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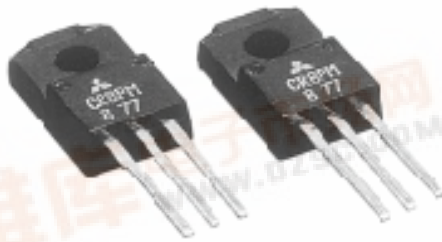
[捷多邦, 专业PCB打样工厂, 24小时加急出货](#)

MITSUBISHI SEMICONDUCTOR (THYRISTOR)

# CR8PM

MEDIUM POWER USE  
INSULATED TYPE, GLASS PASSIVATION TYPE

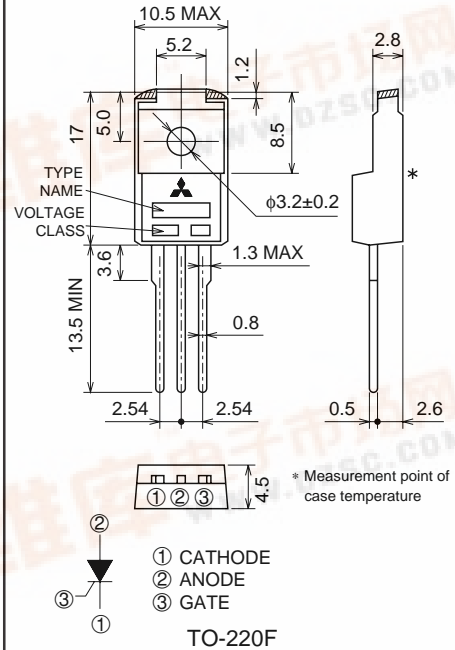
## CR8PM



- IT (AV) ..... 8A
- VDRM ..... 400V/600V
- IGT ..... 15mA
- Viso ..... 1500V
- UL Recognized: File No. E80276

## OUTLINE DRAWING

Dimensions in mm



## APPLICATION

Switching mode power supply, ECR, regulator for auticycle, motor control

## MAXIMUM RATINGS (Ta=25°C, unless otherwise noted)

Symbol	Parameter	Voltage class		Unit
		8	12	
VRRM	Repetitive peak reverse voltage	400	600	V
VRSM	Non-repetitive peak reverse voltage	500	720	V
VR (DC)	DC reverse voltage	320	480	V
VDRM	Repetitive peak off-state voltage	400	600	V
Vd (DC)	DC off-state voltage	320	480	V

Symbol	Parameter	Conditions	Ratings	Unit
IT (RMS)	RMS on-state current		12.6	A
IT (AV)	Average on-state current	Commercial frequency, sine half wave, 180° conduction, Tc=81°C	8.0	A
ITSM	Surge on-state current	60Hz sine half wave 1 full cycle, peak value, non-repetitive	120	A
I <sup>2</sup> t	I <sup>2</sup> t for fusing	Value corresponding to 1 cycle of half wave 60Hz, surge on-state current	60	A <sup>2</sup> s
PGM	Peak gate power dissipation		5.0	W
PG (AV)	Average gate power dissipation		0.5	W
VFGM	Peak gate forward voltage		6.0	V
VRGM	Peak gate reverse voltage		10	V
IFGM	Peak gate forward current		2.0	A
Tj	Junction temperature		-40 ~ +125	°C
Tstg	Storage temperature		-40 ~ +125	°C
—	Weight	Typical value	2.0	g
Viso	Isolation voltage	Ta=25°C, AC 1 minute, each terminal to case	1500	V

