

BCR08AS-14A

700V - 0.8A - Triac

Low Power Use

R07DS0970EJ0001

Rev.0.01

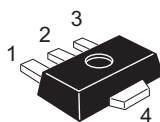
Nov 28, 2012

Features

- $I_{T(RMS)}$: 0.8 A
- V_{DRM} : 700 V
- I_{FGTL} , I_{RGTL} , I_{RGTH} : 5 mA
- Completed Pb Free
- Non-Insulated Type
- Planar Passivation Type
- Surface Mounted Type

Outline

RENESAS Package code: PLZZ0004CA-A)
(Package name: UPAK)



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

Applications

Hybrid IC, solid state relay, electric fan, washing machine, and other general purpose control applications

Maximum Ratings

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

Parameter	Symbol	Ratings	Unit	Conditions
RMS on-state current	$I_{T(RMS)}$	0.8	A	Commercial frequency, sine full wave 360° conduction, $T_a = 40^{\circ}C$ ^{Note3}
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 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	A	
Junction temperature	T_j	- 40 to +125	°C	
Storage temperature	T_{stg}	- 40 to +125	°C	
Mass	—	50	mg	Typical value

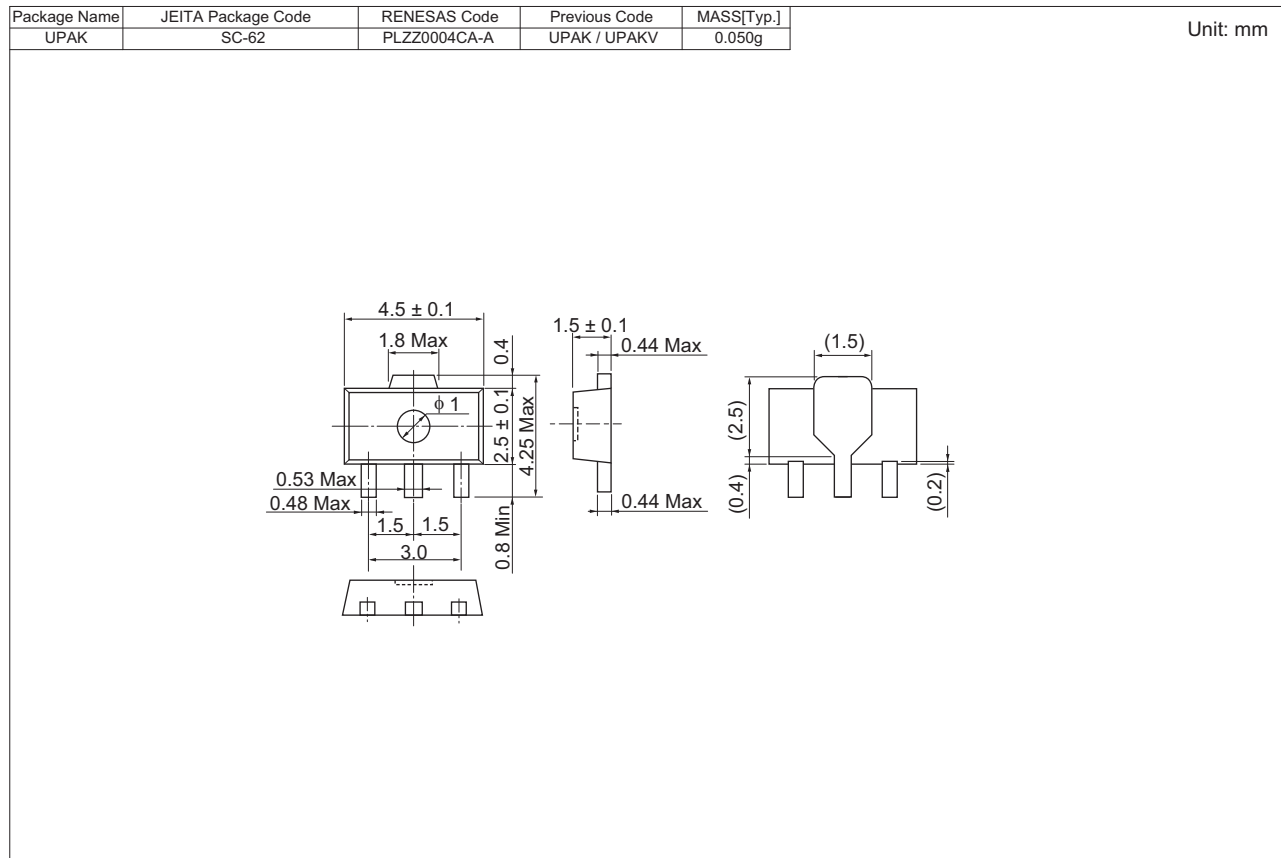
Electrical Characteristics

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 ^{Note2}	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 ^{Note2}	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}	0.2	—	—	V	$T_j = 125^\circ\text{C}$, $V_D = 1/2 V_{DRM}$
Thermal resistance	$R_{th(j-a)}$	—	—	65	$^\circ\text{C/W}$	Junction to ambient ^{Note3}
Critical-rate of rise of off-state commutating voltage ^{Note4}	$(dv/dt)_c$	0.5	—	—	$\text{V}/\mu\text{s}$	$T_j = 125^\circ\text{C}$

- Notes: 1. Gate open.
 2. Measurement using the gate trigger characteristics measurement circuit.
 3. Soldering with ceramic plate (25 mm×25 mm×t0.7 mm)
 4. Test conditions of the critical-rate of rise of off-state commutating voltage are 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 $V_D = 400\text{ V}$	

Package Dimensions



Ordering Information

Orderable Part Number	Packing	Quantity	Remark
BCR08AS-14AT14#B10	Embossed Tape	4000 pcs.	Taping direction "T1"

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