

# CR2AS-8UE

400V - 2A – Thyristor  
Low Power Use

R07DS1229EJ0100  
Rev.1.00  
Oct 09, 2014

## Features

- $I_{T(AV)}$ : 2 A
- $V_{DRM}$ : 400 V
- $I_{GT}$ : 100  $\mu$ A
- Non-Insulated Type
- Planar Type

## Outline

RENESAS Package code: PRSS0004ZG-A  
(Package name: MP-3A)



## Maximum Ratings

Parameter	Symbol	Voltage class	Unit
		8	
Repetitive peak reverse voltage	$V_{RRM}$	400	V
Non-repetitive peak reverse voltage	$V_{RSM}$	500	V
Repetitive peak off-state voltage <sup>Note1</sup>	$V_{DRM}$	400	V

Note: 1. With gate to cathode resistance  $R_{GK}=1k\Omega$

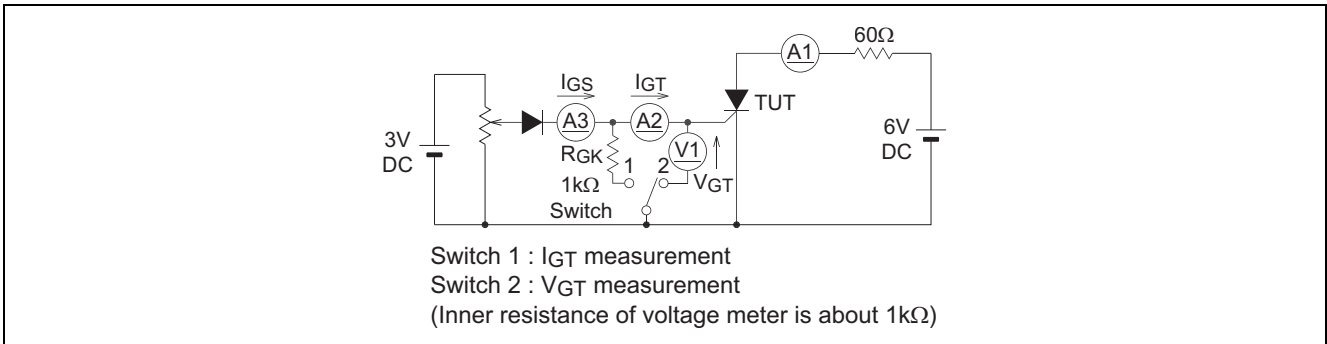
Parameter	Symbol	Ratings	Unit	Conditions
RMS on-state current	$I_{T(RMS)}$	4	A	
Average on-state current	$I_{T(AV)}$	2	A	Commercial frequency, sine half wave 180° conduction, $T_c=101^\circ\text{C}$ <sup>Note2</sup>
Surge on-state current	$I_{TSM}$	20	A	60Hz sine half wave, 1full cycle, peak value, non-repetitive
$I^2t$ for fusing	$I^2t$	1.7	$\text{A}^2\text{s}$	Value corresponding to 1cycle of half wave 60Hz, surge on-state current
Peak gate power dissipation	$P_{GM}$	0.5	W	
Average gate power dissipation	$P_{G(AV)}$	0.1	W	
Peak gate forward voltage	$V_{FGM}$	6	V	
Peak gate reverse voltage	$V_{RGM}$	6	V	
Peak gate forward current	$I_{FGM}$	0.2	A	
Junction temperature	$T_j$	- 40 to +125	$^\circ\text{C}$	
Storage temperature	$T_{stg}$	- 40 to +125	$^\circ\text{C}$	
Mass	—	0.32	g	Typical value

