current set point 1	0 ... 500 mV (50 Ohm input)
Diode current set point 2	0 ... 5 V (high impedance)
Trigger	TTL
Enable	TTL
Reset	TTL
Outputs	
Diode current monitor	0 ... 82.5 mV (into 50 Ohm)
Temperature	0 ... 4 V for 0 ... 80°C
Ready	TTL



General specifications

Ambient temperature	0 ... +45 °C
Cooling	Required
Dimensions	95 x 61 x 20 mm
Weight	250 g
Ordering Code	10100368

* for internal electronics

Description
The fast diode current modulator VFM 1,5-25 is a linear modulator with improved properties for driving arbitrary current waveforms or fast pulses into laser diodes in TO56 package, especially into OSRAM's blue TB450 diode.
Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 27 MHz and currents up to 1.5 A.
The VFM 1,5-25 is small and compact and it is designed for mounting it with low inductance directly at laser diodes.
The VFM 1,5-25 has two analogue inputs for the current setpoint, a high frequency input (50 Ohm input impedance) with a bandwidth of 27 MHz and a low frequency input with a bandwidth of 100 KHz. Both inputs cover the full current range.
Additionally there is a TTL-Trigger input which acts at the high frequency input for generating fast and clean pulses.

For detailed information see operating manual or visit our website.

MESSTEC Power Converter GmbH

Data Sheet
Fast Modulator VFM 10-25

Features

Drives arbitrary current waveforms into laser diodes
CW, pulsed, modulated or mixed curves
Very short rise and fall time
Enhanced optical performance
Two analog inputs plus BIAS current
Trigger input
Small dimensions, low weight

Specification

Diode current CW	0 ... 10 A
Diode current pulsed	0 ... 20 A
Diode voltage	0 ... 24 V
Output power	240 W max
Power dissipation	30 W max allowed
Supply current	11 A max
Supply voltage	3 V ... 24 V
Rise time	28 ns
Fall time	32 ns
Frequency (set point 1)	20 MHz max
Frequency (set point 2)	100 kHz max

Inputs

Diode current set point 1	0 ... 500 mV (50 Ohm input)
Diode current set point 2	0 ... 5 V (high impedance)
Trigger	TTL
Enable	TTL
Reset	TTL

Outputs

Diode current monitor	0 ... 56 mV (into 50 Ohm)
Temperature	0 ... 4 V for 0 ... 80°C
Ready	TTL

General specifications

Ambient temperature	0 ... +45 °C
Cooling	Required
Dimensions	95 x 61 x 20 mm
Weight	240 g
Ordering Code	10100370

Description

The fast diode current modulator VFM 10-25 is a linear modulator with improved properties for driving arbitrary current waveforms or fast pulses into laser diodes. Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 20 MHz and currents up to 10 A for CW and 20A for pulsed waveforms. The modulator is small and compact and it is designed for mounting with low inductance directly at laser diodes or for integrating in laser diode modules. It has two analogue inputs for the current set point: a high frequency input (50 Ohm input impedance) with a bandwidth of 20 MHz and a low frequency input with a bandwidth of 100 KHz. Additionally there is a 10 turns potentiometer for generating a CW-current (bias current). All set points are added and build the effective current set point. A TTL-Trigger input generates fast and clean pulses at the high frequency set point 1.

Technical subjects to change without notice.

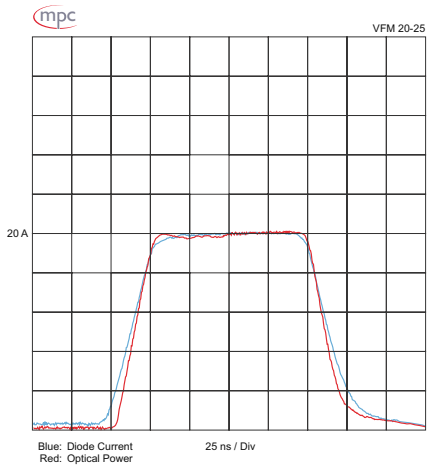
10100371

VFM 20-25
Fast Diode Current Modulator

Features
Drives arbitrary current waveforms into high voltage, high power laser diodes
CW, pulsed, modulated or mixed
Short rise and fall time
Frequency up to 20 MHz
Enhanced optical performance
Two analog inputs
Trigger input
Small dimensions

Specification

Diode current	0 ... 20 A
Diode current pulsed	0 ... 40 A (short pulses)
Diode voltage	0 ... 24 V
Output power	480 W max
Power dissipation	30 W max allowed
Supply voltage	1 V ... 25 V
Supply current	20 A max
Supply voltage*	3 V ... 6 V
Rise time	28 ns
Fall time	32 ns
Frequency	20 MHz max
Inputs	
Diode current set point 1	0 ... 500 mV (50 Ohm input)
Diode current set point 2	0 ... 5 V (high impedance)
Trigger	TTL
Enable	TTL
Reset	TTL
Outputs	
Diode current monitor	0 ... 110 mV (into 50 Ohm)
Temperature	0 ... 4 V for 0 ... 80°C
Ready	TTL



General specifications

Ambient temperature	0 ... +45 °C
Cooling	Required
Dimensions	95 x 61 x 20 mm
Weight	250 g
Ordering Code	10100371

* for internal electronics

Description
The fast diode current modulator VFM 20-25 is a linear modulator with improved properties for driving arbitrary current waveforms or fast pulses into laser diodes.
Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 20 MHz and currents up to 20 A for CW and 40 A for pulsed waveforms.
The VFM 20-25 is small and compact and it is designed for mounting it with low inductance directly at laser diodes or for integrating it in laser diode modules.
The VFM 20-25 has two analogue inputs for the current setpoint, a high frequency input (50 Ohm input impedance) with a bandwidth of 20 MHz and a low frequency input with a bandwidth of 100 KHz. Both inputs cover the full current range.
Additionally there is a TTL-Trigger input which acts at the high frequency input for generating fast and clean pulses.

