

BCR8PM-14L

Triac

Medium Power Use

REJ03G0308-0100 Rev.1.00 Aug.20.2004

Features

I_{T (RMS)}: 8 A
 V_{DRM}: 700 V

• I_{FGTI} , I_{RGTII} , I_{RGTIII} : 30 mA (20 mA)^{Note 5}

• Viso: 2000 V

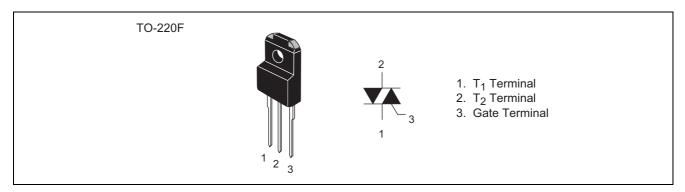
• Insulated Type

• Planar Passivation Type

• UL Recognized : Yellow Card No. E223904

File No. E80271

Outline



Applications

Washing machine, inversion operation of capacitor motor, and other general controlling devices

Maximum Ratings

Parameter	Symbol	Voltage class	Unit	
Farameter	Syllibol	14		
Repetitive peak off-state voltage ^{Note1}	V_{DRM}	700	V	
Non-repetitive peak off-state voltage ^{Note1}	V_{DSM}	840	V	

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Parameter	Symbol	Ratings	Unit	Conditions
RMS on-state current	I _{T (RMS)}	8	А	Commercial frequency, sine full wave 360° conduction, Tc = 88°C
Surge on-state current	I _{TSM}	80	А	60Hz sinewave 1 full cycle, peak value, non-repetitive
I ² t for fusing	l ² t	26	A ² s	Value corresponding to 1 cycle of half wave 60Hz, surge on-state current
Peak gate power dissipation	P_{GM}	5	W	
Average gate power dissipation	P _{G (AV)}	0.5	W	
Peak gate voltage	V_{GM}	10	V	
Peak gate current	I _{GM}	2	Α	
Junction temperature	Tj	- 40 to +125	°C	
Storage temperature	Tstg	- 40 to +125	°C	
Mass	_	2.0	g	Typical value
Isolation voltage	Viso	2000	V	Ta = 25°C, AC 1 minute, $T_1 \cdot T_2 \cdot G$ terminal to case

Notes: 1. Gate open.

Electrical Characteristics

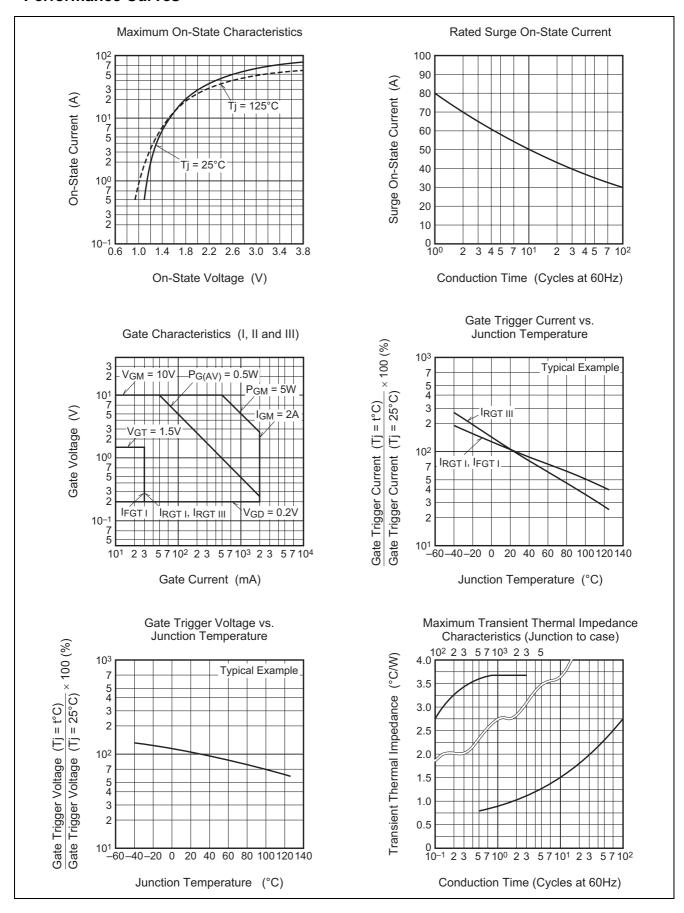
Parameter		Symbol	Min.	Тур.	Max.	Unit	Test conditions	
Repetitive peak off-state current		I _{DRM}	_	_	2.0	mA	Tj = 125°C, V _{DRM} applied	
On-state voltage		V_{TM}	_	_	1.6	V	Tc = 25°C, I _{TM} = 12 A, Instantaneous measurement	
Gate trigger voltage ^{Note2}	I	V_{FGTI}	_	_	1.5	V	$Tj = 25$ °C, $V_D = 6$ V, $R_L = 6$ Ω,	
	II	V_{RGTI}	_	_	1.5	V	$R_G = 330 \Omega$	
	III	V_{RGTIII}	_	_	1.5	V		
Gate trigger current ^{Note2}	I	I_{FGTI}	_	_	30 ^{Note5}	mA	$Tj = 25$ °C, $V_D = 6$ V, $R_L = 6$ Ω	
	II	$I_{RGT_{\mathrm{I}}}$	_	_	30 ^{Note5}	mA	$R_G = 330 \Omega$	
	III	I _{RGTIII}	_	_	30 ^{Note5}	mA		
Gate non-trigger voltage		V_{GD}	0.2	_	_	V	$Tj = 125^{\circ}C, V_D = 1/2 V_{DRM}$	
Thermal resistance		R _{th (j-c)}	_	_	3.7	°C/W	Junction to case ^{Note3}	
Critical-rate of rise of off-state commutating voltage ^{Note4}		(dv/dt)c	10	_	_	V/μs	Tj = 125°C	

