BCR2PM

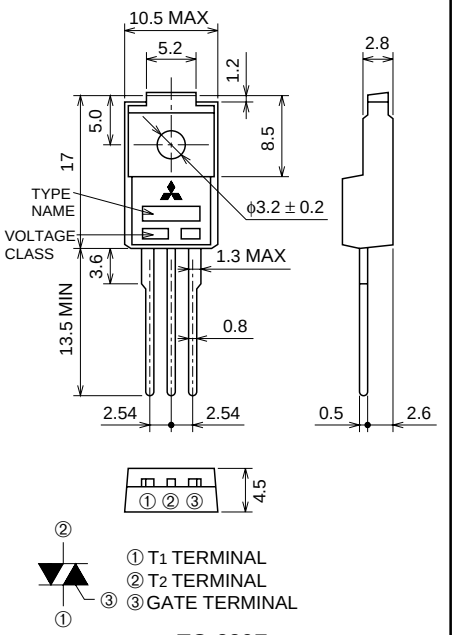
LOW POWER USE

INSULATED TYPE, PLANAR PASSIVATION TYPE

BCR2PM

- $I_{T\ (RMS)}$ 2A
- V_{DRM} 600V
- $I_{RGT\ I}$, $I_{RGT\ III}$ 10mA

OUTLINE DRAWING Dimensions in mm



TO-220F

APPLICATION

Switching mode power supply, light dimmer, electric flasher unit,
control of household equipment such as TV sets · stereo · refrigerator · washing machine · infrared kotatsu · carpet, solenoid drivers, small motor control,
copying machine, electric tool,
other general purpose control applications

MAXIMUM RATINGS

Symbol	Parameter	Voltage class	Unit
		12	
V_{DRM}	Repetitive peak off-state voltage ✻1	600	V
V_{DSM}	Non-repetitive peak off-state voltage ✻1	720	V

Symbol	Parameter	Conditions	Ratings	Unit
$I_{T\ (RMS)}$	RMS on-state current	Commercial frequency, sine full wave 360° conduction	2	A
I_{TSM}	Surge on-state current	60Hz sinewave 1 full cycle, peak value, non-repetitive	10	A
I^2t	I^2t for fusing	Value corresponding to 1 cycle of half wave 60Hz, surge on-state current	0.41	A^2s
P_{GM}	Peak gate power dissipation		1	W
$P_{G\ (AV)}$	Average gate power dissipation		0.1	W
V_{GM}	Peak gate voltage		6	V
I_{GM}	Peak gate current		1	A
T_j	Junction temperature		–40 ~ +125	°C
T_{stg}	Storage temperature		–40 ~ +125	°C
—	Weight	Typical value	2.0	g

✻1. Gate open.

MITSUBISHI ELECTRIC

BCR2PM

LOW POWER USE

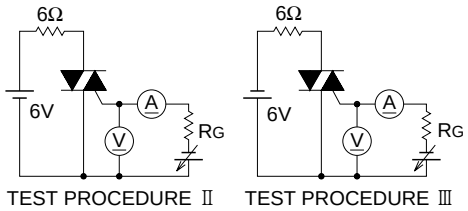
INSULATED TYPE, PLANAR PASSIVATION TYPE

ELECTRICAL CHARACTERISTICS

Symbol	Parameter		Test conditions	Limits			Unit
				Min.	Typ.	Max.	
I_{DRM}	Repetitive peak off-state current		T_j=125°C, V_{DRM} applied	—	—	0.5	mA
V_{TM}	On-state voltage		T_a=25°C, I_{TM}=1.5A, Instantaneous measurement	—	—	1.6	V
$V_{RGT\ I}$	Gate trigger voltage *2	Ⅱ	T_j=25°C, V_D=6V, R_L=6Ω, R_G=330Ω	—	—	2.0	V
$V_{RGT\ Ⅲ}$		Ⅲ		—	—	2.0	V
$I_{RGT\ I}$	Gate trigger current *2	Ⅱ	T_j=25°C, V_D=6V, R_L=6Ω, R_G=330Ω	—	—	10	mA
$I_{RGT\ Ⅲ}$		Ⅲ		—	—	10	mA
V_{GD}	Gate non-trigger voltage		T_j=125°C, V_D=1/2V_{DRM}	0.1	—	—	V
$R_{th\ (j-a)}$	Thermal resistance		Junction to ambient, Natural convection	—	—	40	°C/W

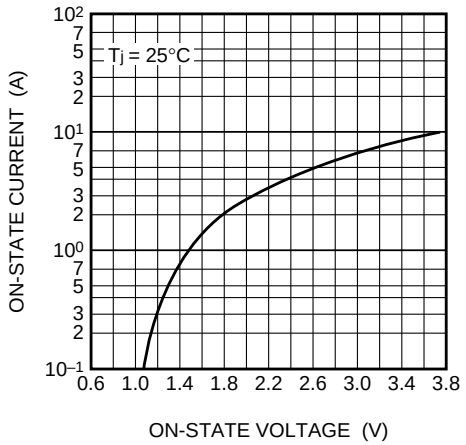
*2. Measurement using the gate trigger characteristics measurement circuit.