**Electrical Characteristics**

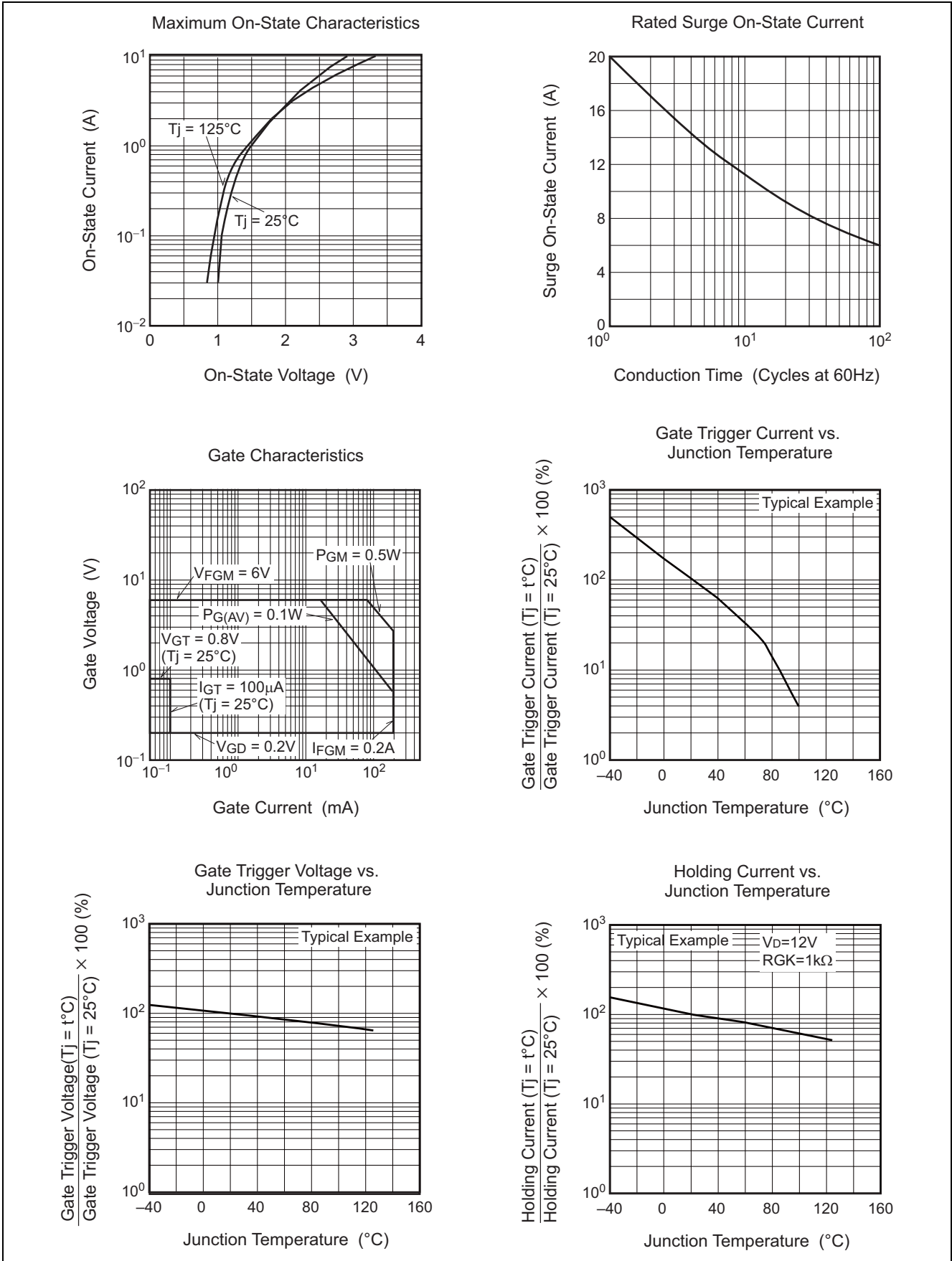
Parameter	Symbol	Min.	Typ.	Max.	Unit	Test conditions
Repetitive peak reverse current	$I_{RRM}$	—	—	0.1	mA	$T_j = 125^\circ\text{C}$ , $V_{RRM}$ applied $R_{GK} = 1\text{ k}\Omega$
Repetitive peak off-state current	$I_{DRM}$	—	—	0.1	mA	$T_j = 125^\circ\text{C}$ , $V_{DRM}$ applied $R_{GK} = 1\text{ k}\Omega$
On-state voltage	$V_{TM}$	—	—	2.2	V	$T_j = 25^\circ\text{C}$ , $I_{TM} = 4\text{ A}$ instantaneous value
Gate trigger voltage	$V_{GT}$	—	—	0.8	V	$T_j = 25^\circ\text{C}$ , $V_D = 6\text{ V}$ , $I_T = 0.1\text{ A}$ <sup>Note3</sup>
Gate non-trigger voltage	$V_{GD}$	0.2	—	—	V	$T_j = 125^\circ\text{C}$ , $V_D = 1/2 V_{DRM}$ $R_{GK} = 1\text{ k}\Omega$
Gate trigger current	$I_{GT}$	1	—	100	$\mu\text{A}$	$T_j = 25^\circ\text{C}$ , $V_D = 6\text{ V}$ , $I_T = 0.1\text{ A}$ <sup>Note3</sup>
Holding current	$I_H$	—	—	3	mA	$T_j = 25^\circ\text{C}$ , $V_D = 12\text{ V}$ $R_{GK} = 1\text{ k}\Omega$
Thermal resistance	$R_{th(j-c)}$	—	—	4.4	$^\circ\text{C/W}$	Junction to case <sup>Note2</sup>

