MESSTEC Power Converter GmbH

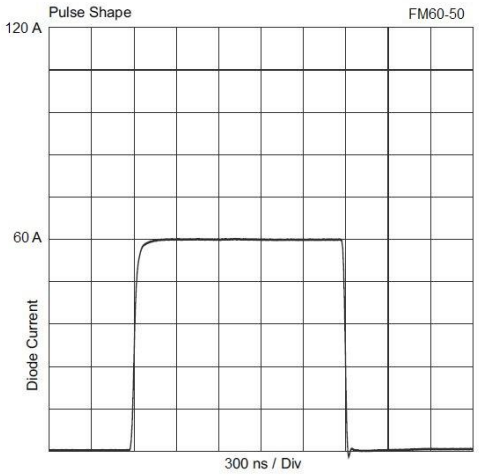
Data Sheet
Fast Modulator FM 60-50

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!