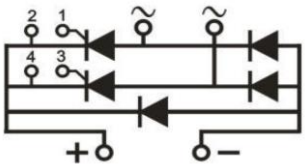
MMH75.16

Single-phase half-control

Features:

- International standard package
- Isolation voltage 2500V ~
- Simple mounting
- UL recognized, file no. E312789



Typical applications:

- Various rectifier power
- AC/DC motor control
- Heater control
- Light dimmer
- Frequency cpnverters

Symbol	Characteristcs	Test Conditions	Value			Unit
			Min	Typ	Max	
$V_{RSM/DSM}$	Non-repetitive reverse/forward blocking voltage	Tj = 25°C			1700	V
$V_{RRM/DRM}$	Repetitive reverse/forward blocking voltage	Tj = 25°C			1600	V
I_O	DC output current	Single-phase full wave rectifyinng circuit, T_c = 85 °C			75	A
I_{RRM} I_{DRM}	Repetitive peak current	at V_{DRM}/V_{RRM} Tj = 125°C			10	mA
I_{TSM}-I_{FSM}	Surge non repetitive current	10ms half sine wave Tj = 45°C			1000	A
I^2t	I^2t for fusing coordination	Thristor: V_R = 60% V_{RRM} Tj = 45°C			5000	A^2s
V_{TO}	Threshold voltage	Tj = 125°C			0.90	V
r_T	On-state slope resistance	Tj = 125°C			5	mΩ
V_{TM}-V_{FM}	Thyristor: Peak on-state voltage	T=25°C ; I_T=90A			1.60	V
	Diode: Peak forward voltage	T=25°C ; I_F=90A			1.20	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM} = 67% V_{DRM}, Tj = 125°C, linear voltage rise			500	V/µs
di/dt	Critical rate of rise of off-state current	Tj = 25°C, Gate source 1,5A, Tr < 0,5µs			150	A/µs
I_{GT}	Gate trigger current	V_A = 12V, I_A = 1A, 'Tj = 25 °C	20		150	mA
V_{GT}	Gate trigger voltage		0.70		1.80	V
I_{GD}	Gate non-trigger current	V_D = 2/3V_{DRM}, 'Tj = 125 °C			10	mA
V_{GD}	Gate non-trigger voltage				0.25	V
P_{GM}	Gate peak power				10	W
$P_{G(AV)}$	Gate average power				0.5	W
I_H	Holding current	Tj = 25°C	20		150	mA
I_L	Latching current	Tj = 25°C	100		400	mA
$R_{th(j-c)}$	Thermal resistance junction to case	per module			0.47	°C/W
$R_{th(c-s)}$	Thermal resistance case to sink	per module			0.07	°C/W
V_{ISO}	Isolation voltage	50Hz, RMS, t = 1min, I_{ISO} : 1mA (MAX)		2500		V
F_M	Mounting torque - copper plate (M6)		4		6	N·m
	Mounting torque - terminal (M5)		2.5		4.5	N·m
T_{stg}	Storage Temperature		-40		125	°C
T_j	Operating Temperature		-40		125	°C
W_t	Weight			190		g
Outline	M18-1					

