

# BCR08AM-14A

700V - 0.8A - Triac

R07DS1226EJ0500

Low Power Use


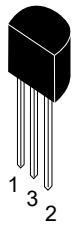
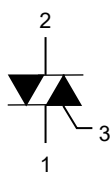
Rev.5.00

Sept. 10, 2019

## Features

- $I_{T(RMS)}$  : 0.8 A
- $V_{DRM}$  : 700 V
- $I_{RGT I}$ ,  $I_{RGT II}$ ,  $I_{RGT III}$ : 5 mA
- $T_j$ : 125 °C
- Planar Passivation Type
- RoHS Compliant
- Halogen-free (PRSS0003DJ-A)
- Completely Pb-free (PRSS0003DJ-A)

## Outline

RENESAS Package code: PRSS0003EA-A (Package name: TO-92*) Ordering code: #B00	PRSS0003DJ-A (Package name: TO-92) #BD0			
<p><b>Not Recommended for New Design</b></p>		1. $T_1$ Terminal 2. $T_2$ Terminal 3. Gate Terminal		

## Application

Washing machine, electric fan, air cleaner, Solid State Relay and other general purpose AC control applications.

## Maximum Ratings

Parameter	Symbol	Voltage class		Unit
		14		
Repetitive peak off-state voltage <sup>Note1</sup>	$V_{DRM}$	700		V
Non-repetitive peak off-state voltage <sup>Note1</sup>	$V_{DSM}$	840		V

Notes: 1. Gate open.

Parameter	Symbol	Ratings	Unit	Conditions
RMS on-state current	$I_{T(RMS)}$	0.8	A	Commercial frequency, sine full wave 360° conduction, $T_c = 67^\circ\text{C}$
Surge on-state current	$I_{TSM}$	8	A	60 Hz sinewave 1 full cycle, peak value, non-repetitive
$I^2t$ for fusing	$I^2t$	0.26	A <sup>2</sup> 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	A	
Junction Temperature	$T_j$	-40 to +125	°C	
Storage temperature	$T_{stg}$	-40 to +125	°C	

## Electrical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test conditions
Repetitive peak off-state current	$I_{DRM}$	—	—	1.0	mA	$T_j = 125^\circ\text{C}$ , $V_{DRM}$ applied
On-state voltage	$V_{TM}$	—	—	2.0	V	$T_c = 25^\circ\text{C}$ , $I_{TM} = 1.2\text{ A}$ , instantaneous measurement
Gate trigger voltage <sup>Note2</sup>	I	$V_{FGTI}$	—	—	2.0	$T_j = 25^\circ\text{C}$ , $V_D = 6\text{ V}$ , $R_L = 6\ \Omega$ , $R_G = 330\ \Omega$
	II	$V_{RGTI}$	—	—	2.0	
	III	$V_{RGTIII}$	—	—	2.0	
Gate trigger current <sup>Note2</sup>	I	$I_{FGTI}$	—	—	5	$T_j = 25^\circ\text{C}$ , $V_D = 6\text{ V}$ , $R_L = 6\ \Omega$ , $R_G = 330\ \Omega$
	II	$I_{RGTI}$	—	—	5	
	III	$I_{RGTIII}$	—	—	5	
Gate non-trigger voltage	$V_{GD}$	0.1	—	—	V	$T_j = 125^\circ\text{C}$ , $V_D = 1/2 V_{DRM}$
Thermal resistance	$R_{th(j-c)}$	—	—	50	$^\circ\text{C/W}$	Junction to case <sup>Note3</sup>
Critical-rate of rise of off-state commutating voltage <sup>Note4</sup>	$(dv/dt)_c$	0.5	—	—	$\text{V}/\mu\text{s}$	$T_j = 125^\circ\text{C}$

