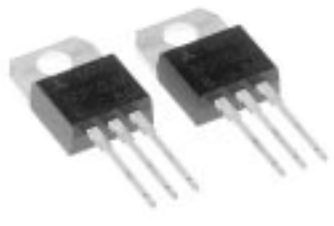


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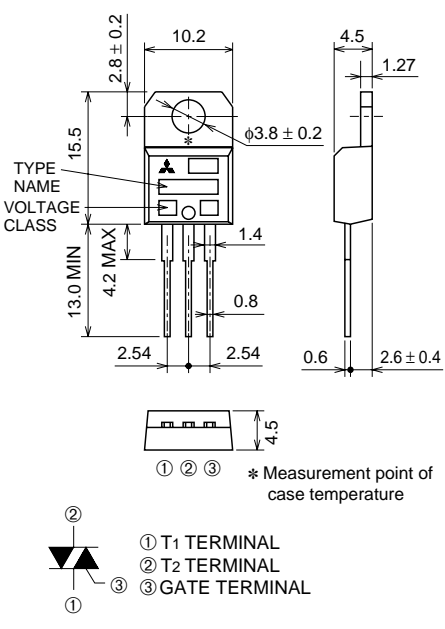
MEDIUM POWER USE
INSULATED TYPE, GLASS PASSIVATION TYPE

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- I_T (RMS) 10A
- V_{DRM} 400V/600V
- IFGT I, IRGT I, IRGT III 15mA
- V_{iso} 1500V

OUTLINE DRAWING Dimensions
in mm



TYPE NAME
VOLTAGE CLASS

① ② ③ * Measurement point of case temperature

① T1 TERMINAL
② T2 TERMINAL
③ GATE TERMINAL

TO-220

APPLICATION

Light dimmer

MAXIMUM RATINGS

Symbol	Parameter	Voltage class		Unit
		8	12	
V_{DRM}	Repetitive peak off-state voltage*1	400	600	V
V_{DSM}	Non-repetitive peak off-state voltage*1	500	720	V

Symbol	Parameter	Conditions	Ratings	Unit
I_T (RMS)	RMS on-state current	Commercial frequency, sine full wave 360° conduction, $T_c=93^\circ\text{C}$ *3	10	A
I_{TSM}	Surge on-state current	60Hz sinewave 1 full cycle, peak value, non-repetitive	100	A
I^2t	I^2t for fusing	Value corresponding to 1 cycle of half wave 60Hz, surge on-state current	41.6	A ² s
PGM	Peak gate power dissipation		5	W
PG (AV)	Average gate power dissipation		0.5	W
VGM	Peak gate voltage		10	V
IGM	Peak gate current		2	A
T_j	Junction temperature		-40 ~ +125	°C
T_{stg}	Storage temperature		-40 ~ +125	°C
—	Weight	Typical value	2.3	g
V_{iso}	Isolation voltage	$T_a=25^\circ\text{C}$, AC 1 minute, T1 · T2 · G terminal to case	1500	V

*1. Gate open.

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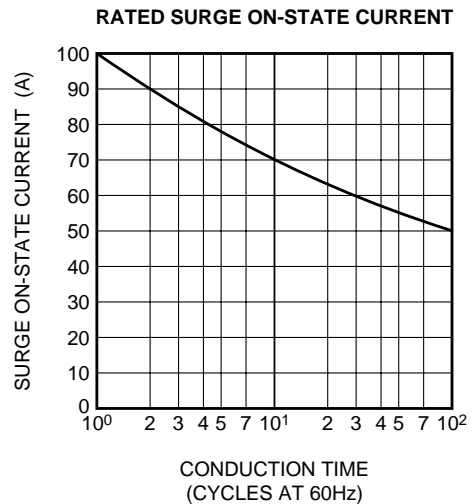
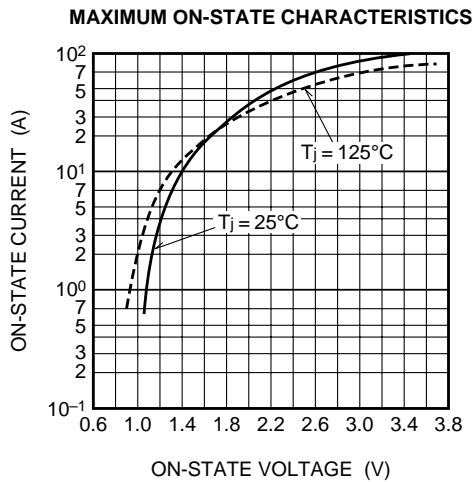
MEDIUM POWER USE
INSULATED TYPE, GLASS PASSIVATION TYPE

ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Test conditions	Limits			Unit	
			Min.	Typ.	Max.		
IDRM	Repetitive peak off-state current	$T_j=125^\circ\text{C}$, V_{DRM} applied	—	—	2.0	mA	
VTM	On-state voltage	$T_c=25^\circ\text{C}$, $I_{\text{TM}}=15\text{A}$, Instantaneous measurement	—	—	1.5	V	
VFGT I	Gate trigger voltage *2	$T_j=25^\circ\text{C}$, $V_D=6\text{V}$, $R_L=6\Omega$, $R_G=330\Omega$	I	—	—	1.5	V
VRGT I			II	—	—	1.5	V
VRGT III			III	—	—	1.5	V
IFGT I	Gate trigger current *2	$T_j=25^\circ\text{C}$, $V_D=6\text{V}$, $R_L=6\Omega$, $R_G=330\Omega$	I	—	—	15	mA
IRGT I			II	—	—	15	mA
IRGT III			III	—	—	15	mA
VGD	Gate non-trigger voltage	$T_j=125^\circ\text{C}$, $V_D=1/2V_{\text{DRM}}$	0.2	—	—	V	
$R_{\text{th (j-c)}}$	Thermal resistance	Junction to case *3 *4	—	—	2.7	$^\circ\text{C/W}$	

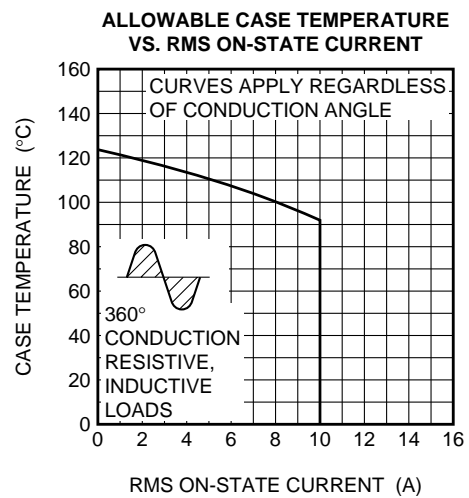
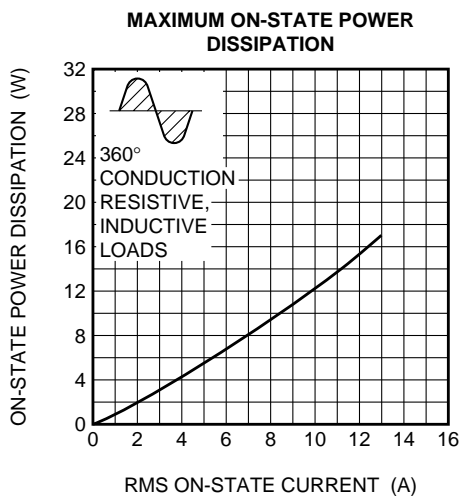
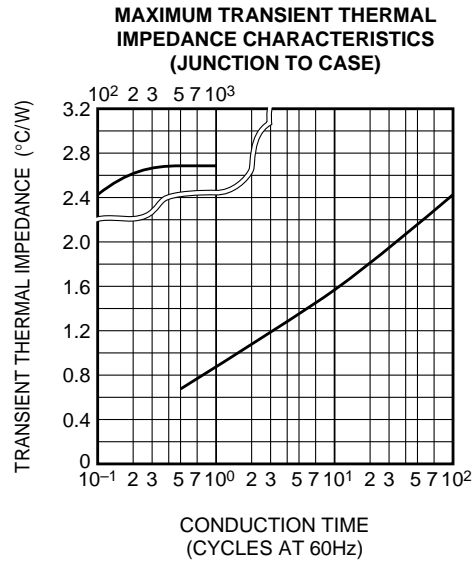
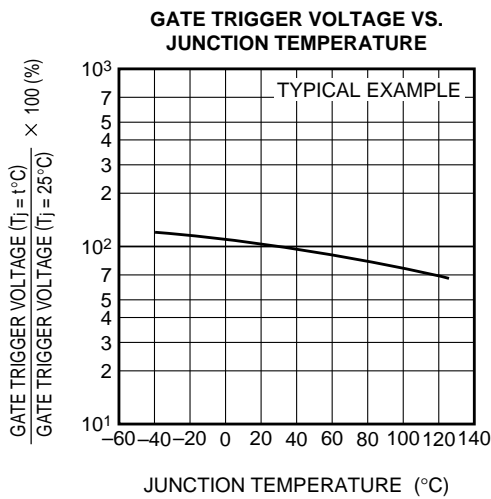
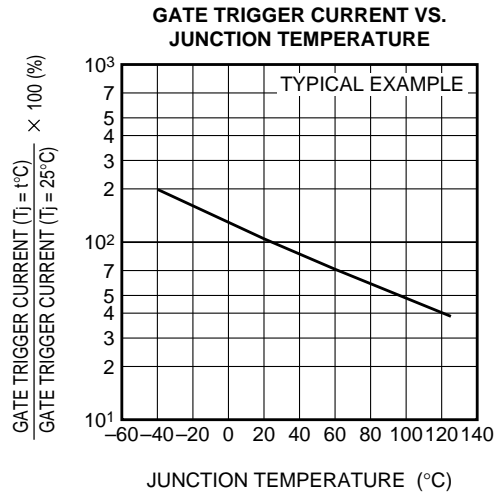
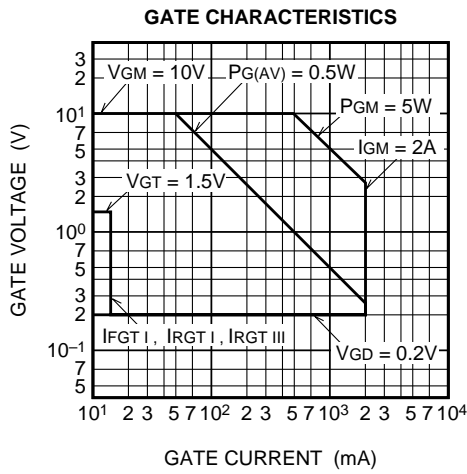
*2. Measurement using the gate trigger characteristics measurement circuit.
 *3. Case temperature is measured at the T2 terminal 1.5mm away from the molded case.
 *4. The contact thermal resistance $R_{\text{th (c-f)}}$ in case of greasing is 1.0°C/W .