GATE TRIGGER CHARACTERISTICS TEST CIRCUITS

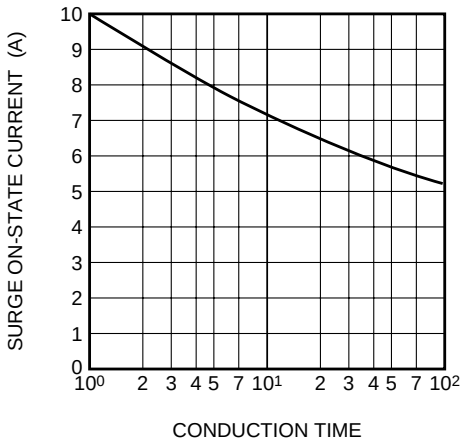


PERFORMANCE CURVES

MAXIMUM ON-STATE CHARACTERISTICS



RATED SURGE ON-STATE CURRENT



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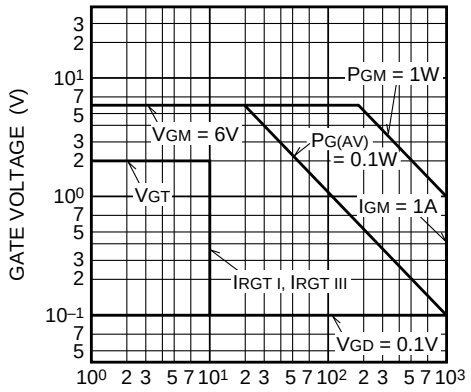
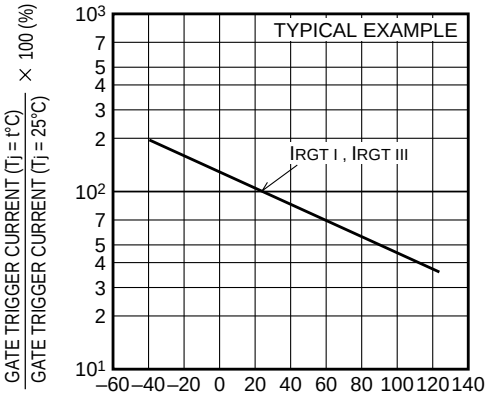
LOW POWER USE

INSULATED TYPE, PLANAR PASSIVATION TYPE

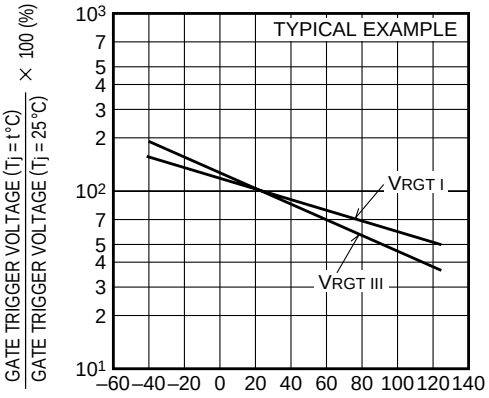
GATE CHARACTERISTICS



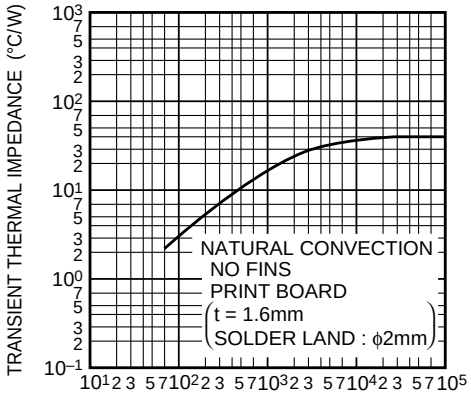
GATE TRIGGER CURRENT VS. JUNCTION TEMPERATURE



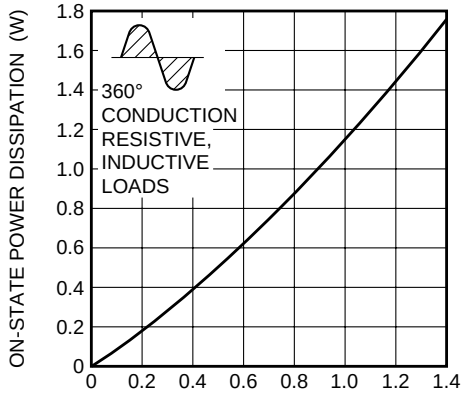
GATE TRIGGER VOLTAGE VS. JUNCTION TEMPERATURE



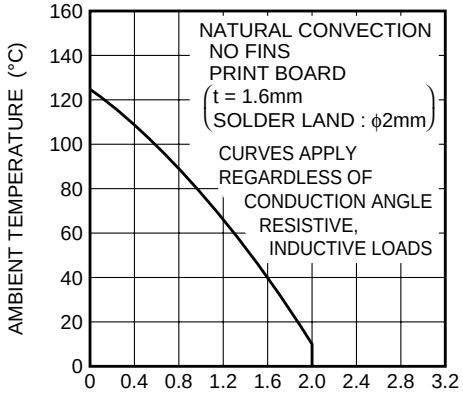
MAXIMUM TRANSIENT THERMAL IMPEDANCE CHARACTERISTICS (JUNCTION TO AMBIENT)