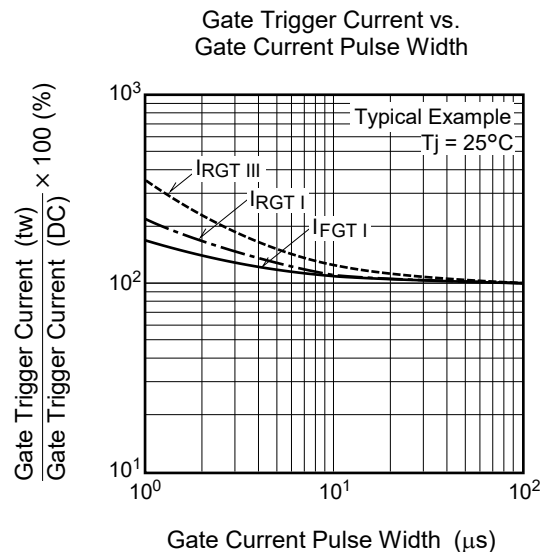
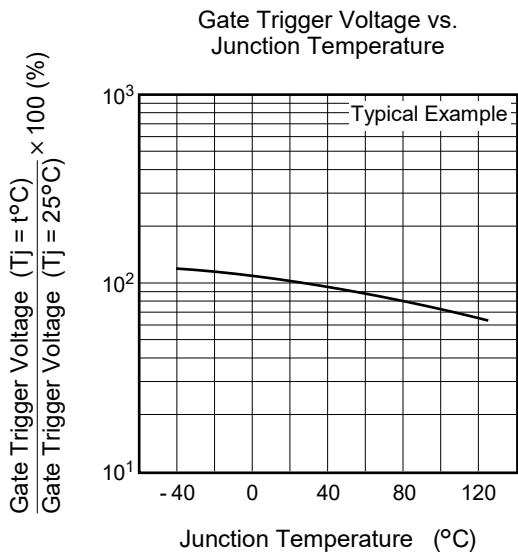
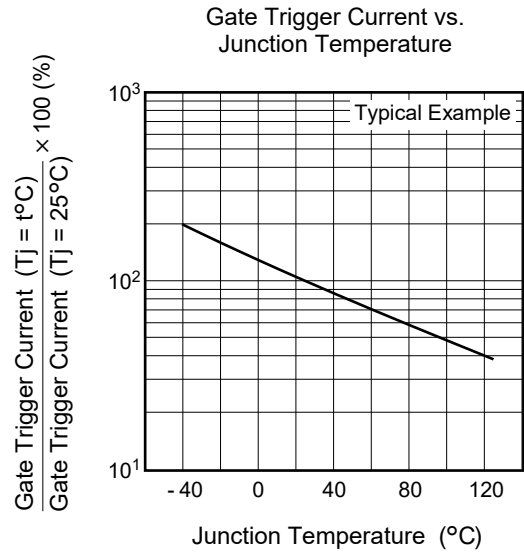
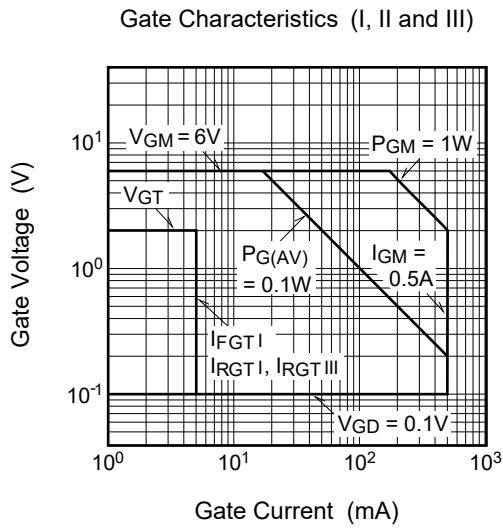
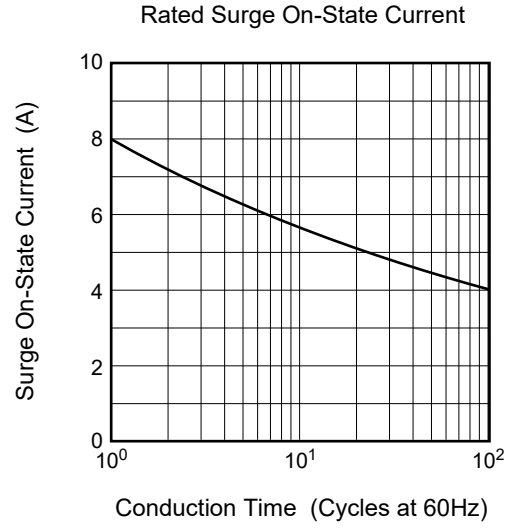
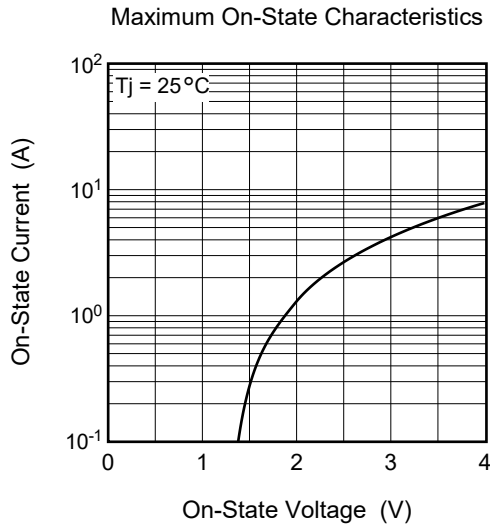
Notes: 2. Measurement using the gate trigger characteristics measurement circuit.