PERFORMANCE CURVES



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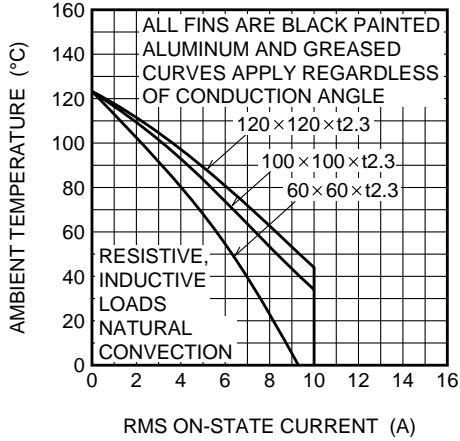
MEDIUM POWER USE
INSULATED TYPE, GLASS PASSIVATION TYPE



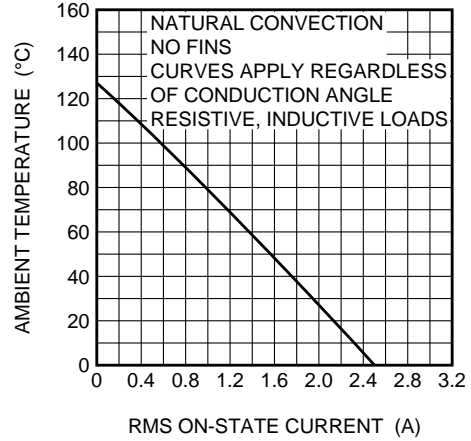
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MEDIUM POWER USE
INSULATED TYPE, GLASS PASSIVATION TYPE

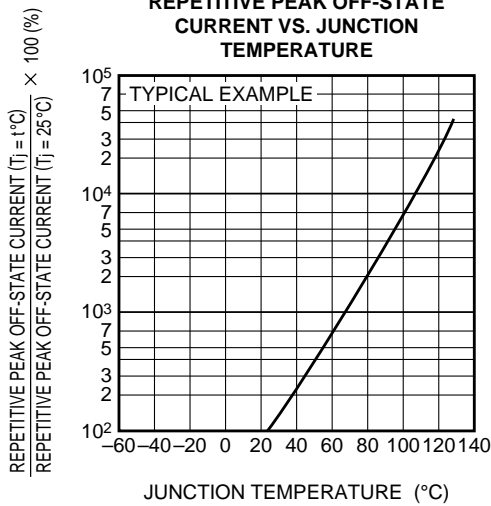
ALLOWABLE AMBIENT TEMPERATURE VS. RMS ON-STATE CURRENT