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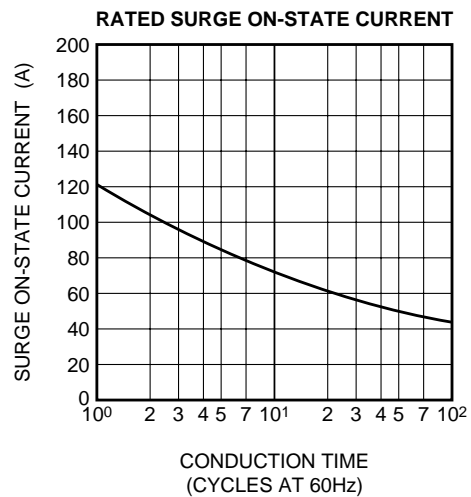
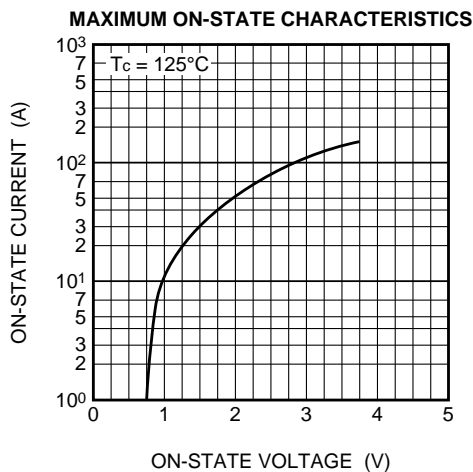
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## ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Test conditions	Limits			Unit
			Min.	Typ.	Max.	
I <sub>RRM</sub>	Repetitive peak reverse current	T <sub>j</sub> =125°C, V <sub>RRM</sub> applied	—	—	2.0	mA
I <sub>DRM</sub>	Repetitive peak off-state current	T <sub>j</sub> =125°C, V <sub>DRM</sub> applied	—	—	2.0	mA
V <sub>TM</sub>	On-state voltage	T <sub>c</sub> =25°C, I <sub>TM</sub> =25A, instantaneous value	—	—	1.4	V
V <sub>GT</sub>	Gate trigger voltage	T <sub>a</sub> =25°C, V <sub>D</sub> =6V, I <sub>T</sub> =1A	—	—	1.0	V
V <sub>GD</sub>	Gate non-trigger voltage	T <sub>j</sub> =125°C, V <sub>D</sub> =1/2V <sub>DRM</sub>	0.2	—	—	V
I <sub>GT</sub>	Gate trigger current	T <sub>j</sub> =25°C, V <sub>D</sub> =6V, I <sub>T</sub> =1A	—	—	15	mA
I <sub>H</sub>	Holding current	T <sub>j</sub> =25°C, V <sub>D</sub> =12V	—	1.5	—	mA
R <sub>th(j-c)</sub>	Thermal resistance	Junction to case *1	—	—	3.7	°C/W