For detailed information see operating manual or visit our website.

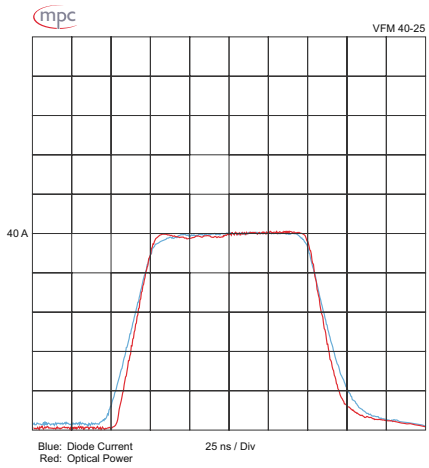
10100373

VFM 40-25
Fast Diode Current Modulator

Features
Drives arbitrary current waveforms into high voltage, high power laser diodes
CW, pulsed, modulated or mixed
Short rise and fall time
Frequency up to 20 MHz
Enhanced optical performance
Two analog inputs
Trigger input
Small dimensions

Specification

Diode current	0 ... 40 A
Diode current pulsed	0 ... 80 A (short pulses)
Diode voltage	0 ... 24 V
Output power	960 W max
Power dissipation	60 W max allowed
Supply voltage	1 V ... 25 V
Supply current	40 A max
Supply voltage*	3 V ... 6 V
Rise time	28 ns
Fall time	32 ns
Frequency	20 MHz max
Inputs	
Diode current set point 1	0 ... 500 mV (50 Ohm input)
Diode current set point 2	0 ... 5 V (high impedance)
Trigger	TTL
Enable	TTL
Reset	TTL
Outputs	
Diode current monitor	0 ... 110 mV (into 50 Ohm)
Temperature	0 ... 4 V for 0 ... 80°C
Ready	TTL



General specifications

Ambient temperature	0 ... +45 °C
Cooling	Required
Dimensions	95 x 61 x 20 mm
Weight	255 g
Ordering Code	10100373

* for internal electronics

Description
The fast diode current modulator VFM 40-25 is a linear modulator with improved properties for driving arbitrary current waveforms or fast pulses into laser diodes.
Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 20 MHz and currents up to 40 A for CW and 80 A for pulsed waveforms.
The VFM 40-25 is small and compact and it is designed for mounting it with low inductance directly at laser diodes or for integrating it in laser diode modules.
The VFM 40-25 has two analogue inputs for the current setpoint, a high frequency input (50 Ohm input impedance) with a bandwidth of 20 MHz and a low frequency input with a bandwidth of 100 KHz. Both inputs cover the full current range.
Additionally there is a TTL-Trigger input which acts at the high frequency input for generating fast and clean pulses.

For detailed information see operating manual or visit our website.

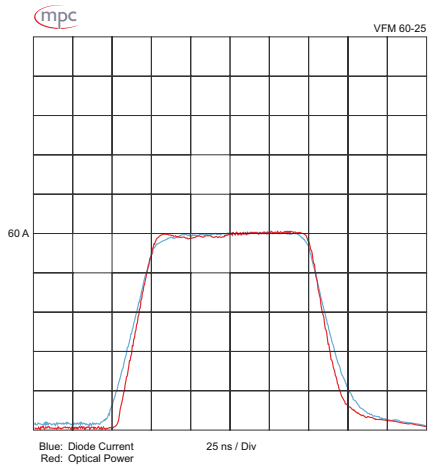
10100375

VFM 60-25
Fast Diode Current Modulator

Features
Drives arbitrary current waveforms into high voltage, high power laser diodes
CW, pulsed, modulated or mixed
Short rise and fall time
Frequency up to 20 MHz
Enhanced optical performance
Two analog inputs
Trigger input
Small dimensions

Specification

Diode current	0 ... 60 A
Diode current pulsed	0 ... 120 A (short pulses)
Diode voltage	0 ... 24 V
Output power	1440 W max
Power dissipation	90 W max allowed
Supply voltage	1 V ... 25 V
Supply current	60 A max
Supply voltage*	3 V ... 6 V
Rise time	28 ns
Fall time	32 ns
Frequency	20 MHz max
Inputs	
Diode current set point 1	0 ... 500 mV (50 Ohm input)
Diode current set point 2	0 ... 5 V (high impedance)
Trigger	TTL
Enable	TTL
Reset	TTL
Outputs	
Diode current monitor	0 ... 110 mV (into 50 Ohm)
Temperature	0 ... 4 V for 0 ... 80°C
Ready	TTL



General specifications

Ambient temperature	0 ... +45 °C
Cooling	Required
Dimensions	95 x 61 x 20 mm
Weight	260 g
Ordering Code	10100375

* for internal electronics

Description
The fast diode current modulator VFM 60-25 is a linear modulator with improved properties for driving arbitrary current waveforms or fast pulses into laser diodes.
Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 20 MHz and currents up to 60 A for CW and 120 A for pulsed waveforms.
The VFM 60-25 is small and compact and it is designed for mounting it with low inductance directly at laser diodes or for integrating it in laser diode modules.
The VFM 60-25 has two analogue inputs for the current setpoint, a high frequency input (50 Ohm input impedance) with a bandwidth of 20 MHz and a low frequency input with a bandwidth of 100 KHz. Both inputs cover the full current range.
Additionally there is a TTL-Trigger input which acts at the high frequency input for generating fast and clean pulses.