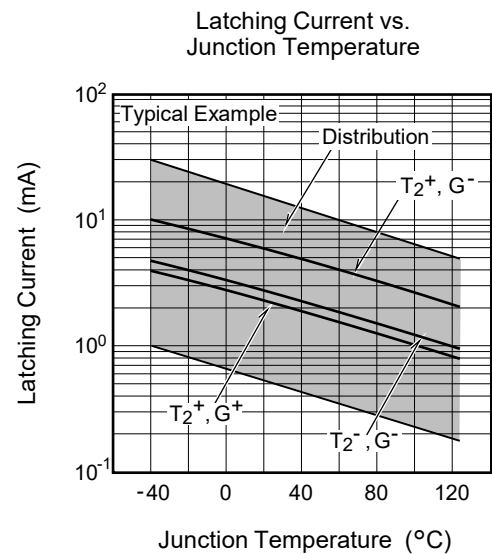
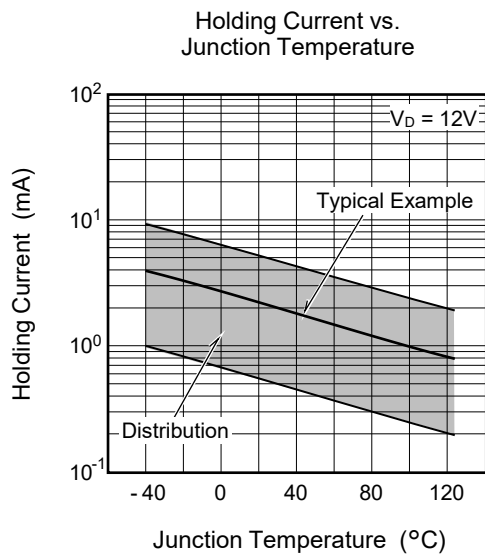
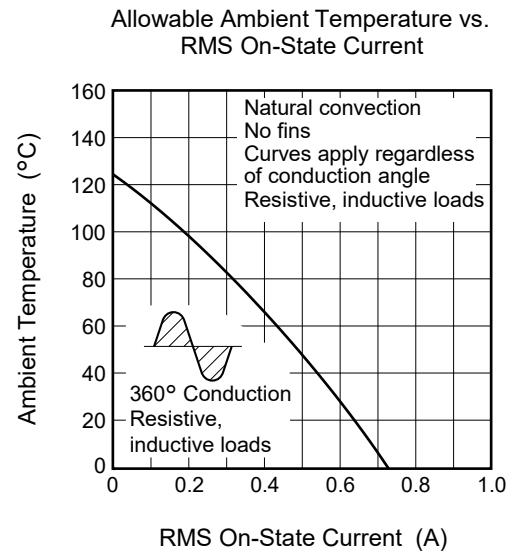
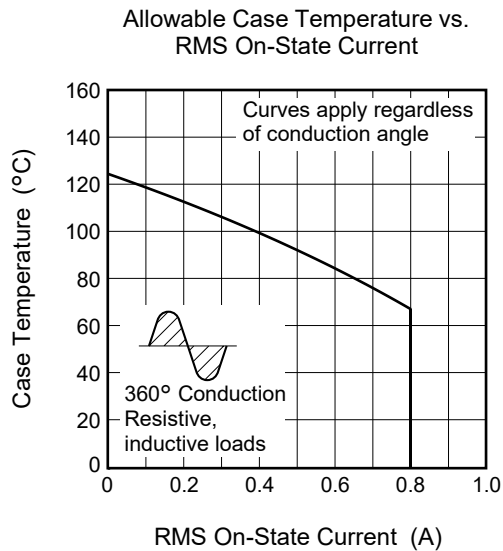
