

CR2PM-8UE

400V - 2A - Thyristor
Low Power Use

R07DS1160EJ0200
Rev.2.00
Dec 24, 2014

Features

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

Outline

RENESAS Package code: PRSS0003AA-B
(Package name: TO-220F(2))



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 ^{Note1}	V_{DRM}	400	V

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

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, $T_c = 98^\circ\text{C}$
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	A^2s	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	—	2.0	g	Typical value

Electrical Characteristics

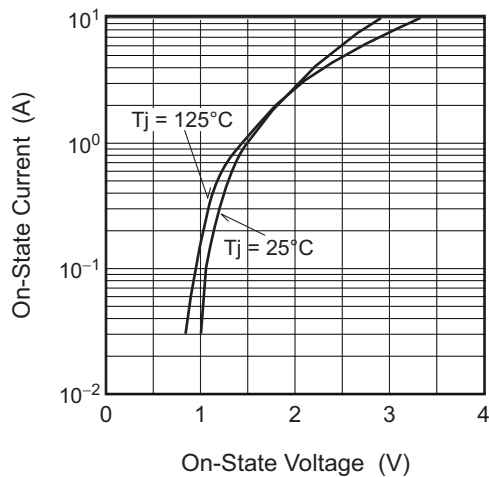
Parameter	Symbol	Min.	Typ.	Max.	Unit	Test conditions
Repetitive peak reverse current	I_{RRM}	—	—	0.1	mA	$T_j = 125^\circ\text{C}$, V_{RRM} applied $R_{GK} = 1\text{ k}\Omega$
Repetitive peak off-state current	I_{DRM}	—	—	0.1	mA	$T_j = 125^\circ\text{C}$, V_{DRM} applied $R_{GK} = 1\text{ k}\Omega$
On-state 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	$T_j = 25^\circ\text{C}$, $V_D = 6\text{ V}$, $I_T = 0.1\text{ A}$
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	μA	$T_j = 25^\circ\text{C}$, $V_D = 6\text{ V}$, $I_T = 0.1\text{ A}$
Holding current	I_H	—	—	3.0	mA	$T_j = 25^\circ\text{C}$, $V_D = 12\text{ V}$ $R_{GK} = 1\text{ k}\Omega$
Thermal resistance	$R_{th(j-c)}$	—	—	5.6	$^\circ\text{C/W}$	Junction to case ^{Note2}

Notes: 2. The contact thermal resistance $R_{th(c-f)}$ in case of greasing is 0.5°C/W .