For detailed information see operating manual or visit our website.

MESSTEC Power Converter GmbH

Data Sheet
Fast Modulator VFM 20-50

Features

Drives arbitrary current waveforms into laser diodes
CW, pulsed, modulated or mixed curves
Very short rise and fall time
Enhanced optical performance
Two analog inputs plus BIAS current
Trigger input
Small dimensions, low weight

Specification

Diode current CW	0 ... 20 A
Diode current pulsed	0 ... 40 A
Diode voltage	0 ... 49 V
Output power	980 W max
Power dissipation	30 W max allowed
Supply voltage	1 V ... 49 V
Supply current	20 A max
Supply voltage*	3 V ... 6 V (* for internal electronics)
Rise time	55 ns
Fall time	55 ns
Frequency (set point 1)	9 MHz max
Frequency (set point 2)	100 kHz max

Inputs

Diode current set point 1	0 ... 500 mV (50 Ohm input)
Diode current set point 2	0 ... 5 V (high impedance)
Trigger, Enable, Reset	TTL

Outputs

Diode current monitor	0 ... 110 mV (into 50 Ohm)
Temperature	0 ... 4 V for 0 ... 80°C
Ready	TTL

General specifications

Ambient temperature	0 ... +45 °C
Cooling	Required
Dimensions	95 x 61 x 20 mm
Weight	240 g
Ordering Code	10100414

Description

The fast diode current modulator VFM 20-25 is a linear modulator with improved properties for driving arbitrary current waveforms or fast pulses into laser diodes. Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 9 MHz and currents up to 20 A for CW and 40 A for pulsed waveforms. The modulator is small and compact and it is designed for mounting with low inductance directly at laser diodes or for integrating in laser diode modules. It has two analogue inputs for the current set point: a high frequency input (50 Ohm input impedance) with a bandwidth of 9 MHz and a low frequency input with a bandwidth of 100 KHz. Additionally there is a 10 turns potentiometer for generating a CW-current (bias current). All set points are added and build the effective current set point. A TTL-Trigger input generates fast and clean pulses at the high frequency set point 1.
Technical subjects to change without notice.

Warning!
Risk of exposure of hazardous laser radiation
in combination with laser light emitting devices!

MESSTEC Power Converter GmbH

Data Sheet
Fast Modulator VFM 40-50

Features
Drives arbitrary current waveforms into laser diodes
CW, pulsed, modulated or mixed curves
Very short rise and fall time
Enhanced optical performance
Two analog inputs plus BIAS current
Trigger input
Small dimensions, low weight

Specification

Diode current CW	0 ... 40 A
Diode current pulsed	0 ... 80 A
Diode voltage	0 ... 49 V
Output power	1960 W max
Power dissipation	60 W max allowed
Supply voltage	1 V ... 49 V
Supply current	40 A max
Supply voltage*	3 V ... 6 V (* for internal electronics)
Rise time	56 ns
Fall time	56 ns
Frequency (set point 1)	8,9 MHz max
Frequency (set point 2)	100 kHz max

Inputs

Diode current set point 1	0 ... 500 mV (50 Ohm input)
Diode current set point 2	0 ... 5 V (high impedance)
Trigger, Enable, Reset	TTL

Outputs

Diode current monitor	0 ... 110 mV (into 50 Ohm)
Temperature	0 ... 4 V for 0 ... 80°C
Ready	TTL

General specifications

Ambient temperature	0 ... +45 °C
Cooling	Required
Dimensions	95 x 61 x 20 mm
Weight	240 g
Ordering Code	10100416

Description
The fast diode current modulator VFM 40-25 is a linear modulator with improved properties for driving arbitrary current waveforms or fast pulses into laser diodes. Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 9 MHz and currents up to 40 A for CW and 80 A for pulsed waveforms. The modulator is small and compact and it is designed for mounting with low inductance directly at laser diodes or for integrating in laser diode modules. It has two analogue inputs for the current set point: a high frequency input (50 Ohm input impedance) with a bandwidth of 8,9 MHz and a low frequency input with a bandwidth of 100 KHz. Additionally there is a 10 turns potentiometer for generating a CW-current (bias current). All set points are added and build the effective current set point. A TTL-Trigger input generates fast and clean pulses at the high frequency set point 1.
Technical subjects to change without notice.

Warning!
Risk of exposure of hazardous laser radiation
in combination with laser light emitting devices!