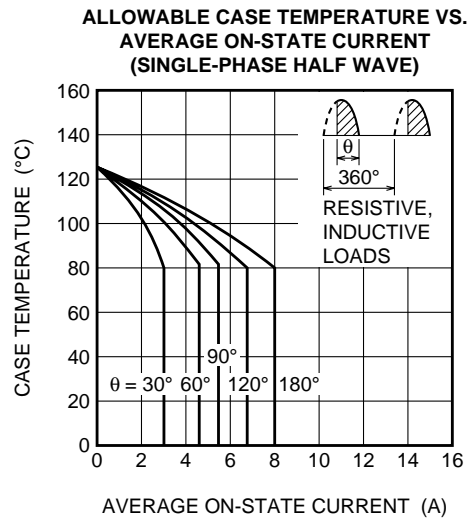
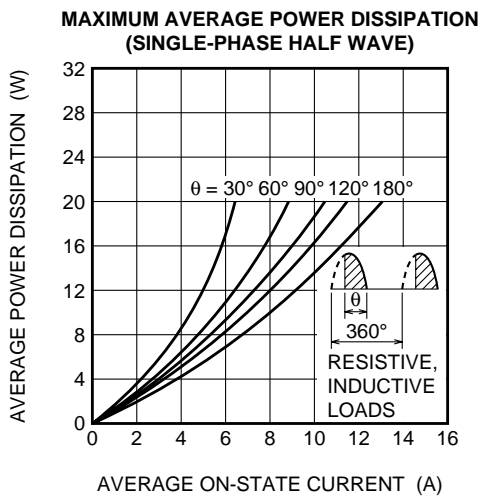
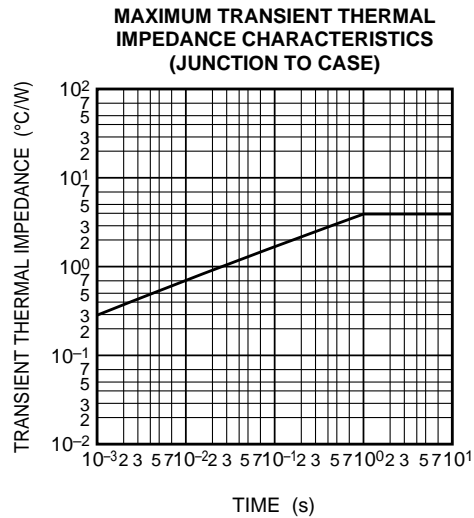
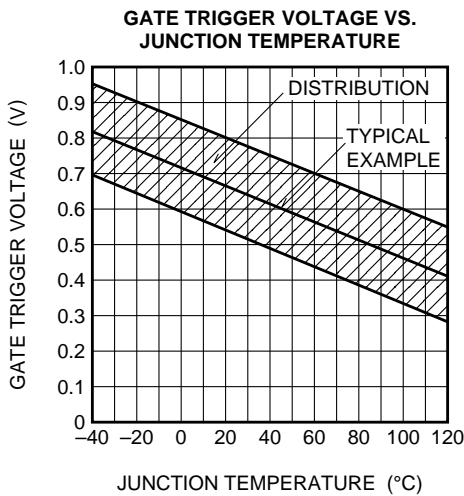
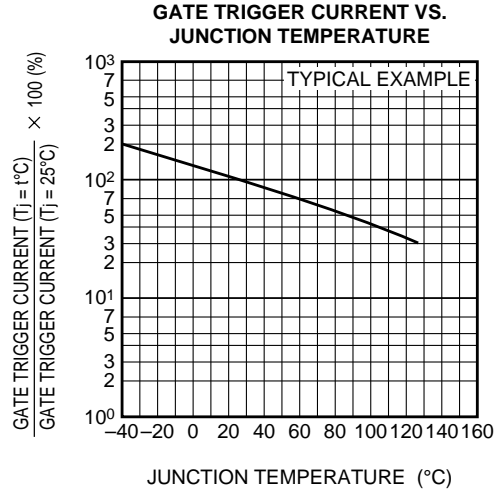
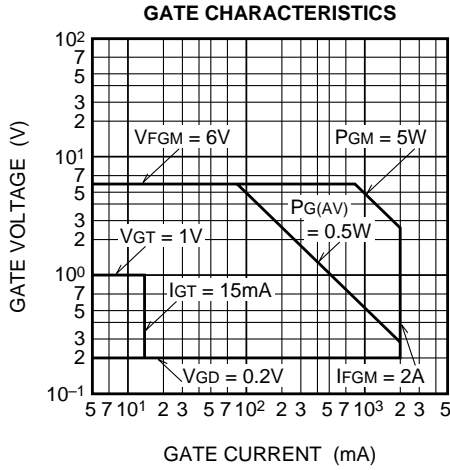
\*1. The contact thermal resistance R<sub>th(j-c)</sub> is 0.5°C/W with greased.