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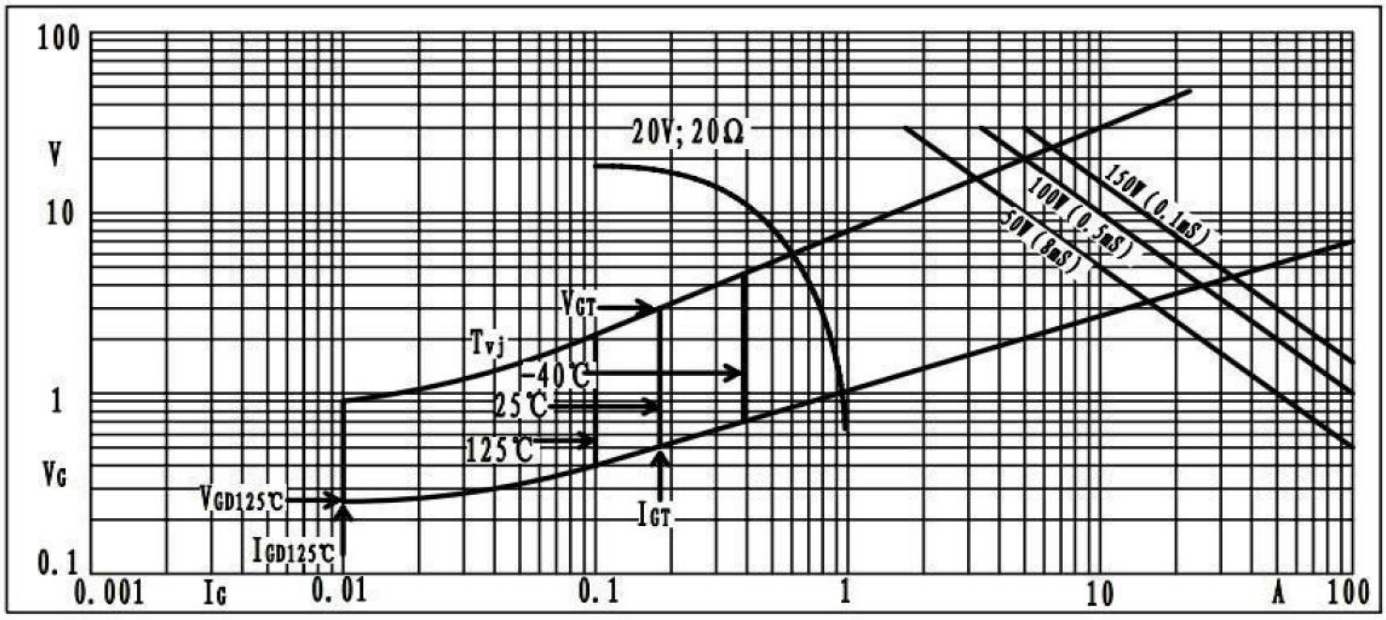