MESSTEC Power Converter GmbH	
Data Sheet **Fast Modulator VFM 60-50**	

Features
Drives arbitrary current waveforms into laser diodes
CW, pulsed, modulated or mixed curves
Very short rise and fall time
Enhanced optical performance
Two analog inputs plus BIAS current
Trigger input
Small dimensions, low weight

Specification

Diode current CW	0 ... 60 A
Diode current pulsed	0 ... 120 A
Diode voltage	0 ... 49 V
Output power	2940 W max
Power dissipation	90 W max allowed
Supply voltage	1 V ... 49 V
Supply current	60 A max
Supply voltage*	3 V ... 6 V (* for internal electronics)
Rise time	60 ns
Fall time	60 ns
Frequency (set point 1)	8,3 MHz max
Frequency (set point 2)	100 kHz max

Inputs

Diode current set point 1	0 ... 500 mV (50 Ohm input)
Diode current set point 2	0 ... 5 V (high impedance)
Trigger, Enable, Reset	TTL

Outputs

Diode current monitor	0 ... 110 mV (into 50 Ohm)
Temperature	0 ... 4 V for 0 ... 80°C
Ready	TTL

General specifications

Ambient temperature	0 ... +45 °C
Cooling	Required
Dimensions	95 x 61 x 20 mm
Weight	240 g
Ordering Code	10100417

Description
The fast diode current modulator VFM 60-25 is a linear modulator with improved properties for driving arbitrary current waveforms or fast pulses into laser diodes. Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 8,3 MHz and currents up to 60 A for CW and 120 A for pulsed waveforms. The modulator is small and compact and it is designed for mounting with low inductance directly at laser diodes or for integrating in laser diode modules. It has two analogue inputs for the current set point: a high frequency input (50 Ohm input impedance) with a bandwidth of 8,3 MHz and a low frequency input with a bandwidth of 100 KHz. Additionally there is a 10 turns potentiometer for generating a CW-current (bias current). All set points are added and build the effective current set point. A TTL-Trigger input generates fast and clean pulses at the high frequency set point 1.
Technical subjects to change without notice.

Warning!
Risk of exposure of hazardous laser radiation
in combination with laser light emitting devices!

MESSTEC Power Converter GmbH

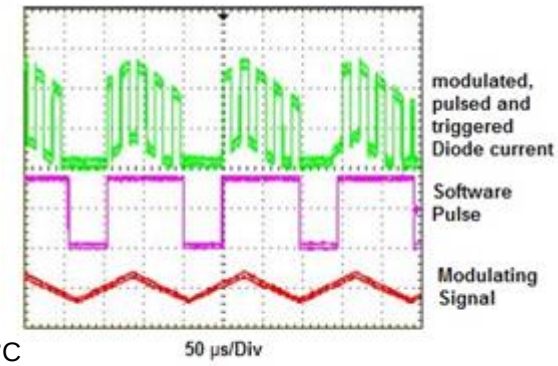
Data Sheet
Fast Diode Current Modulator MCM 10-25-z

Features

Drives arbitrary current waveforms into laser diodes
CW, pulsed, modulated or arbitrary curves
External trigger input, internal pulse generator
Short rise and fall time
Two analog hardware inputs plus software BIAS current
Serial interface for configuration, controlling and monitoring

Specification

Diode current CW	0 ... 10A
Diode current pulsed	0 ... 20A (short pulses)
Diode voltage	1 ... 22,5V
Output power	230W
Power dissipation	30W max allowed
Supply voltage	3,5 … 24,5V
Supply current	max 11A
Rise time / Fall time	6µs / 6µs
Frequency (set point 1)	max 80kHz
Frequency (set point 2)	max 80kHz



Signal Inputs / Outputs

Diode current set point 1	0 ... 500mV (50 Ohm input)
Diode current set point 1 pulse	0 …1000mV (50 Ohm input)
Diode current set point 2	0 ... 5V (high impedance)
Enable & Reset / Trigger	Open Collector / TTL
Diode current monitor	0 ... 2,5V
Temperature	1863,9mV ... 919mV for 0 ... 80°C
Ready	Open Collector

General Specifications

Ambient temperature	0 ... +45°C	Temperature stability	±150ppm / °C
Cooling	Required	Frequency bandwidth	DC ... 93kHz (set point 1)
Dimensions	87 x 72 x 41mm	Frequency bandwidth	DC ... 68kHz (set point 2)
Weight	220g	Accuracy	± 0,2%
		Internal DA-converter	12-bit

Description

The diode current modulator MCM 10-25-z is a linear modulator with excellent properties for driving arbitrary current waveforms or pulses into laser diodes. Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 80 kHz and currents up to 10A for CW and 20A for short pulsed waveforms. An internal pulse generator and an external trigger input generate fast and clean pulses. The modulator is small and compact and it is designed for mounting with low inductance at laser diodes or for integration in laser diode modules. It has two hardware analogue inputs for the current set point and one software BIAS current set point. All set points are added and build the effective current set point. Configuration, controlling and monitoring with PC, notebook or tablet.

Type	Interface	Order Code
MCM 10-25-U	USB	10100555
MCM 10-25-R	RS 232	10100570

Warning!
Risk of exposure of hazardous laser radiation
in combination with laser light emitting devices!

Technical subjects to change without notice.