## PERFORMANCE CURVES



**CR8PM**

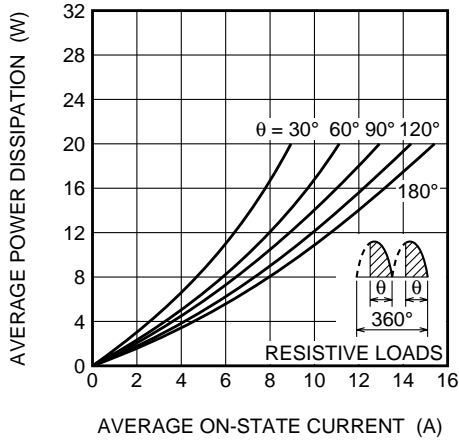
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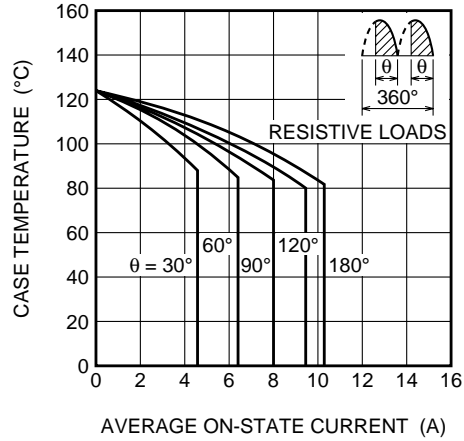
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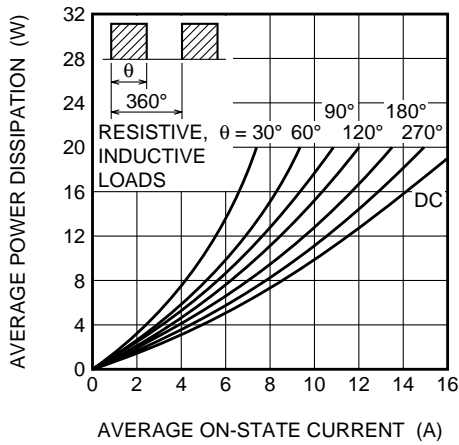
**MAXIMUM AVERAGE POWER DISSIPATION (SINGLE-PHASE FULL WAVE)**



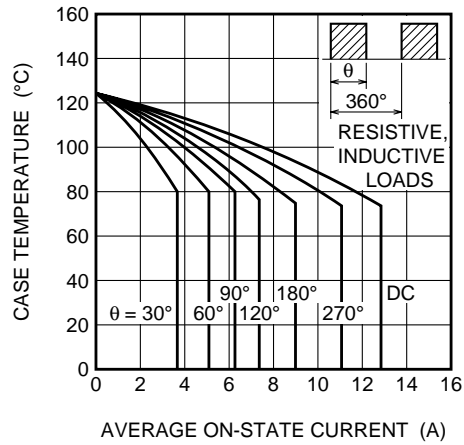
**ALLOWABLE CASE TEMPERATURE VS. AVERAGE ON-STATE CURRENT (SINGLE-PHASE FULL WAVE)**



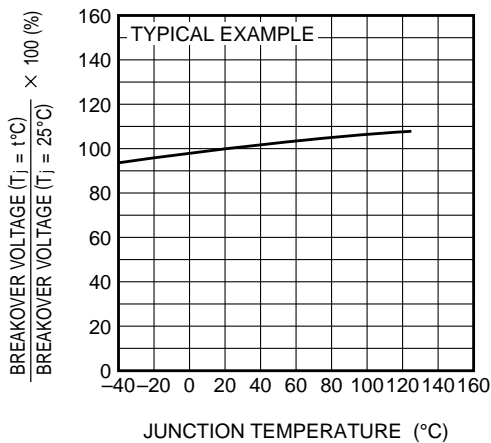
**MAXIMUM AVERAGE POWER DISSIPATION (RECTANGULAR WAVE)**