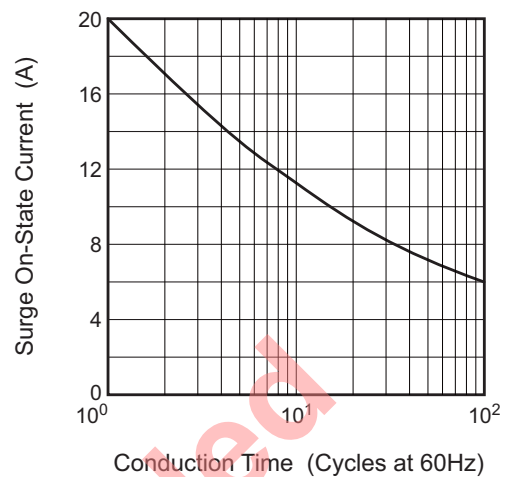
Not Recommended
for New Design

Performance Curves

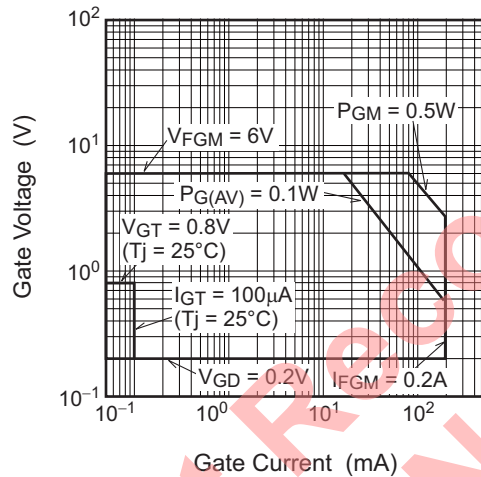
Maximum On-State Characteristics



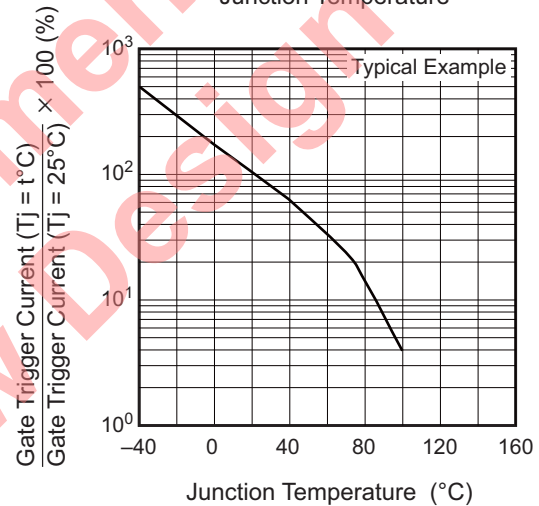
Rated Surge On-State Current



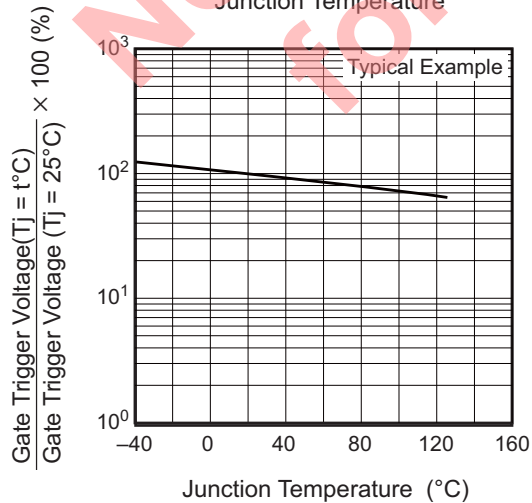
Gate Characteristics



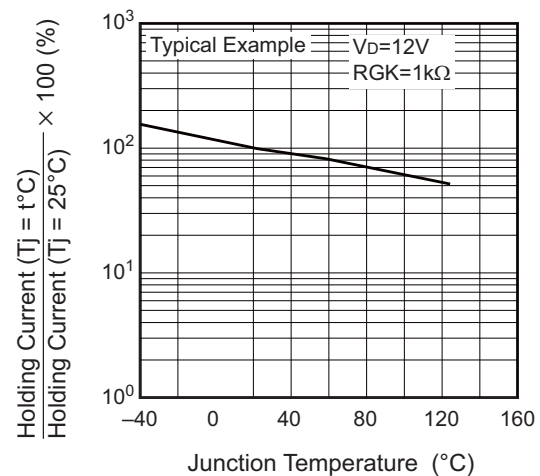
Gate Trigger Current vs. Junction Temperature

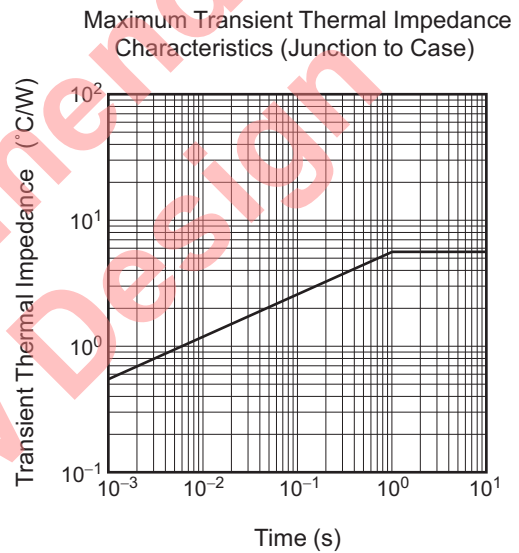
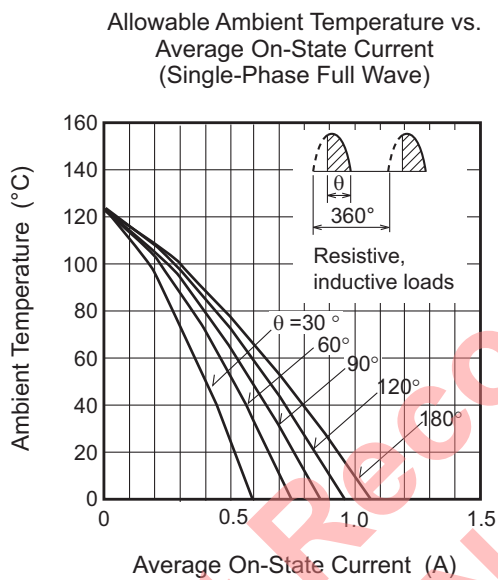
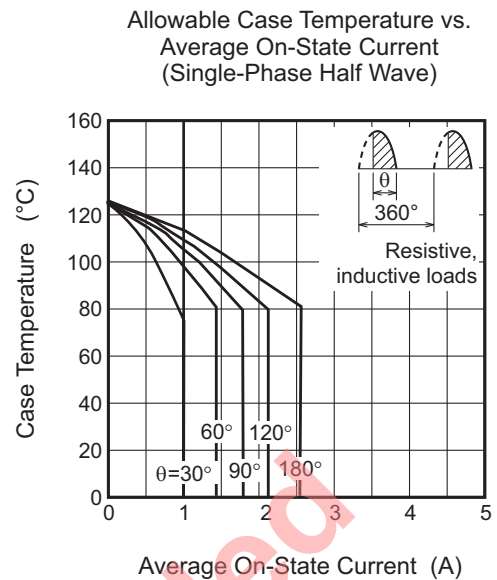
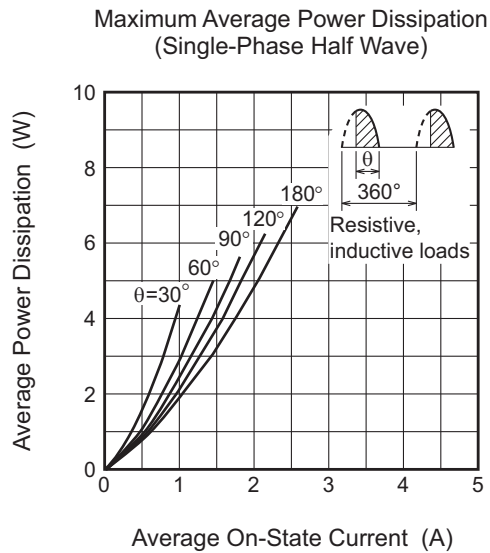