MESSTEC Power Converter GmbH

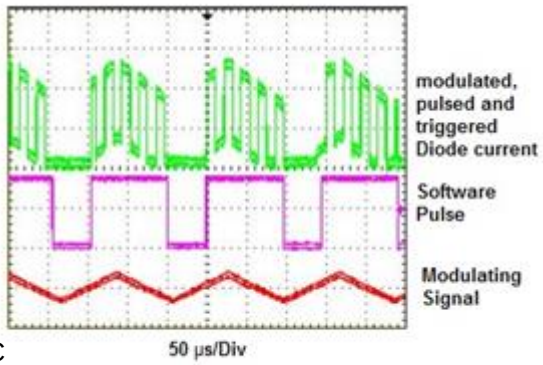
Data Sheet
Fast Diode Current Modulator MCM 20-25-z

Features

Drives arbitrary current waveforms into laser diodes
CW, pulsed, modulated or arbitrary curves
External trigger input, internal pulse generator
Short rise and fall time
Two analog hardware inputs plus software BIAS current
Serial interface for configuration, controlling and monitoring

Specification

Diode current CW	0 ... 20A
Diode current pulsed	0 ... 40A (short pulses)
Diode voltage	1 ... 22,5V
Output power	460W
Power dissipation	60W max allowed
Supply voltage	3,5 … 24,5V
Supply current	max 21A
Rise time / Fall time	6µs / 6µs
Frequency (set point 1)	max 80kHz
Frequency (set point 2)	max 80kHz



Signal Inputs / Outputs

Diode current set point 1	0 ... 500mV (50 Ohm input)
Diode current set point 1 pulse	0 …1000mV (50 Ohm input)
Diode current set point 2	0 ... 5V (high impedance)
Enable & Reset / Trigger	Open Collector / TTL
Diode current monitor	0 ... 2,5V
Temperature	1863,9mV ... 919mV for 0 ... 80°C
Ready	Open Collector

General Specifications

Ambient temperature	0 ... +45°C	Temperature stability	±150ppm / °C
Cooling	Required	Frequency bandwidth	DC ... 93kHz (set point 1)
Dimensions	87 x 72 x 41mm	Frequency bandwidth	DC ... 68kHz (set point 2)
Weight	220g	Accuracy	± 0,2%
		Internal DA-converter	12-bit

Description

The diode current modulator MCM 20-25-z is a linear modulator with excellent properties for driving arbitrary current waveforms or pulses into laser diodes. Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 80 kHz and currents up to 20A for CW and 40A for short pulsed waveforms. An internal pulse generator and an external trigger input generate fast and clean pulses. The modulator is small and compact and it is designed for mounting with low inductance at laser diodes or for integration in laser diode modules. It has two hardware analogue inputs for the current set point and one software BIAS current set point. All set points are added and build the effective current set point. Configuration, controlling and monitoring with PC, notebook or tablet.

Type	Interface	Order Code
MCM 20-25-U	USB	10100556
MCM 20-25-R	RS 232	10100571

Warning!
Risk of exposure of hazardous laser radiation
in combination with laser light emitting devices!

Technical subjects to change without notice.

MESSTEC Power Converter GmbH

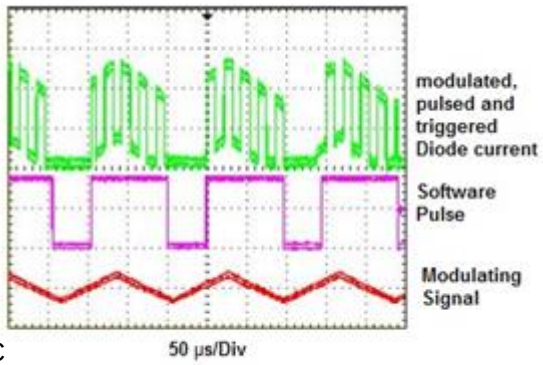
Data Sheet
Fast Diode Current Modulator MCM 30-25-z

Features

Drives arbitrary current waveforms into laser diodes
CW, pulsed, modulated or arbitrary curves
External trigger input, internal pulse generator
Short rise and fall time
Two analog hardware inputs plus software BIAS current
Serial interface for configuration, controlling and monitoring

Specification

Diode current CW	0 ... 30A
Diode current pulsed	0 ... 60A (short pulses)
Diode voltage	1 ... 22,5V
Output power	690W
Power dissipation	90W max allowed
Supply voltage	3,5 … 24,5V
Supply current	max 31A
Rise time / Fall time	6µs / 6µs
Frequency (set point 1)	max 80kHz
Frequency (set point 2)	max 80kHz



Signal Inputs / Outputs

Diode current set point 1	0 ... 500mV (50 Ohm input)
Diode current set point 1 pulse	0 …1000mV (50 Ohm input)
Diode current set point 2	0 ... 5V (high impedance)
Enable & Reset / Trigger	Open Collector / TTL
Diode current monitor	0 ... 2,5V
Temperature	1863,9mV ... 919mV for 0 ... 80°C
Ready	Open Collector

General Specifications

Ambient temperature	0 ... +45°C	Temperature stability	±150ppm / °C
Cooling	Required	Frequency bandwidth	DC ... 93kHz (set point 1)
Dimensions	87 x 72 x 41mm	Frequency bandwidth	DC ... 68kHz (set point 2)
Weight	220g	Accuracy	± 0,2%
		Internal DA-converter	12-bit

Description

The diode current modulator MCM 30-25-z is a linear modulator with excellent properties for driving arbitrary current waveforms or pulses into laser diodes. Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 80 kHz and currents up to 30A for CW and 60A for short pulsed waveforms. An internal pulse generator and an external trigger input generate fast and clean pulses. The modulator is small and compact and it is designed for mounting with low inductance at laser diodes or for integration in laser diode modules. It has two hardware analogue inputs for the current set point and one software BIAS current set point. All set points are added and build the effective current set point. Configuration, controlling and monitoring with PC, notebook or tablet.

