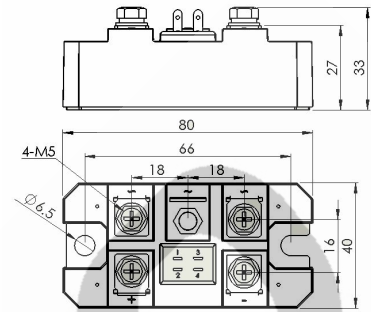
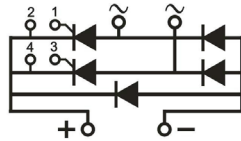


**Features**

- Isolated mounting base 2500V~
- Pressure contact technology with Increased power cycling capability
- Space and weight savings

**Typical Applications**

- AC/DC Motor drives
- Heating control
- Dimming
- Inverters



**Maximum value**

Symbol	Parameter	Rating		Unit
		MFQ100-12	MFQ100-16	
VRRM	Peak reverse repetitive voltage	1200	1600	V
VRSM	Peak reverse non-repetitive voltage	1300	1700	V
VDRM	Peak off-state repetitive voltage	1200	1600	V

Symbol	Parameter	Test condition	Rating	Unit
I <sub>o</sub>	Average on-state current	Single-phase full-wave rectifying circuit TC:85℃	100	A
I <sub>T(RMS)</sub> , I <sub>F(RMS)</sub>	Forward RMS current	One-side heat-dissipation, 180°sin half wave, 50Hz, TC:85℃	157	A
I <sub>TSM</sub> , I <sub>FSM</sub>	Forward surge current	t=10ms, 50Hz, Sin, T <sub>j</sub>	2100	A
I <sup>2</sup> t	I <sup>2</sup> t value	V <sub>R</sub> = 0.6V <sub>RRM</sub> , T <sub>j</sub>	22000	A <sup>2</sup> S
P <sub>GM</sub>	Peak gate power		10	W
P <sub>G(AV)</sub>	Average gate power		3	W
di/dt	On-state current critical rise rate	I <sub>GM</sub> =1.5A, tr ≤0.5μs, T <sub>j</sub> =25℃	50	A/μs
V <sub>iso</sub>	Isolation voltage	AC one minute	2500	V
T <sub>j</sub>	Operating junction temperature		-40 to +125	℃
T <sub>jm</sub>	Rated junction temperature		125	℃
T <sub>stg</sub>	Storage temperature		-40 to +125	℃
M <sub>d</sub>	Mounting torque (copper plate) M6		4	N·m
	Mounting torque (connection terminal) M5		2.7	N·m
W <sub>t</sub>	Weight		200	g

**Electrical characteristics**

Symbol	Parameter	Test condition	Rating	Unit
I <sub>DRM</sub>	Peak off-state repetitive current	One-side heat-dissipation, V <sub>D</sub> =V <sub>DRM</sub> , sine half wave, T <sub>j</sub> =125℃	12	mA
I <sub>RRM</sub>	Peak reverse repetitive current	One-side heat-dissipation, V <sub>R</sub> =V <sub>RRM</sub> , sine half wave, T <sub>j</sub> =125℃	12	mA
V <sub>TM</sub> / V <sub>FM</sub>	Peak forward voltage	I <sub>TM</sub> / I <sub>FM</sub> = 112A, T <sub>j</sub> =25℃	1.6 / 1.3	V
V <sub>GT</sub>	Gate trigger voltage	T <sub>j</sub> =25℃, I <sub>T</sub> =1A, V <sub>D</sub> =12V	0.7-2.5	V
I <sub>GT</sub>	Gate trigger current	T <sub>j</sub> =25℃, I <sub>T</sub> =1A, V <sub>D</sub> =12V	20-100	mA
V <sub>GD</sub>	Gate non-trigger voltage	T <sub>j</sub> =125℃, V <sub>D</sub> =2/3V <sub>DRM</sub>	0.2	V
I <sub>GD</sub>	Gate non-trigger current	T <sub>j</sub> =125℃, V <sub>D</sub> =2/3V <sub>DRM</sub>	10	mA
dv/dt	On-state voltage critical rise rate	T <sub>j</sub> =125℃, V <sub>D</sub> =2/3V <sub>DRM</sub>	500	V/μs
I <sub>H</sub>	Holding current	T <sub>j</sub> =25℃	20-150	mA
I <sub>L</sub>	Latching current	T <sub>j</sub> =25℃	100-400	mA
R <sub>th(j-c)</sub>	Thermal impedance (junction-case)	One-side heat dissipation, sine half wave	0.3	℃/W