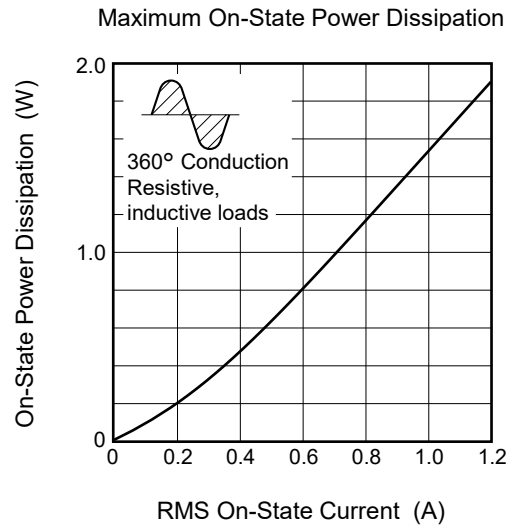
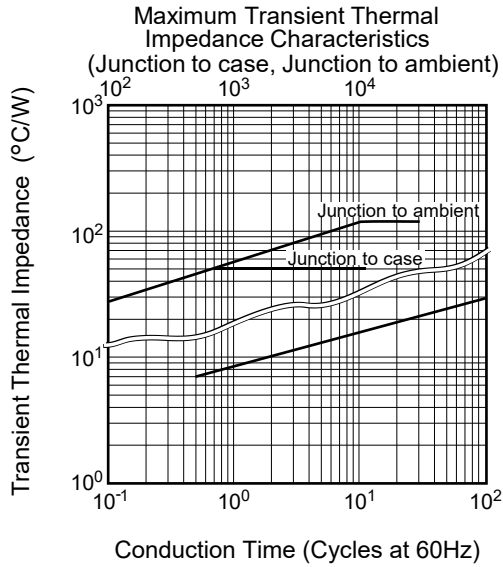
3. Case temperature is measured at the  $T_2$  terminal 1.5 mm away from the molded case.