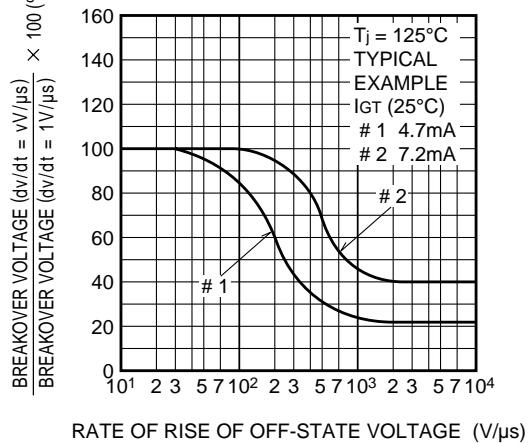
**ALLOWABLE CASE TEMPERATURE VS. AVERAGE ON-STATE CURRENT (RECTANGULAR WAVE)**



**BREAKOVER VOLTAGE VS. JUNCTION TEMPERATURE**



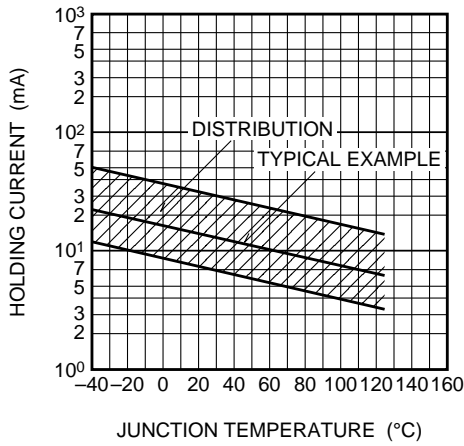
**BREAKOVER VOLTAGE VS. RATE OF RISE OF OFF-STATE VOLTAGE**



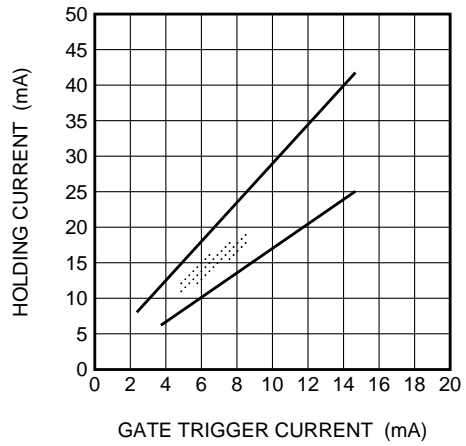
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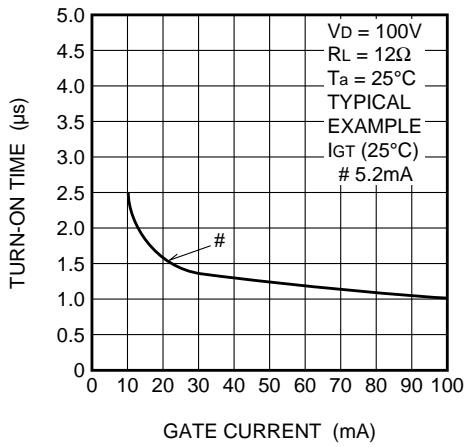
**HOLDING CURRENT VS. JUNCTION TEMPERATURE**



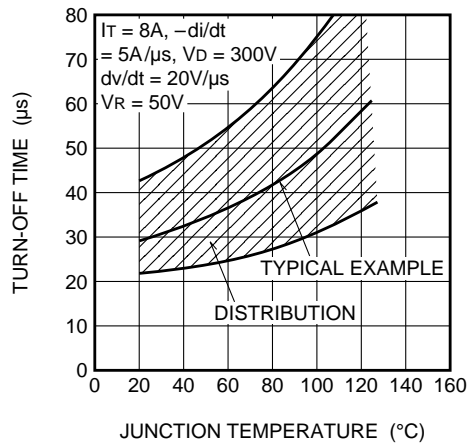
**HOLDING CURRENT VS. GATE TRIGGER CURRENT**



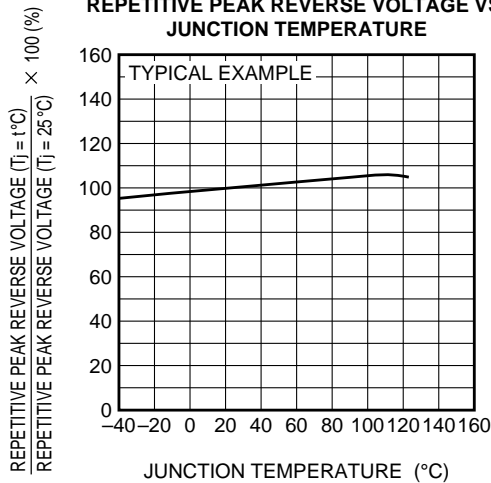
**TURN-ON TIME VS. GATE CURRENT**



**TURN-OFF TIME VS. JUNCTION TEMPERATURE**



**REPETITIVE PEAK REVERSE VOLTAGE VS. JUNCTION TEMPERATURE**



**GATE TRIGGER CURRENT VS. GATE CURRENT PULSE WIDTH**

