

BCR1BM-16A

800V - 1A - Triac Low Power Use

R07DS0967EJ0001 Rev.0.01 Nov 28, 2012

Features

• $I_{T (RMS)}: 1 A$

 V_{DRM} : 800 V (Tj = 125°C)

 I_{FGTI} , I_{RGTI} , I_{RGTIII} : 15 mA

Tj: 125 °C

Planar Passivation Type

Outline

RENESAS Package code: PRSS0003EA-A (Package name: TO-92)





- 1. T₂ Terminal
- 2. Gate Terminal
- 3. T₁ Terminal

Applications

Washing machine, electric fan, air cleaner, other general purpose control applications

Maximum Ratings

Parameter	Symbol	Voltage class	Unit	
Parameter	Syllibol	16		
Repetitive peak off-state voltage ^{Note1}	V_{DRM}	800	V	

Parameter	Symbol	Ratings	Unit	Conditions
RMS on-state current	I _{T (RMS)}	1	A	Commercial frequency, sine full wave 360° conduction, Tc = 49°C
Surge on-state current	I _{TSM}	8	А	60 Hz sinewave 1 full cycle, peak value, non-repetitive
I ² t for fusing	l ² t	0.26	A ² s	Value corresponding to 1 cycle of half wave 60 Hz, surge on-state current
Peak gate power dissipation	P_{GM}	1	W	
Average gate power dissipation	P _{G (AV)}	0.1	W	
Peak gate voltage	V_{GM}	6	V	
Peak gate current	I _{GM}	0.5	Α	
Junction temperature	Tj	- 40 to +125	°C	
Storage temperature	Tstg	- 40 to +125	°C	
Mass	_	0.23	g	Typical value

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Electrical Characteristics

Parameter		Symbol	Min.	Тур.	Max.	Unit	Test conditions
Repetitive peak off-state cur	rent	I _{DRM}	_	_	1.0	mA	Tj = 125°C, V _{DRM} applied
On-state voltage		V_{TM}	_	_	2.0	V	$Tc = 25^{\circ}C$, $I_{TM} = 1.2 A$,
							Instantaneous measurement
Gate trigger voltage ^{Note2}	I	V_{FGTI}	_	_	2.0	V	$Tj = 25$ °C, $V_D = 6$ V, $R_L = 6$ Ω ,
	II	V_{RGTI}	_	_	2.0	V	$R_G = 330 \Omega$
	III	V_{RGTIII}	_	_	2.0	V	
Gate trigger current ^{Note2}	I	$I_{\text{FGT}_{\text{I}}}$	_	_	15	mA	$Tj = 25$ °C, $V_D = 6$ V, $R_L = 6$ Ω ,
	II	$I_{RGT_{ m I}}$	_	_	15	mA	$R_G = 330 \Omega$
	III	I_{RGTIII}	_	_	15	mA	
Gate non-trigger voltage		V_{GD}	0.1	_	_	V	$Tj = 125$ °C, $V_D = 1/2 V_{DRM}$
Thermal resistance		R _{th (j-c)}	_	_	50	°C/W	Junction to case ^{Note3}
Critical-rate of rise of off-stat commutating voltage ^{Note4}	е	(dv/dt)c	0.5	_	_	V/μs	Tj = 125°C

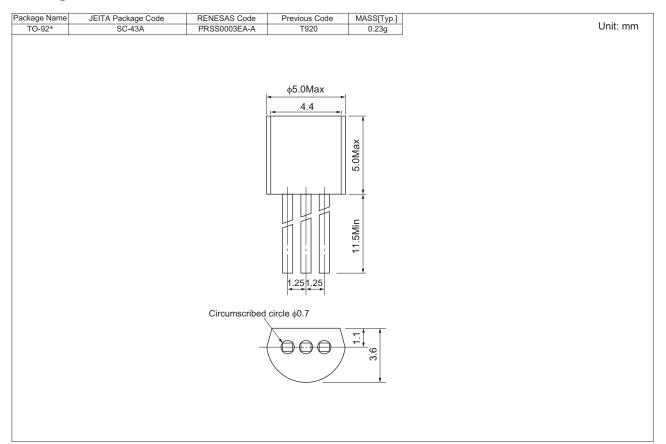
Notes: 1. Gate open.

- 2. Measurement using the gate trigger characteristics measurement circuit.
- 3. Case temperature is measured at the T_2 terminal 1.5 mm away from the molded case.
- 4. Test conditions of the critical-rate of rise of off-state commutating voltage is shown in the table below.

Test conditions	Commutating voltage and current waveforms (inductive load)			
1. Junction temperature Tj = 125°C	Supply Voltage — Time			
2. Rate of decay of on-state commutating current (di/dt)c = - 0.5 A/ms	Main Current ——(di/dt)c ——Time			
3. Peak off-state voltage V _D = 400 V	Main Voltage Time (dv/dt)c			

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Package Dimensions



Ordering Information

Orderable Part Number	Packing	Quantity	Remark
BCR1BM-16A#B00	Bag	500 pcs.	Straight type
BCR1BM-16A-A6#B00	Bag	500 pcs.	A6 Lead form
BCR1BM-16A-TB#B00	Adhesive Tape	2000 pcs.	A8 Lead form

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

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