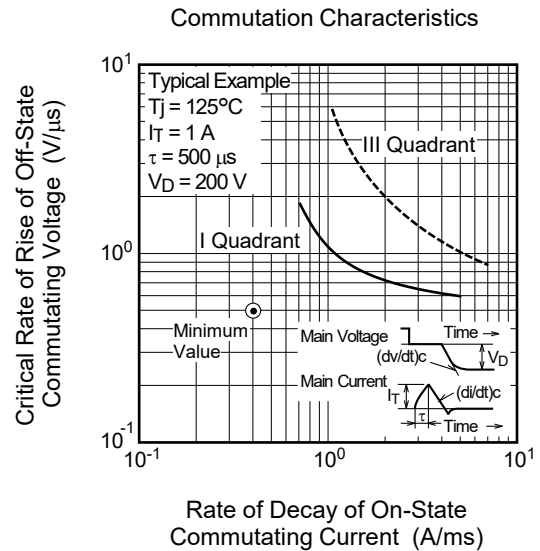
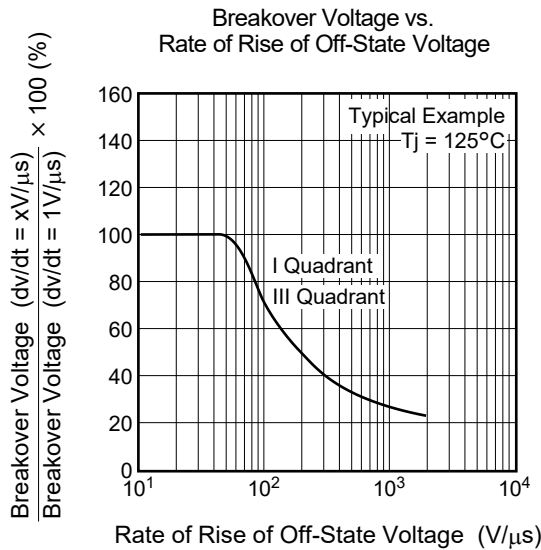
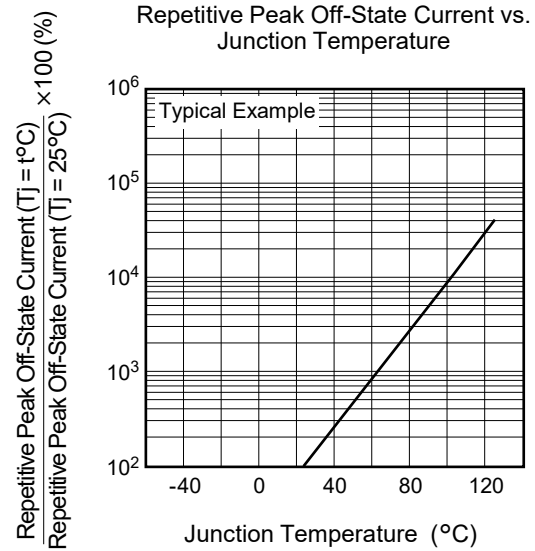
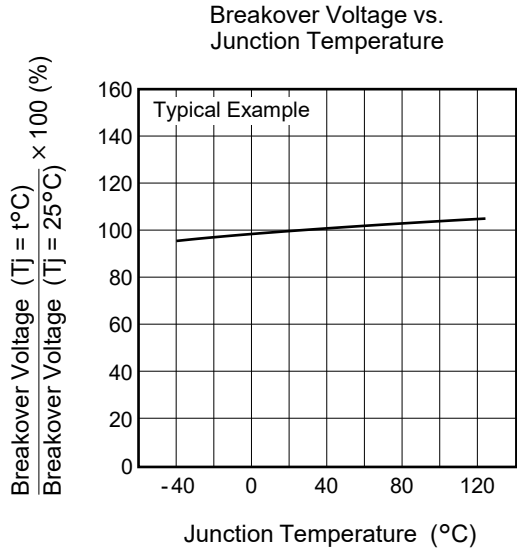
4. Test conditions of the critical-rate of rise of off-state commutating voltage is shown in the table below.