Type	Interface	Order Code
MCM 30-25-U	USB	10100557
MCM 30-25-R	RS 232	10100572

Warning!
Risk of exposure of hazardous laser radiation
in combination with laser light emitting devices!

Technical subjects to change without notice.

MESSTEC Power Converter GmbH

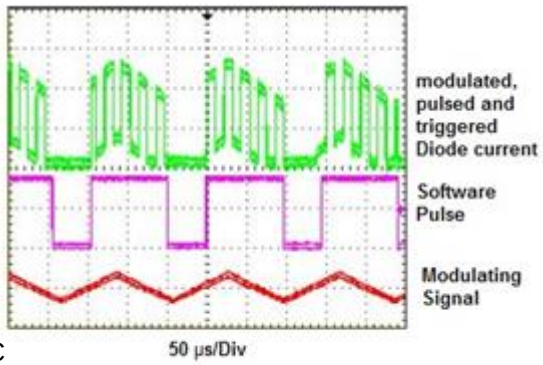
Data Sheet
Fast Diode Current Modulator MCM 40-25-z

Features

Drives arbitrary current waveforms into laser diodes
CW, pulsed, modulated or arbitrary curves
External trigger input, internal pulse generator
Short rise and fall time
Two analog hardware inputs plus software BIAS current
Serial interface for configuration, controlling and monitoring

Specification

Diode current CW	0 ... 40A
Diode current pulsed	0 ... 80A (short pulses)
Diode voltage	1 ... 22,5V
Output power	920W
Power dissipation	120W max allowed
Supply voltage	3,5 … 24,5V
Supply current	max 41A
Rise time / Fall time	6µs / 6µs
Frequency (set point 1)	max 80kHz
Frequency (set point 2)	max 80kHz



Signal Inputs / Outputs

Diode current set point 1	0 ... 500mV (50 Ohm input)
Diode current set point 1 pulse	0 …1000mV (50 Ohm input)
Diode current set point 2	0 ... 5V (high impedance)
Enable & Reset / Trigger	Open Collector / TTL
Diode current monitor	0 ... 2,5V
Temperature	1863,9mV ... 919mV for 0 ... 80°C
Ready	Open Collector

General Specifications

Ambient temperature	0 ... +45°C	Temperature stability	±150ppm / °C
Cooling	Required	Frequency bandwidth	DC ... 93kHz (set point 1)
Dimensions	87 x 72 x 41mm	Frequency bandwidth	DC ... 68kHz (set point 2)
Weight	220g	Accuracy	± 0,2%
		Internal DA-converter	12-bit

Description

The diode current modulator MCM 40-25-z is a linear modulator with excellent properties for driving arbitrary current waveforms or pulses into laser diodes. Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 80 kHz and currents up to 40A for CW and 80A for short pulsed waveforms. An internal pulse generator and an external trigger input generate fast and clean pulses. The modulator is small and compact and it is designed for mounting with low inductance at laser diodes or for integration in laser diode modules. It has two hardware analogue inputs for the current set point and one software BIAS current set point. All set points are added and build the effective current set point. Configuration, controlling and monitoring with PC, notebook or tablet.

Type	Interface	Order Code
MCM 40-25-U	USB	10100558
MCM 40-25-R	RS 232	10100573

Warning!
Risk of exposure of hazardous laser radiation
in combination with laser light emitting devices!

Technical subjects to change without notice.

MESSTEC Power Converter GmbH

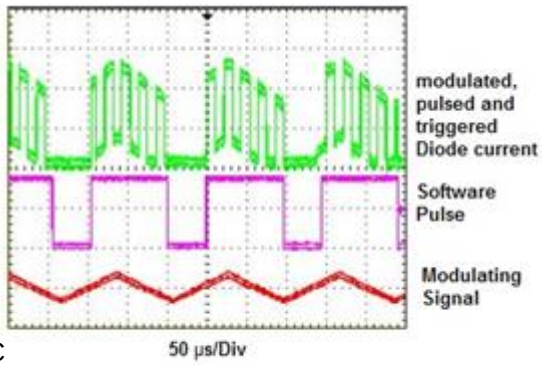
Data Sheet
Fast Diode Current Modulator MCM 10-50-z

Features

Drives arbitrary current waveforms into laser diodes
CW, pulsed, modulated or arbitrary curves
External trigger input, internal pulse generator
Short rise and fall time
Two analog hardware inputs plus software BIAS current
Serial interface for configuration, controlling and monitoring

Specification

Diode current CW	0 ... 10A
Diode current pulsed	0 ... 20A (short pulses)
Diode voltage	1 ... 46V
Output power	460W
Power dissipation	30W max allowed
Supply voltage	24,5 … 50V
Supply current	max 11A
Rise time / Fall time	6µs / 6µs
Frequency (set point 1)	max 80kHz
Frequency (set point 2)	max 80kHz



Signal Inputs / Outputs

Diode current set point 1	0 ... 500mV (50 Ohm input)
Diode current set point 1 pulse	0 …1000mV (50 Ohm input)
Diode current set point 2	0 ... 5V (high impedance)
Enable & Reset / Trigger	Open Collector / TTL
Diode current monitor	0 ...2,5V
Temperature	1863,9mV ... 919mV for 0 ... 80°C
Ready	Open Collector

