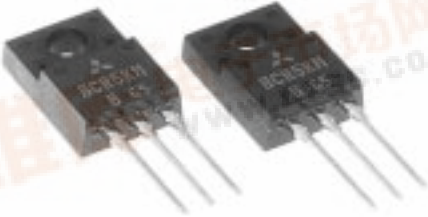


MITSUBISHI SEMICONDUCTOR (TRIAC)

# BCR5KM

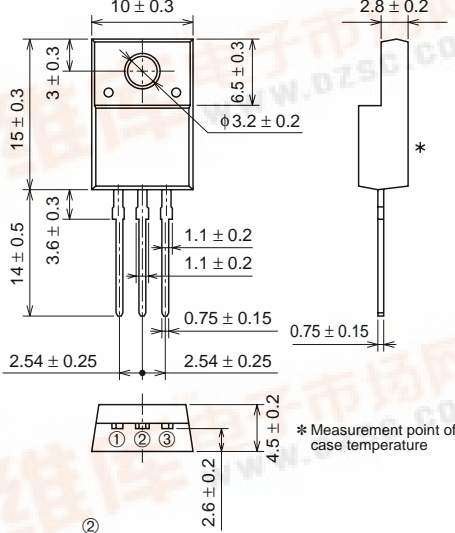
MEDIUM POWER USE  
INSULATED TYPE, PLANAR PASSIVATION TYPE

**BCR5KM**



- IT (RMS) ..... 5A
- VDRM ..... 400V / 600V
- IFGT I , IRGT I , IRGT III ..... 15mA (10mA) \*2
- UL Recognized : File No. E80271

**OUTLINE DRAWING** Dimensions in mm



\* Measurement point of case temperature

TO-220FN

① T1 TERMINAL  
② T2 TERMINAL  
③ GATE TERMINAL

## APPLICATION

Control of heater such as electric rice cooker, electric pot

## MAXIMUM RATINGS

Symbol	Parameter	Voltage class		Unit
		8	12	
VDRM	Repetitive peak off-state voltage*1	400	600	V
VDSM	Non-repetitive peak off-state voltage*1	500	720	V

Symbol	Parameter	Conditions	Ratings	Unit
IT (RMS)	RMS on-state current	Commercial frequency, sine full wave 360° conduction, Tc=103°C	5	A
ITSM	Surge on-state current	60Hz sinewave 1 full cycle, peak value, non-repetitive	50	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	10.4	A <sup>2</sup> s
PGM	Peak gate power dissipation		3	W
PG (AV)	Average gate power dissipation		0.3	W
VGM	Peak gate voltage		10	V
IGM	Peak gate current		2	A
Tj	Junction temperature		-40 ~ +125	°C
Tstg	Storage temperature		-40 ~ +125	°C
—	Weight		2.0	g
Viso	Isolation voltage	Ta=25°C, AC 1 minute, T1 · T2 · G terminal to case	2000	V

# BCR5KM

MEDIUM POWER USE  
INSULATED TYPE, PLANAR PASSIVATION TYPE

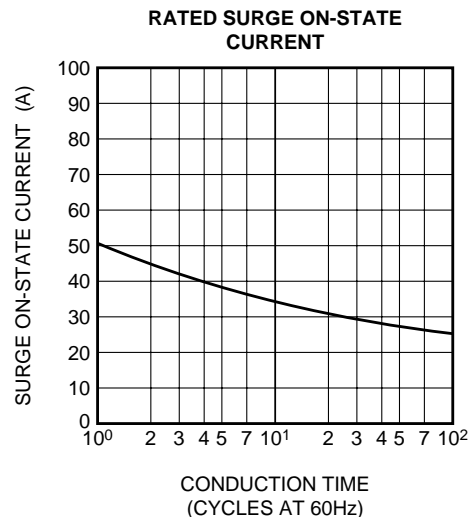
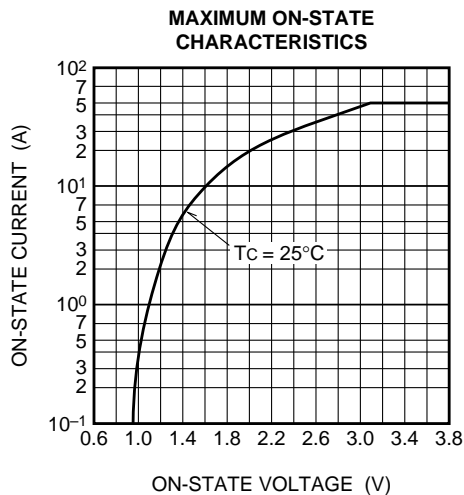
## ELECTRICAL CHARACTERISTICS