Test conditions	Commutating voltage and current waveforms (inductive load)
1. Junction temperature $T_j = 125^\circ\text{C}$ 2. Rate of decay of on-state commutating current $(di/dt)_c = -0.4\text{ A/ms}$ 3. Peak off-state voltage $V_D = 400\text{ V}$	

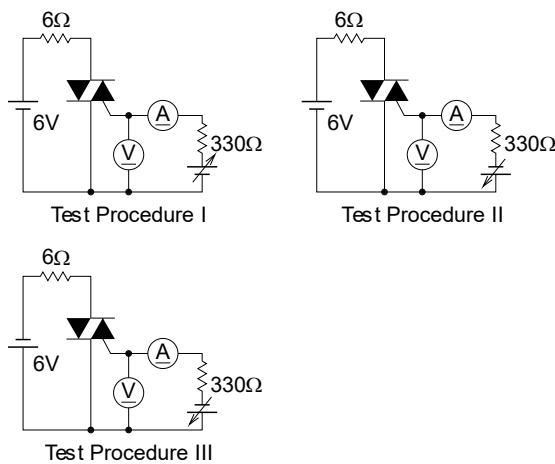
Performance Curves





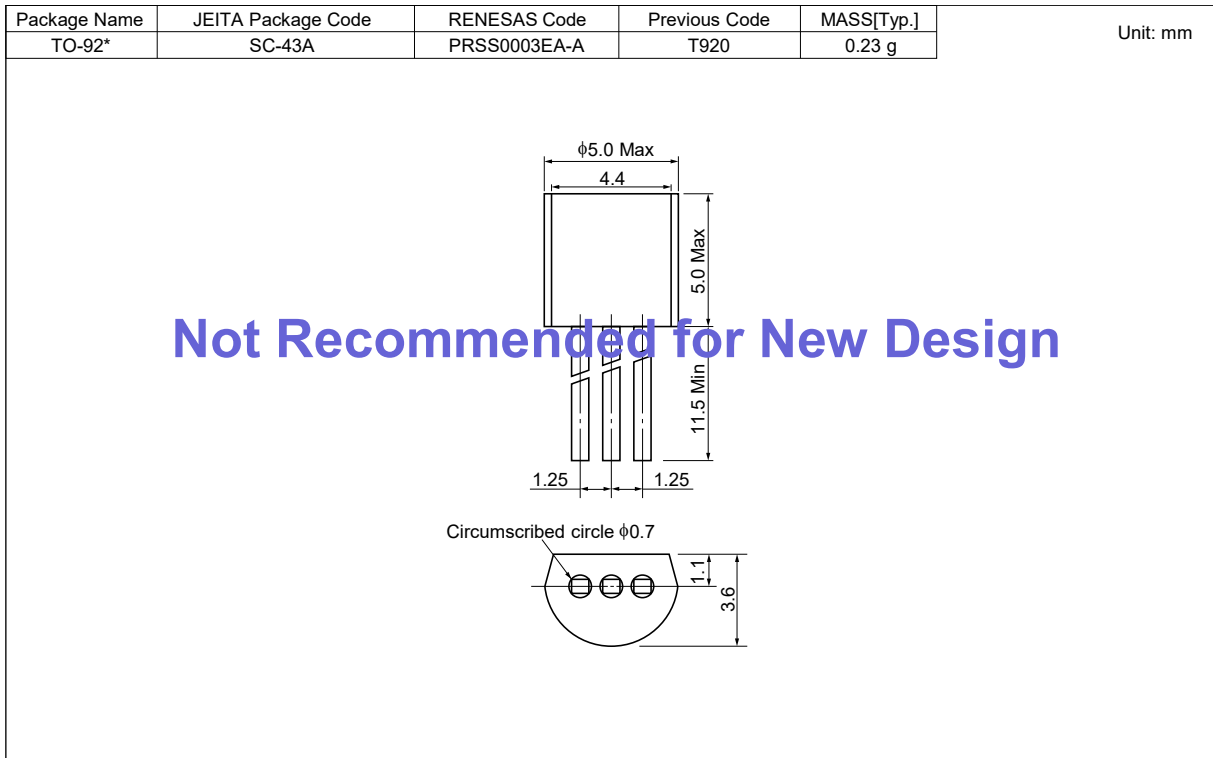


Gate Trigger Characteristics Test Circuits

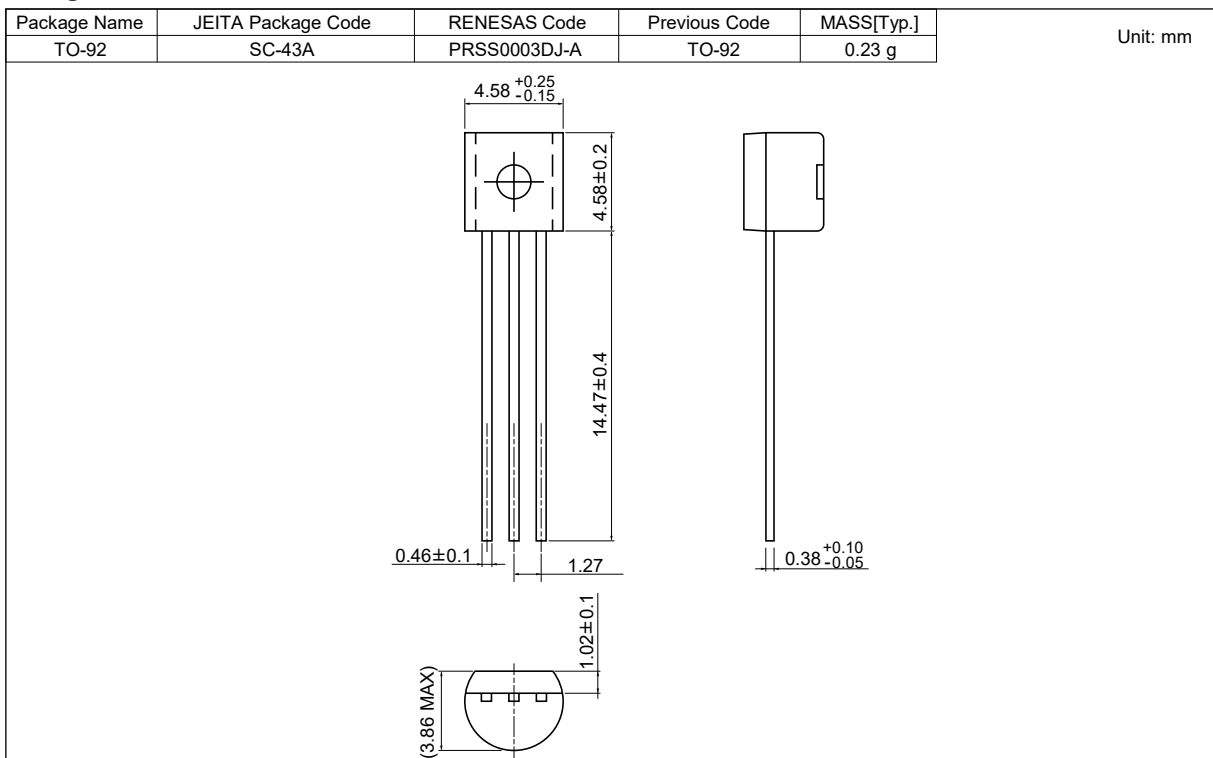


### Package Dimensions

Ordering code: #B00 <Not Recommended for New Design>



Ordering code: #BD0



## Ordering Information

Orderable Part Number	Package	Packing <sup>Note5</sup>	Quantity	Remark
BCR08AM-14A#B00	TO-92*	Plastic Bag	500 pcs.	Straight type, NRND
BCR08AM-14A-A6#B00	TO-92*	Plastic Bag	500 pcs.	A6 Lead form, NRND
BCR08AM-14A-TB#B00	TO-92*	Adhesive Tape	2000 pcs.	A8 Lead form, NRND
BCR08AM-14A#BD0	TO-92	Plastic Bag	1000 pcs.	Straight type, Halogen-free, Completely Pb-free
BCR08AM-14A-A6#BD0	TO-92	Plastic Bag	1000 pcs.	A6 Lead form, Halogen-free, Completely Pb-free
BCR08AM-14A-TB#BD0	TO-92	Adhesive Tape	2000 pcs.	A8 Lead form, Halogen-free, Completely Pb-free

Note: 5. Please confirm the specification about the shipping in detail.

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