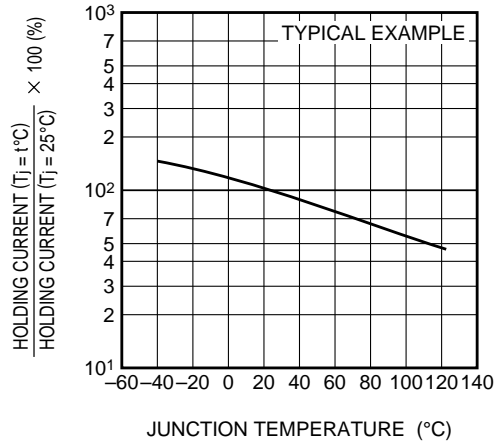
ALLOWABLE AMBIENT TEMPERATURE VS. RMS ON-STATE CURRENT



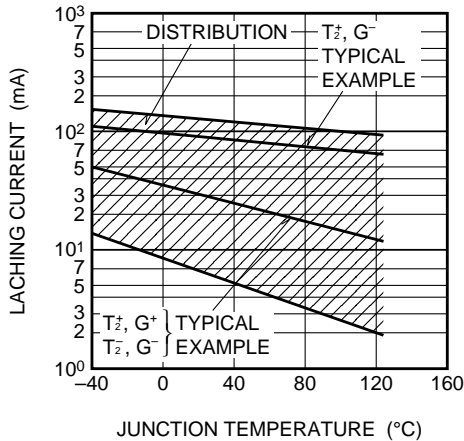
REPETITIVE PEAK OFF-STATE CURRENT VS. JUNCTION TEMPERATURE



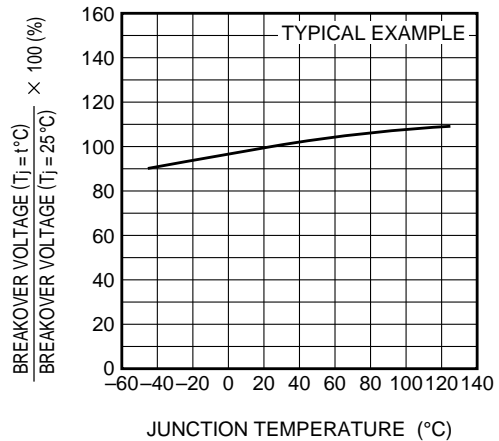
HOLDING CURRENT VS. JUNCTION TEMPERATURE



LATCHING CURRENT VS. JUNCTION TEMPERATURE

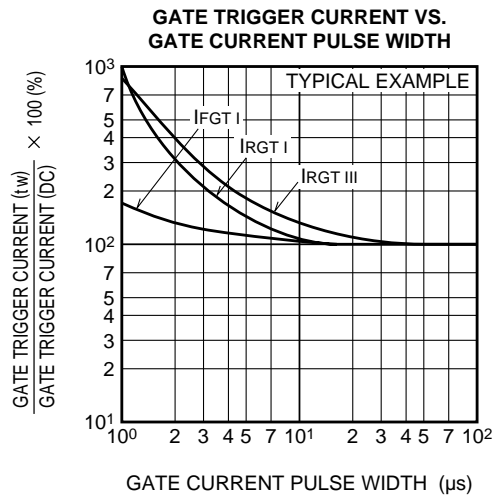
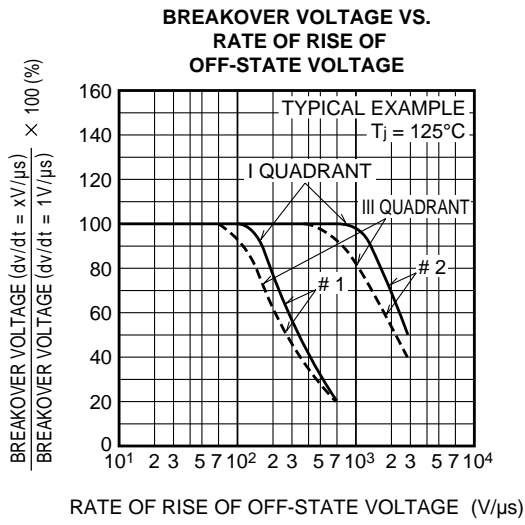


BREAKOVER VOLTAGE VS. JUNCTION TEMPERATURE

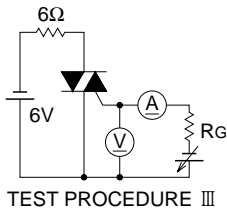
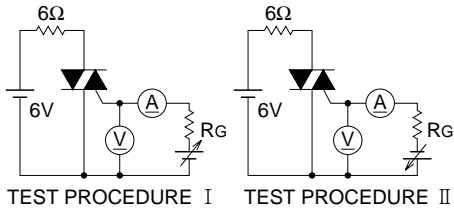


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MEDIUM POWER USE
INSULATED TYPE, GLASS PASSIVATION TYPE



GATE TRIGGER CHARACTERISTICS TEST CIRCUITS





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