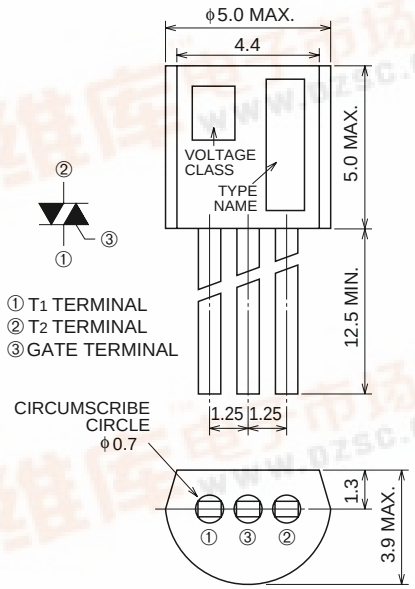
BCR08AM-14

LOW POWER USE
PLANAR PASSIVATION TYPE

BCR08AM-14

- $I_{T\ (RMS)}$ ····· 0.8A
- V_{DRM} ····· 700V
- $I_{FGT\ I}$, $I_{RGT\ I}$, $I_{RGT\ III}$ ····· 5mA

OUTLINE DRAWING Dimensions in mm



JEDEC : TO-92

APPLICATION

Contactless AC switches, heating, refrigerator, washing machine, electric fan, vending machines, trigger circuit for low and medium triac, solid state relay, other general purpose control applications

MAXIMUM RATINGS

Symbol	Parameter	Voltage class	Unit
		14	
V_{DRM}	Repetitive peak off-state voltage*1	700	V
V_{DSM}	Non-repetitive peak off-state voltage*1	840	V

Symbol	Parameter	Conditions	Ratings	Unit
$I_{T\ (RMS)}$	RMS on-state current	Commercial frequency, sine full wave 360° conduction, Tc=67°C	0.8	A
I_{TSM}	Surge on-state current	60Hz sinewave 1 full cycle, peak value, non-repetitive	8	A
I^2t	I^2t for fusing	Value corresponding to 1 cycle of half wave 60Hz, surge on-state current	0.26	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	0.23	g

*1. Gate open.

MITSUBISHI ELECTRIC

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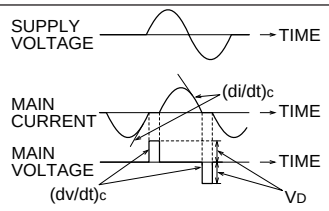
ELECTRICAL CHARACTERISTICS

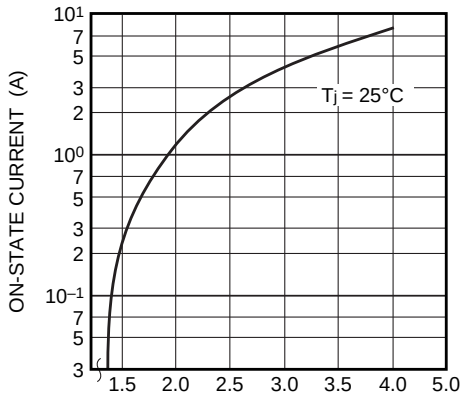
Symbol	Parameter		Test conditions	Limits			Unit
				Min.	Typ.	Max.	
I_{DRM}	Repetitive peak off-state current		T_j=125°C, V_{DRM} applied	—	—	1.0	mA
V_{TM}	On-state voltage		T_C=25°C, I_{TM}=1.2A, Instantaneous measurement	—	—	2.0	V
$V_{FGT\ I}$	Gate trigger voltage	I	T_j=25°C, V_D=6V, R_L=6Ω, R_G=330Ω	—	—	2.0	V
$V_{RGT\ I}$		II		—	—	2.0	V
$V_{RGT\ III}$		III		—	—	2.0	V
$I_{FGT\ I}$	Gate trigger current	I	T_j=25°C, V_D=6V, R_L=6Ω, R_G=330Ω	—	—	5	mA
$I_{RGT\ I}$		II		—	—	5	mA
$I_{RGT\ III}$		III		—	—	5	mA
V_{GD}	Gate non-trigger voltage		T_j=125°C, V_D=1/2V_{DRM}	0.1	—	—	V
$R_{th\ (j-c)}$	Thermal resistance		Junction to case ✻3	—	—	50	°C/W
$(dv/dt)_c$	Critical-rate of rise of off-state commutating voltage			✻2	—	—	V/μs

✻2. The critical-rate of rise of the off-state commutating voltage is shown in the table below.
✻3. Case temperature is measured at the T_2 terminal 1.5mm away from the molded case.

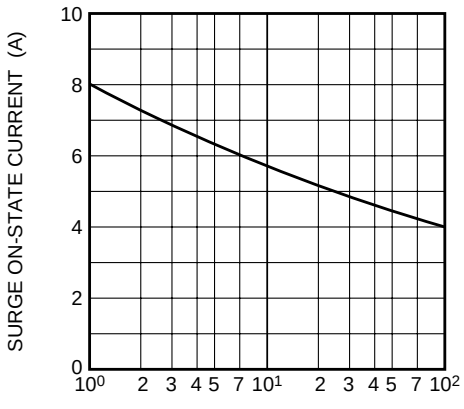
Voltage class	V_{DRM} (V)	$(dv/dt)_c$		Test conditions	Commutating voltage and current waveforms (inductive load)
		Min.	Unit		
14	700	0.5	V/μs	1. Junction temperature T_j=125°C 2. Rate of decay of on-state commutating current $(di/dt)_c$=–0.4A/ms 3. Peak off-state voltage V_D=400V	

PERFORMANCE CURVES

MAXIMUM ON-STATE CHARACTERISTICS



RATED SURGE ON-STATE CURRENT



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