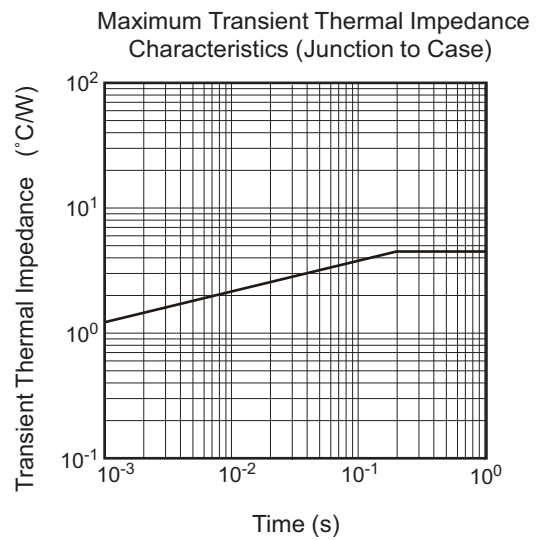
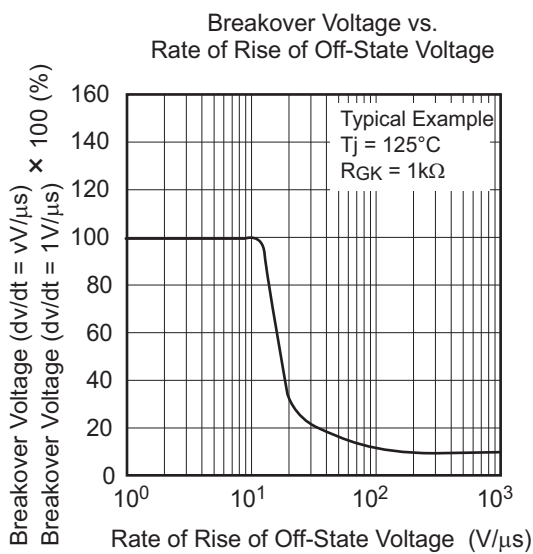
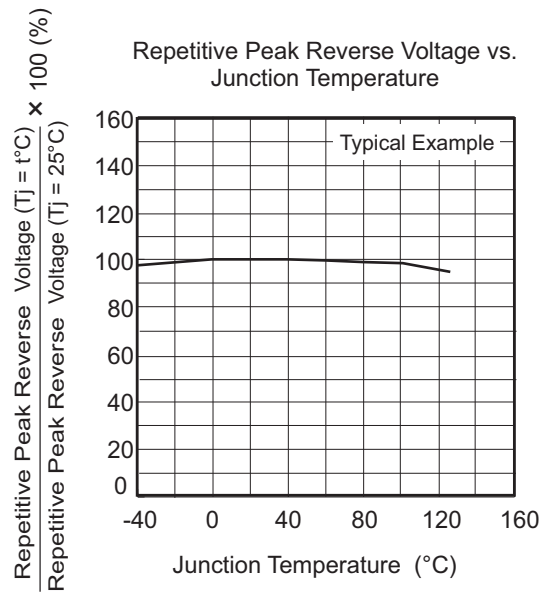
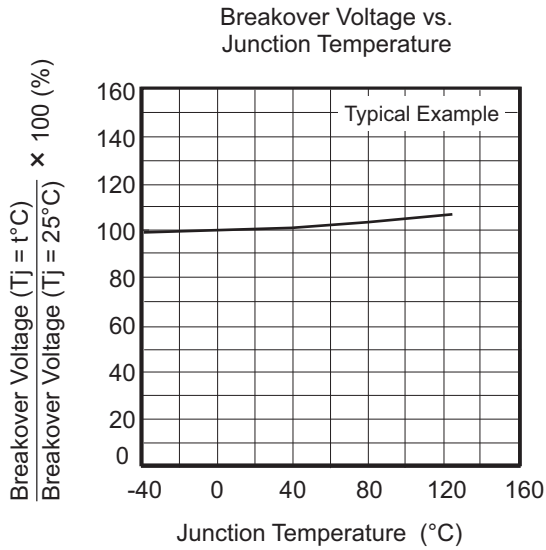