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	$T_c=25^\circ\text{C}$ , $I_{TM}=7\text{A}$ , 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*2	mA
IRGT I			II	—	—	15*2	mA
IRGT III			III	—	—	15*2	mA
VGD	Gate non-trigger voltage	$T_j=125^\circ\text{C}$ , $V_D=1/2V_{DRM}$	0.2	—	—	V	
$R_{th(j-c)}$	Thermal resistance	Junction to case *3	—	—	3.8	$^\circ\text{C/W}$	
$R_{th(j-a)}$	Thermal resistance	Junction to ambient	—	—	50	$^\circ\text{C/W}$	

\*2. High sensitivity ( $I_{GT} \leq 10\text{mA}$ ) is also available. (IGT item ①)

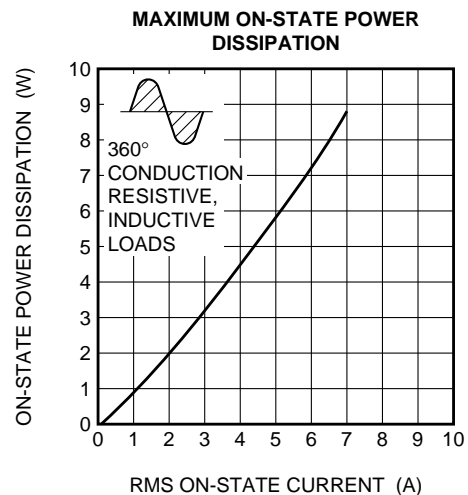
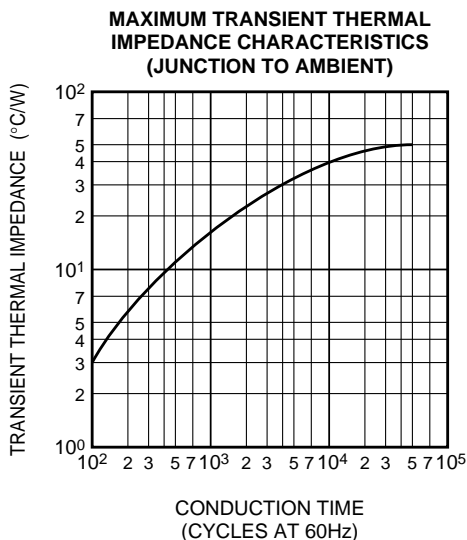
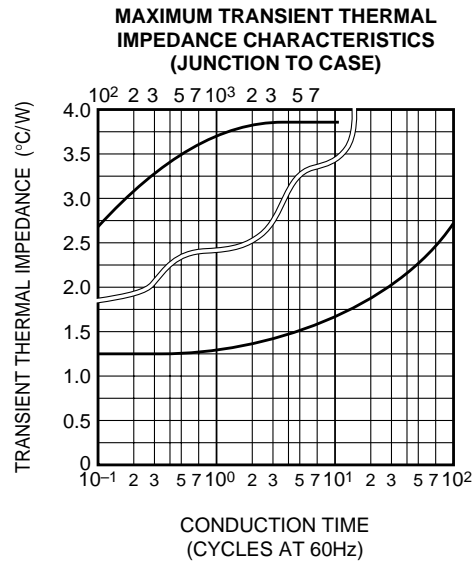
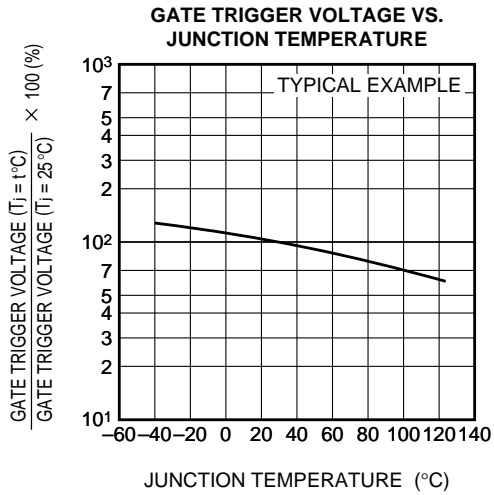
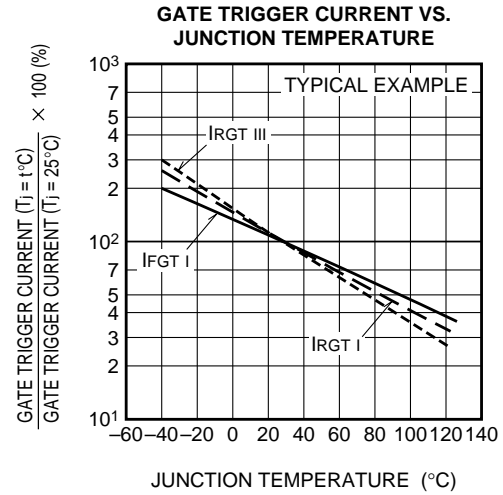
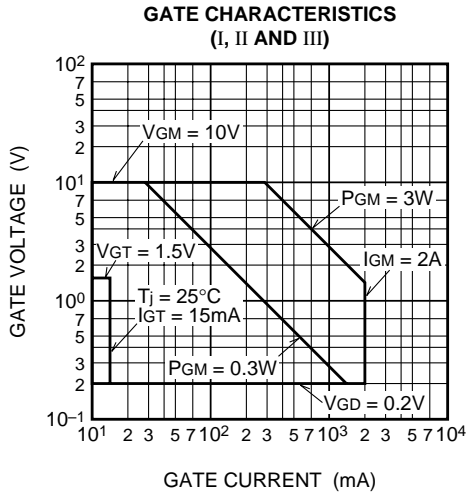
\*3. The contact thermal resistance  $R_{th(c-f)}$  in case of greasing is  $0.5^\circ\text{C/W}$ .