General Specifications

Ambient temperature	0 ... +45°C	Temperature stability	±150ppm / °C
Cooling	Required	Frequency bandwidth	DC ... 93kHz (set point 1)
Dimensions	87 x 72 x 41mm	Frequency bandwidth	DC ... 68kHz (set point 2)
Weight	220g	Accuracy	± 0,2%
		Internal DA-converter	12-bit

Description

The diode current modulator MCM 10-50-z is a linear modulator with excellent properties for driving arbitrary current waveforms or pulses into laser diodes. Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 80 kHz and currents up to 10A for CW and 20A for short pulsed waveforms. An internal pulse generator and an external trigger input generate fast and clean pulses. The modulator is small and compact and it is designed for mounting with low inductance at laser diodes or for integration in laser diode modules. It has two hardware analogue inputs for the current set point and one software BIAS current set point. All set points are added and build the effective current set point. Configuration, controlling and monitoring with PC, notebook or tablet.

Type	Interface	Order Code
MCM 10-50-U	USB	10100560
MCM 10-50-R	RS 232	10100575

Warning!
Risk of exposure of hazardous laser radiation
in combination with laser light emitting devices!

Technical subjects to change without notice.

MESSTEC Power Converter GmbH

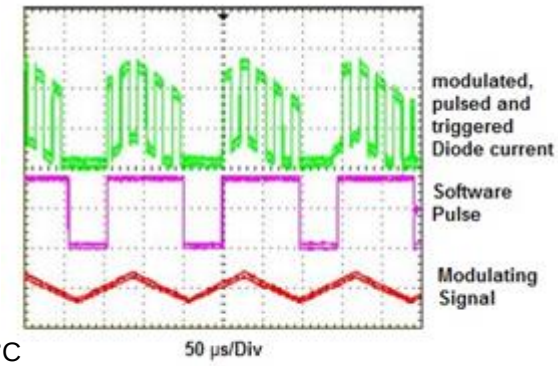
Data Sheet
Fast Diode Current Modulator MCM 20-50-z

Features

Drives arbitrary current waveforms into laser diodes
CW, pulsed, modulated or arbitrary curves
External trigger input, internal pulse generator
Short rise and fall time
Two analog hardware inputs plus software BIAS current
Serial interface for configuration, controlling and monitoring

Specification

Diode current CW	0 ... 20A
Diode current pulsed	0 ... 40A (short pulses)
Diode voltage	1 ... 46V
Output power	920W
Power dissipation	60W max allowed
Supply voltage	24,5 … 50V
Supply current	max 21A
Rise time / Fall time	6µs / 6µs
Frequency (set point 1)	max 80kHz
Frequency (set point 2)	max 80kHz



Signal Inputs / Outputs

Diode current set point 1	0 ... 500mV (50 Ohm input)
Diode current set point 1 pulse	0 …1000mV (50 Ohm input)
Diode current set point 2	0 ... 5V (high impedance)
Enable & Reset / Trigger	Open Collector / TTL
Diode current monitor	0 ... 2,5V
Temperature	1863,9mV ... 919mV for 0 ... 80°C
Ready	Open Collector

General Specifications

Ambient temperature	0 ... +45°C	Temperature stability	±150ppm / °C
Cooling	Required	Frequency bandwidth	DC ... 93kHz (set point 1)
Dimensions	87 x 72 x 41mm	Frequency bandwidth	DC ... 68kHz (set point 2)
Weight	220g	Accuracy	± 0,2%
		Internal DA-converter	12-bit

Description

The diode current modulator MCM 20-50-z is a linear modulator with excellent properties for driving arbitrary current waveforms or pulses into laser diodes. Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 80 kHz and currents up to 20A for CW and 40A for short pulsed waveforms. An internal pulse generator and an external trigger input generate fast and clean pulses. The modulator is small and compact and it is designed for mounting with low inductance at laser diodes or for integration in laser diode modules. It has two hardware analogue inputs for the current set point and one software BIAS current set point. All set points are added and build the effective current set point. Configuration, controlling and monitoring with PC, notebook or tablet.

Type	Interface	Order Code
MCM 20-50-U	USB	10100561
MCM 20-50-R	RS 232	10100576

Warning!
Risk of exposure of hazardous laser radiation
in combination with laser light emitting devices!

Technical subjects to change without notice.

MESSTEC Power Converter GmbH

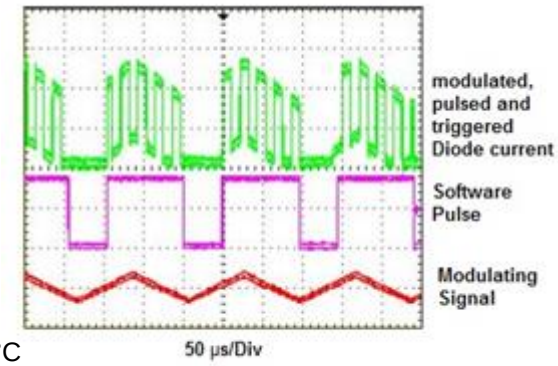
Data Sheet
Fast Diode Current Modulator MCM 30-50-z