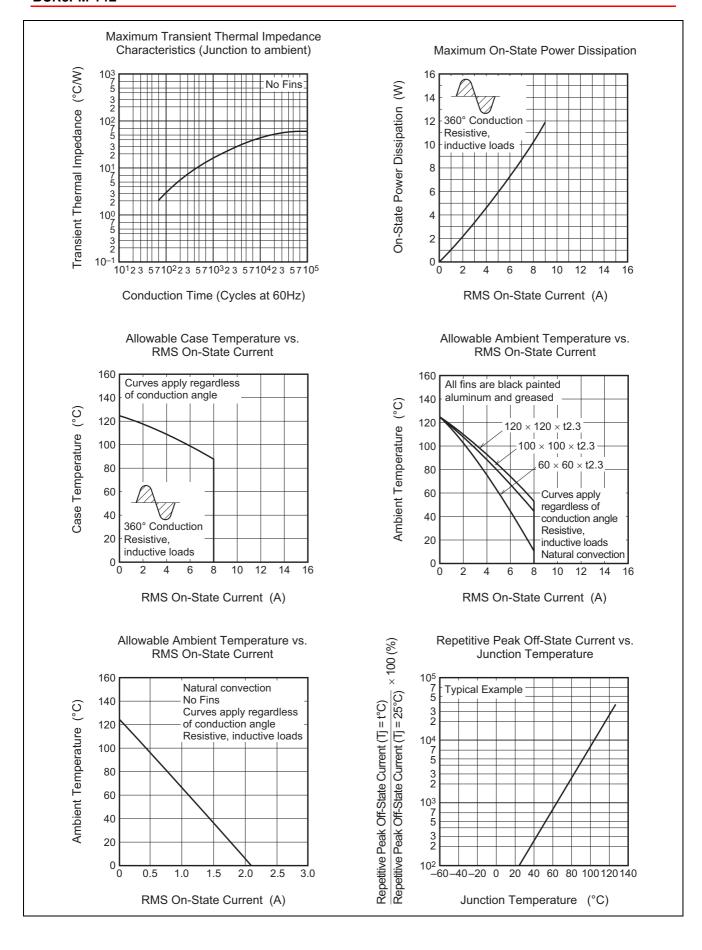
Notes: 2. Measurement using the gate trigger characteristics measurement circuit.