## PERFORMANCE CURVES



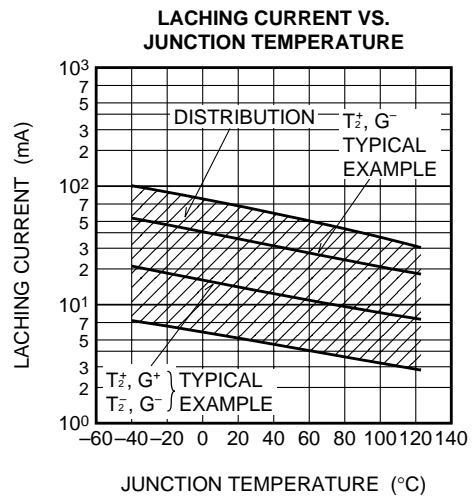
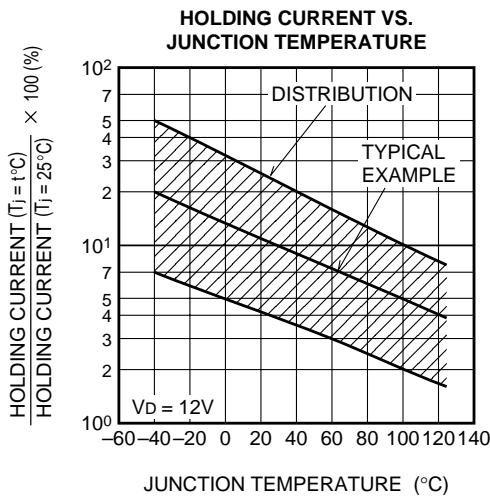
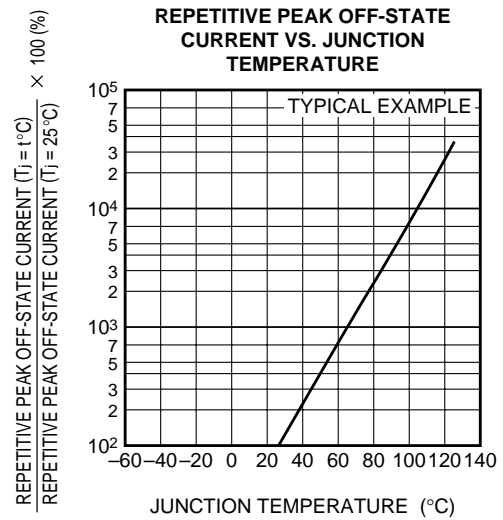
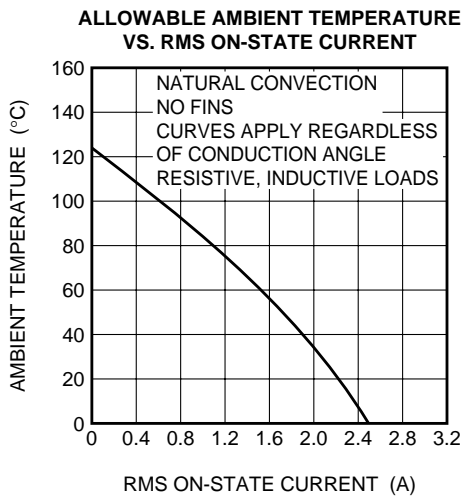
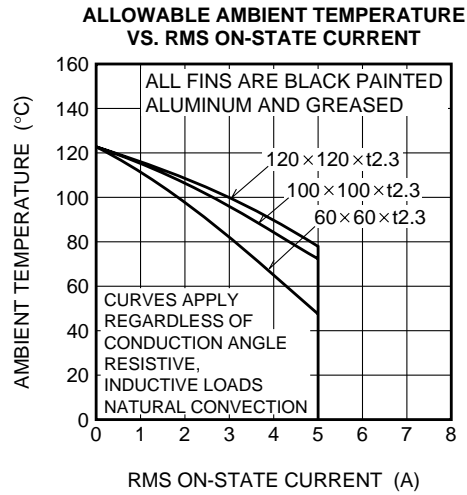
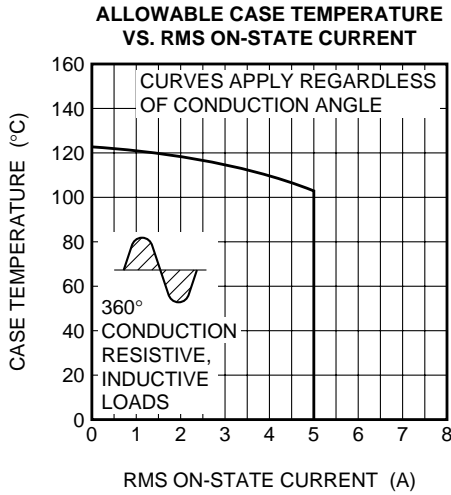
# BCR5KM