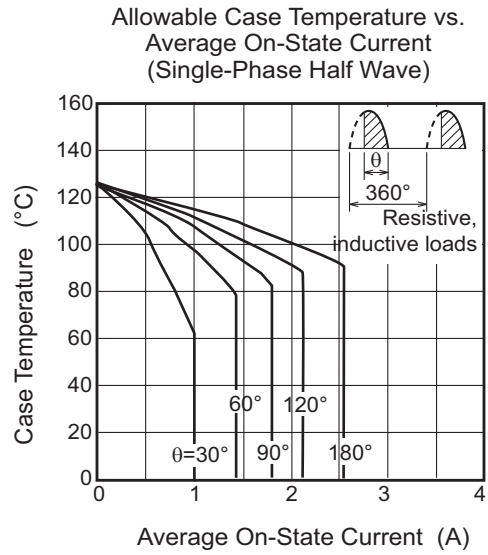
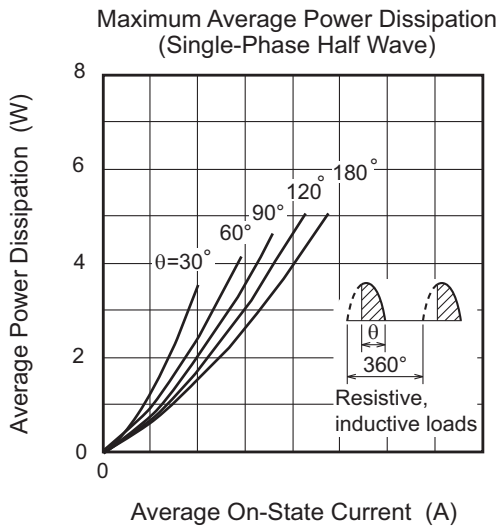
Note: 2. The measurement point for case temperature is at anode tab.