MAXIMUM ON-STATE POWER DISSIPATION



ALLOWABLE AMBIENT TEMPERATURE VS. RMS ON-STATE CURRENT



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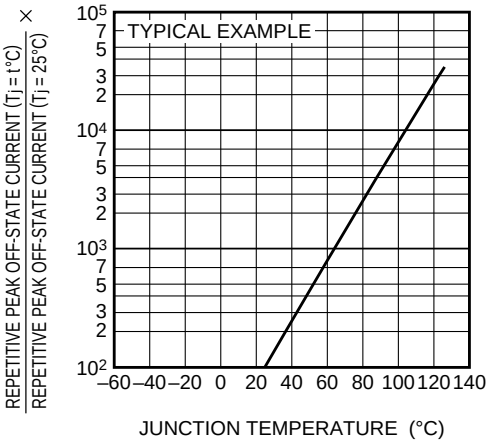
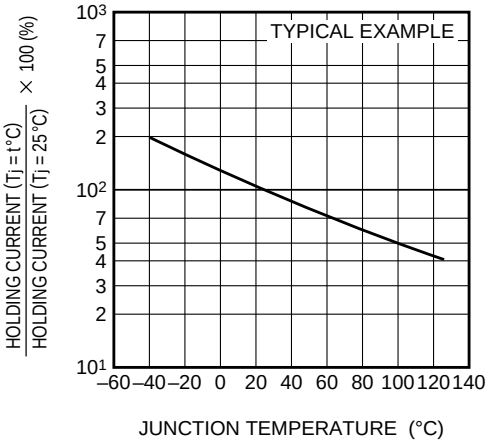
LOW POWER USE

INSULATED TYPE, PLANAR PASSIVATION TYPE

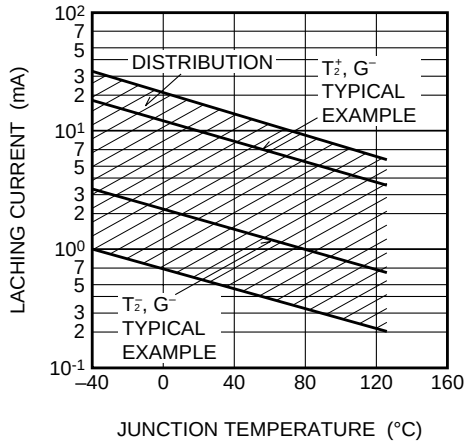
REPETITIVE PEAK OFF-STATE CURRENT VS. JUNCTION TEMPERATURE



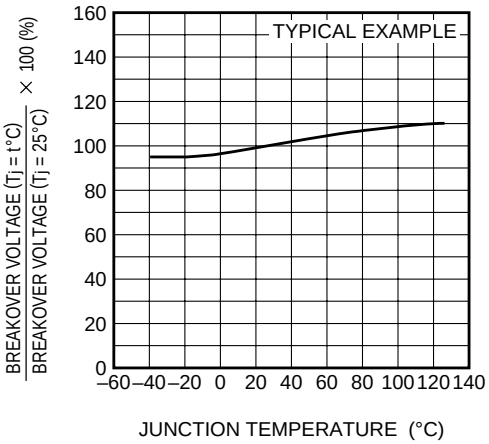
HOLDING CURRENT VS. JUNCTION TEMPERATURE



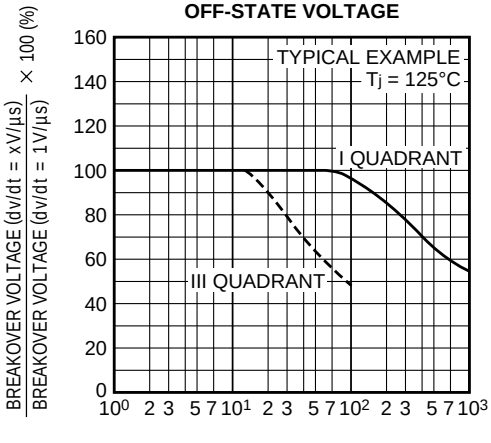
LACHING CURRENT VS. JUNCTION TEMPERATURE



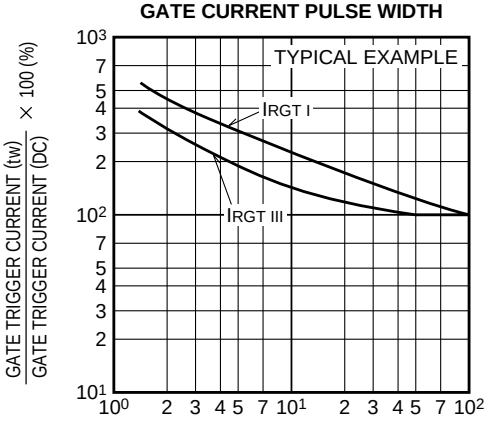
BREAKOVER VOLTAGE VS. JUNCTION TEMPERATURE



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



GATE TRIGGER CURRENT VS. GATE CURRENT PULSE WIDTH



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