Features

Drives arbitrary current waveforms into laser diodes
CW, pulsed, modulated or arbitrary curves
External trigger input, internal pulse generator
Short rise and fall time
Two analog hardware inputs plus software BIAS current
Serial interface for configuration, controlling and monitoring

Specification

Diode current CW	0 ... 30A
Diode current pulsed	0 ... 60A (short pulses)
Diode voltage	1 ... 46V
Output power	1380W
Power dissipation	90W max allowed
Supply voltage	24,5 … 50V
Supply current	max 31A
Rise time / Fall time	6µs / 6µs
Frequency (set point 1)	max 80kHz
Frequency (set point 2)	max 80kHz



Signal Inputs / Outputs

Diode current set point 1	0 ... 500mV (50 Ohm input)
Diode current set point 1 pulse	0 …1000mV (50 Ohm input)
Diode current set point 2	0 ... 5V (high impedance)
Enable & Reset / Trigger	Open Collector / TTL
Diode current monitor	0 ... 2,5V
Temperature	1863,9mV ... 919mV for 0 ... 80°C
Ready	Open Collector

General Specifications

Ambient temperature	0 ... +45°C	Temperature stability	±150ppm / °C
Cooling	Required	Frequency bandwidth	DC ... 93kHz (set point 1)
Dimensions	87 x 72 x 41mm	Frequency bandwidth	DC ... 68kHz (set point 2)
Weight	220g	Accuracy	± 0,2%
		Internal DA-converter	12-bit

Description

The diode current modulator MCM 30-50-z is a linear modulator with excellent properties for driving arbitrary current waveforms or pulses into laser diodes. Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 80 kHz and currents up to 30A for CW and 60A for short pulsed waveforms. An internal pulse generator and an external trigger input generate fast and clean pulses. The modulator is small and compact and it is designed for mounting with low inductance at laser diodes or for integration in laser diode modules. It has two hardware analogue inputs for the current set point and one software BIAS current set point. All set points are added and build the effective current set point. Configuration, controlling and monitoring with PC, notebook or tablet.

Type	Interface	Order Code
MCM 30-50-U	USB	10100562
MCM 30-50-R	RS 232	10100577

Warning!
Risk of exposure of hazardous laser radiation
in combination with laser light emitting devices!

Technical subjects to change without notice.

MESSTEC Power Converter GmbH

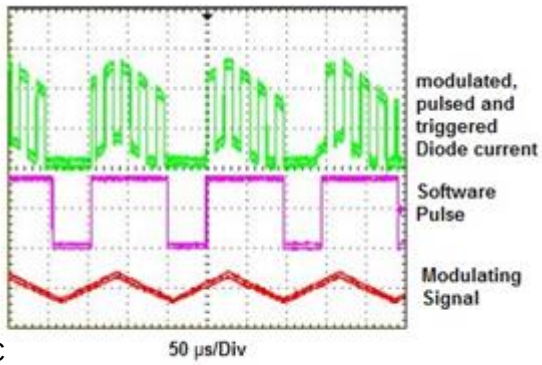
Data Sheet
Fast Diode Current Modulator MCM 40-50-z

Features

Drives arbitrary current waveforms into laser diodes
CW, pulsed, modulated or arbitrary curves
External trigger input, internal pulse generator
Short rise and fall time
Two analog hardware inputs plus software BIAS current
Serial interface for configuration, controlling and monitoring

Specification

Diode current CW	0 ... 40A
Diode current pulsed	0 ... 80A (short pulses)
Diode voltage	1 ... 46V
Output power	1840W
Power dissipation	120W max allowed
Supply voltage	24,5 … 50V
Supply current	max 41A
Rise time / Fall time	6µs / 6µs
Frequency (set point 1)	max 80kHz
Frequency (set point 2)	max 80kHz



Signal Inputs / Outputs

Diode current set point 1	0 ... 500mV (50 Ohm input)
Diode current set point 1 pulse	0 …1000mV (50 Ohm input)
Diode current set point 2	0 ... 5V (high impedance)
Enable & Reset / Trigger	Open Collector / TTL
Diode current monitor	0 ... 2,5V
Temperature	1863,9mV ... 919mV for 0 ... 80°C
Ready	Open Collector

General Specifications

Ambient temperature	0 ... +45°C	Temperature stability	±150ppm / °C
Cooling	Required	Frequency bandwidth	DC ... 93kHz (set point 1)
Dimensions	87 x 72 x 41mm	Frequency bandwidth	DC ... 68kHz (set point 2)
Weight	220g	Accuracy	± 0,2%
		Internal DA-converter	12-bit

Description

The diode current modulator MCM 40-50-z is a linear modulator with excellent properties for driving arbitrary current waveforms or pulses into laser diodes. Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 80 kHz and currents up to 40A for CW and 80A for short pulsed waveforms. An internal pulse generator and an external trigger input generate fast and clean pulses. The modulator is small and compact and it is designed for mounting with low inductance at laser diodes or for integration in laser diode modules. It has two hardware analogue inputs for the current set point and one software BIAS current set point. All set points are added and build the effective current set point. Configuration, controlling and monitoring with PC, notebook or tablet.

Type	Interface	Order Code
MCM 40-50-U	USB	10100563
MCM 40-50-R	RS 232	10100578

Warning!
Risk of exposure of hazardous laser radiation
in combination with laser light emitting devices!

Technical subjects to change without notice.