Fig1. Gate trigger characteristics

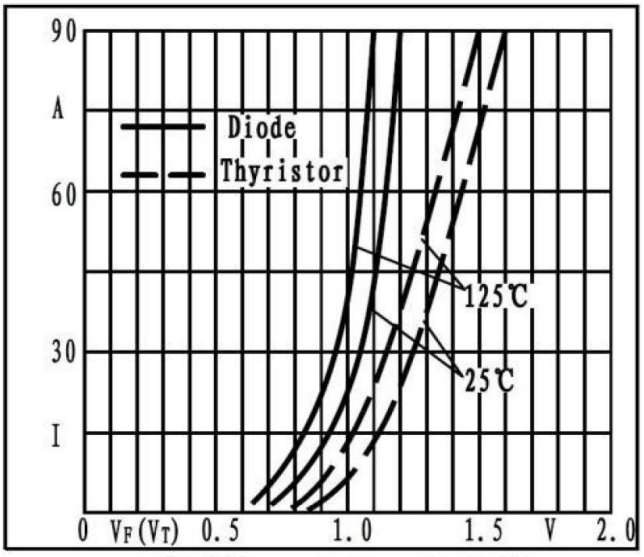

Fig2. Forward characteristics

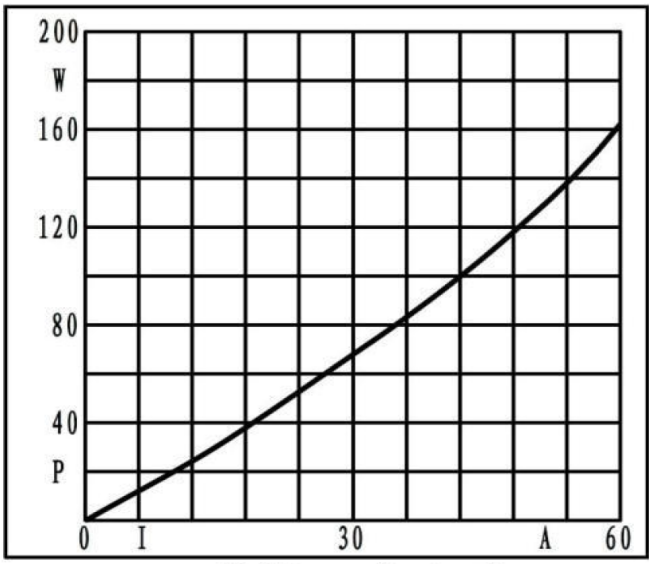

Fig3. Power dissipation

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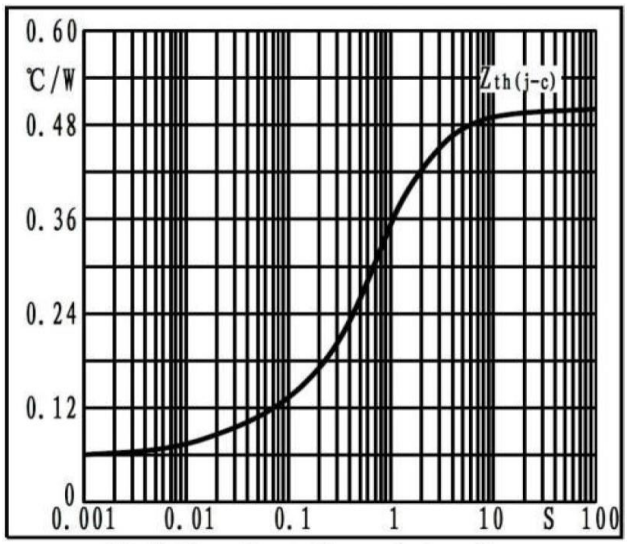


Fig4. Transient thermal impedance

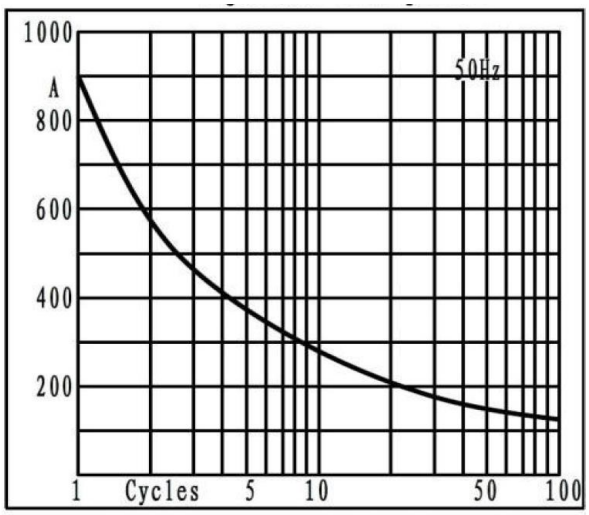


Fig5. Max non-repetitive forward surge current

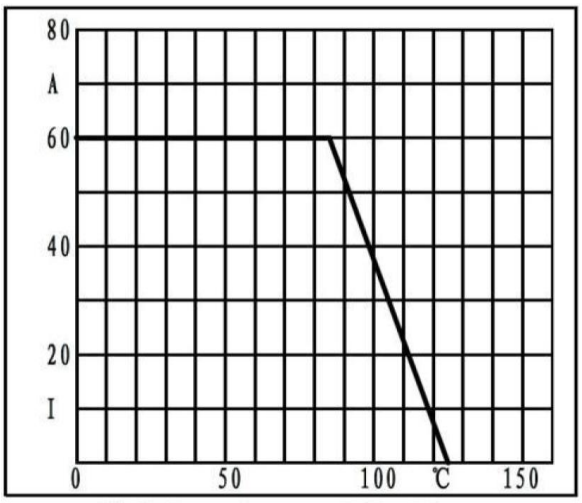
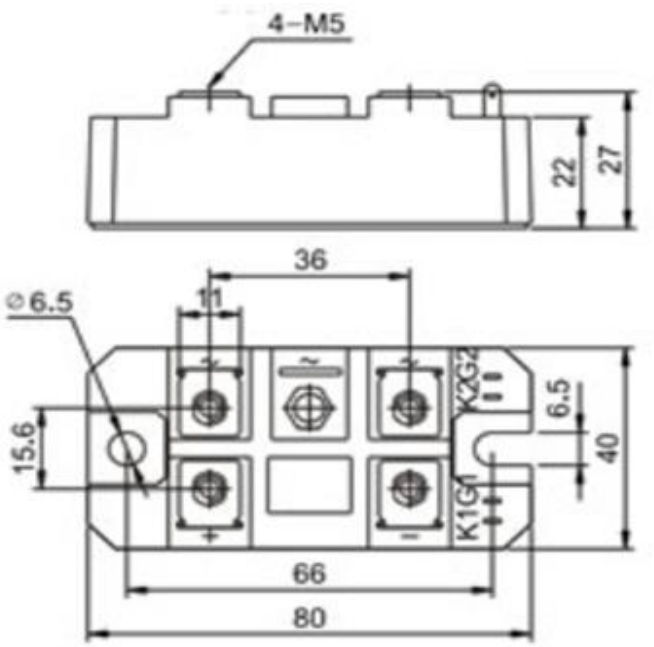


Fig6. Forward current derating curve



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