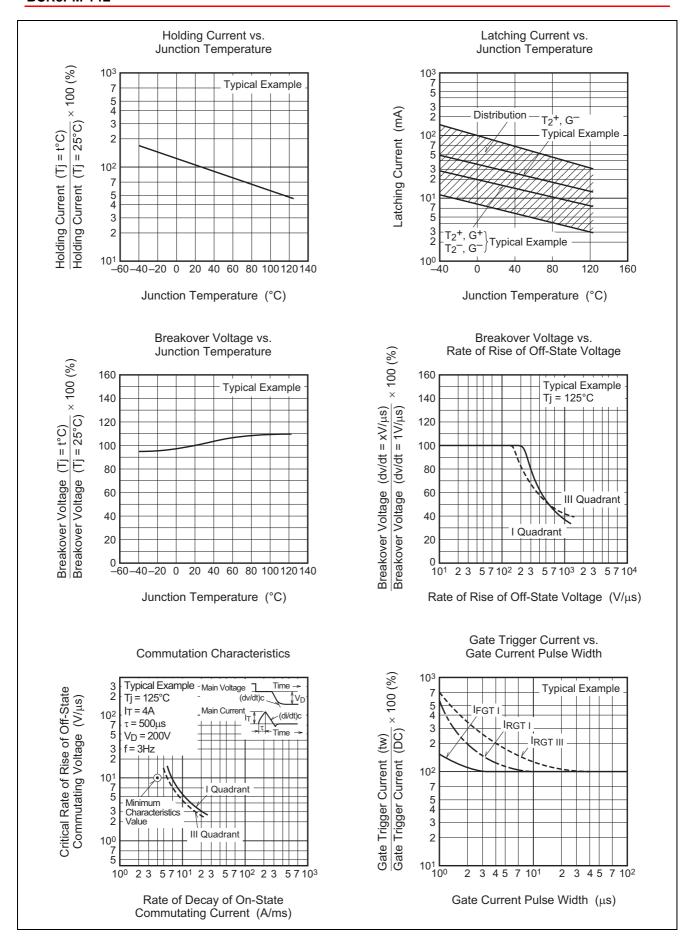
- 3. The contact thermal resistance $R_{th\ (c\text{-}f)}$ in case of greasing is 0.5°C/W.
- 4. Test conditions of the critical-rate of rise of off-state commutating voltage is shown in the table below.
- 5. High sensitivity ($I_{GT} \le 20$ mA) is also available. (I_{GT} item: 1)

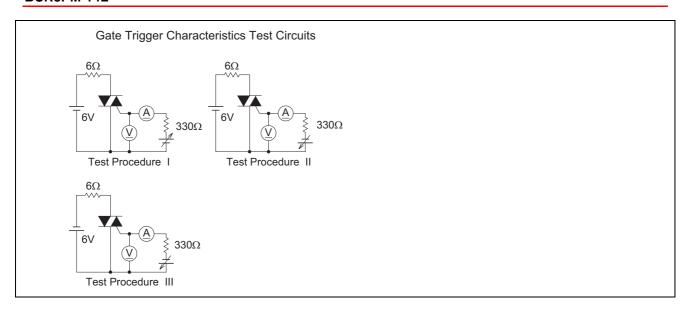
Test conditions	Commutating voltage and current waveforms (inductive load)
1. Junction temperature Tj = 125°C	Supply Voltage
2. Rate of decay of on-state commutating current (di/dt)c = - 4.0 A/ms 3. Peak off-state voltage	Main Current Main Voltage Time
$V_D = 400 \text{ V}$	(dv/dt)c V _D

Performance Curves

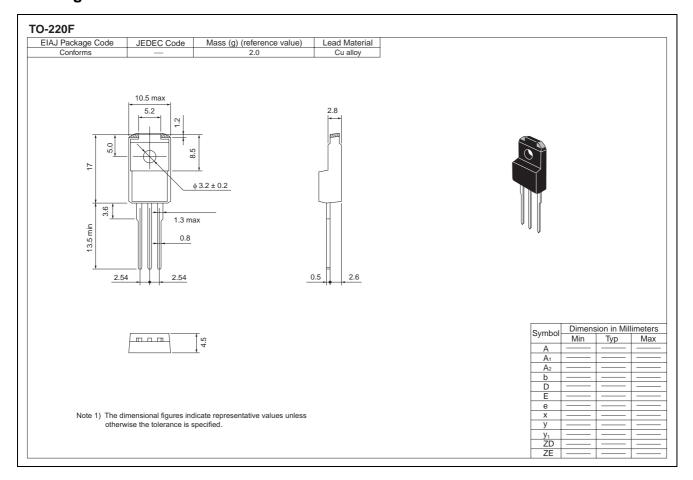








Package Dimensions



Order Code

Lead form	Standard packing	Quantity	Standard order code	Standard order code example
Straight type	Vinyl sack	100	Type name +A	BCR8PM-14LA
Lead form	Plastic Magazine (Tube)	50	Type name +A – Lead forming code	BCR8PM-14LA-A8

Note: Please confirm the specification about the shipping in detail.

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