Gate Trigger Voltage vs. Junction Temperature

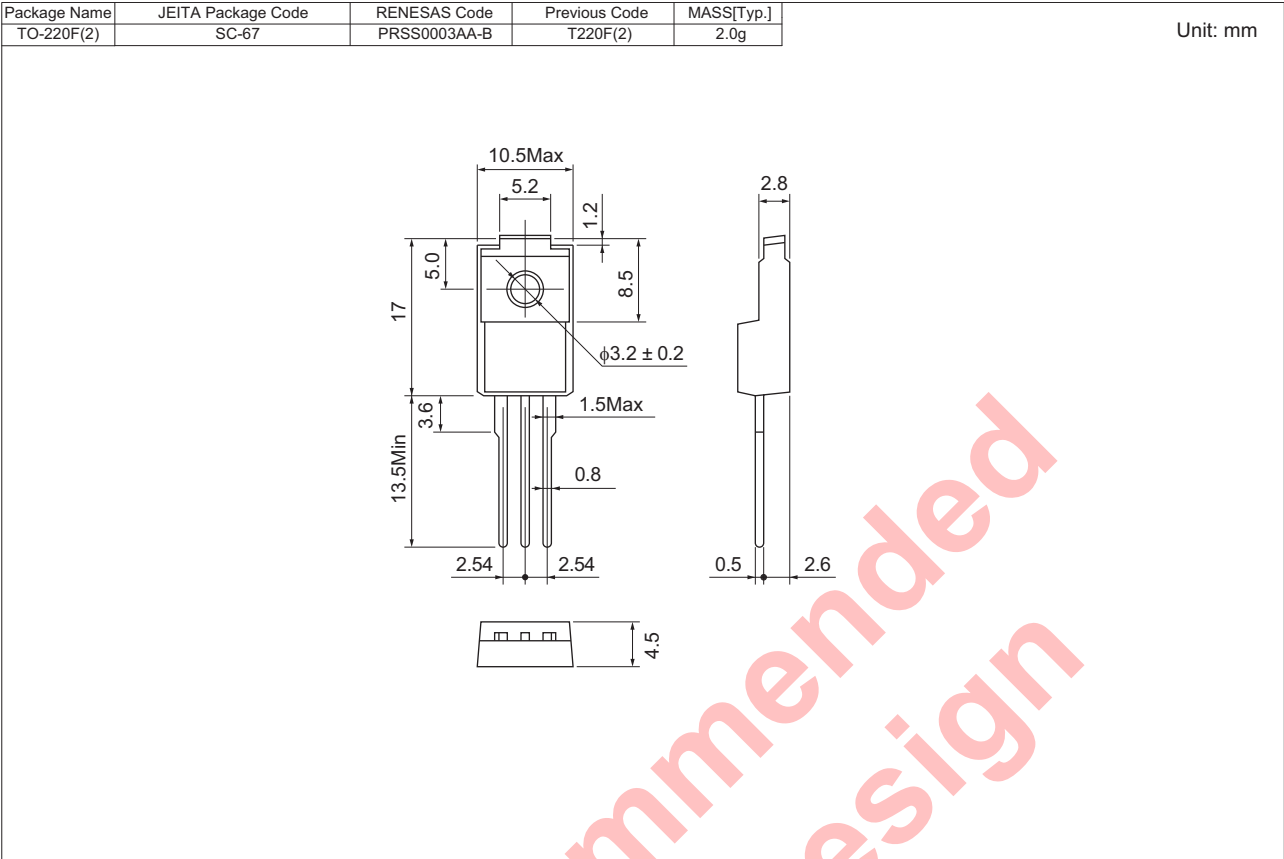


Holding Current vs. Junction Temperature





Package dimensions



Ordering Information

Orderable Part Number	Packing	Quantity	Remark
CR2PM-8UE#B00	Bag	100 pcs.	Straight type
CR2PM-8UE-□□#B00	Tube	50 pcs.	□□:Lead forming type

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

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