MEDIUM POWER USE  
INSULATED TYPE, PLANAR PASSIVATION TYPE



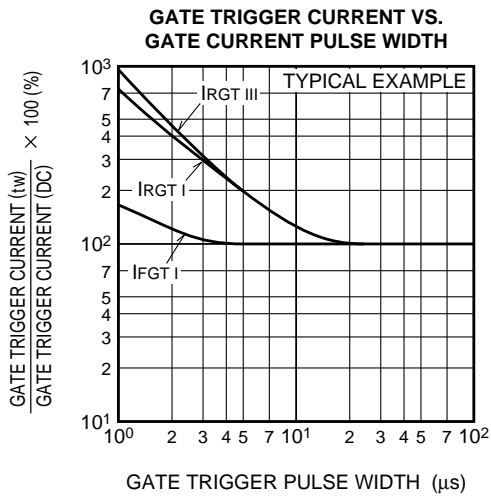
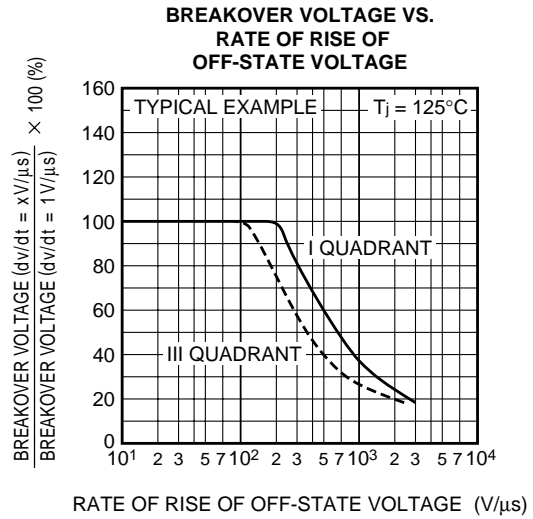
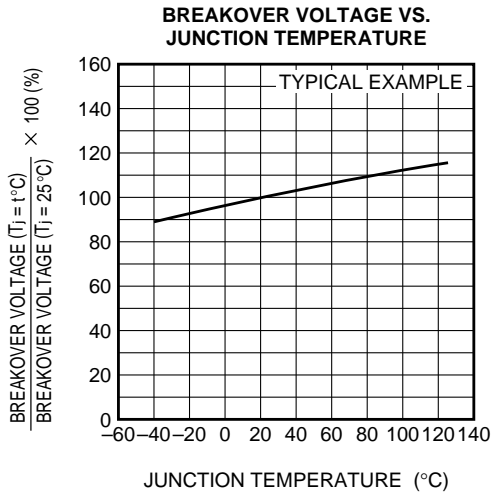
**BCR5KM**

**MEDIUM POWER USE**  
**INSULATED TYPE, PLANAR PASSIVATION TYPE**



# BCR5KM

MEDIUM POWER USE  
INSULATED TYPE, PLANAR PASSIVATION TYPE



**GATE TRIGGER CHARACTERISTICS TEST CIRCUITS**