Note: 3.  $I_{GT}$ ,  $V_{GT}$  measurement circuit

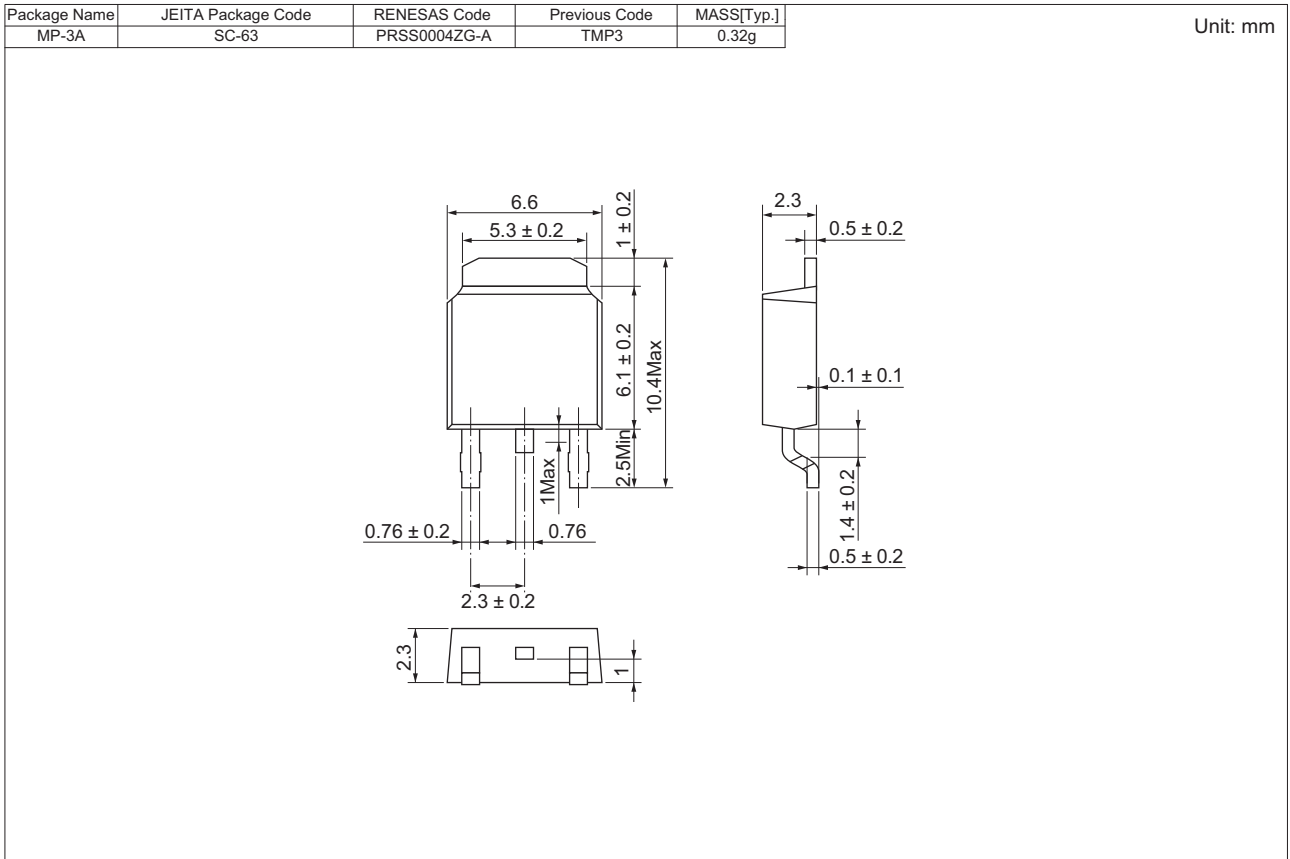


Performance Curves





Package dimensions



Ordering Information

Orderable Part Number	Packing	Quantity	Remark
CR2AS-8UE#B00	Tube	75 pcs.	
CR2AS-8UE-A2#B00	Tube	75 pcs.	A2 Lead forming
CR2AS-8UE-T13#B00	Embossed Tape	3000 pcs.	Taping direction "T1"

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

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