

CR05BS-8

Thyristor

Low Power Use

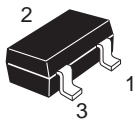
R07DS0136EJ0300
 (Previous: REJ03G0347-0200)
 Rev.3.00
 Oct 13, 2010

Features

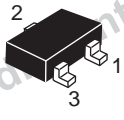
- $I_{T(AV)}$: 0.1 A
- V_{DRM} : 400 V
- I_{GT} : 100 μ A
- Non-Insulated Type
- Planar Passivation Type
- Surface Mounted type
- Completed Pb free product

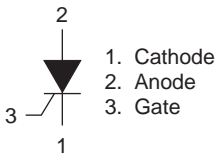
Outline

RENESAS Package code: PLSP0003ZB-A
(Package name:MPAK)



RENESAS Package code: PLSP0003ZA-A
(Package name:SC-59)





1. Cathode
2. Anode
3. Gate

Applications

Strobe flasher

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
DC reverse voltage	$V_{R(DC)}$	320	V
Repetitive peak off-state voltage ^{Note1}	V_{DRM}	400	V
DC off-state voltage ^{Note1}	$V_{D(DC)}$	320	V

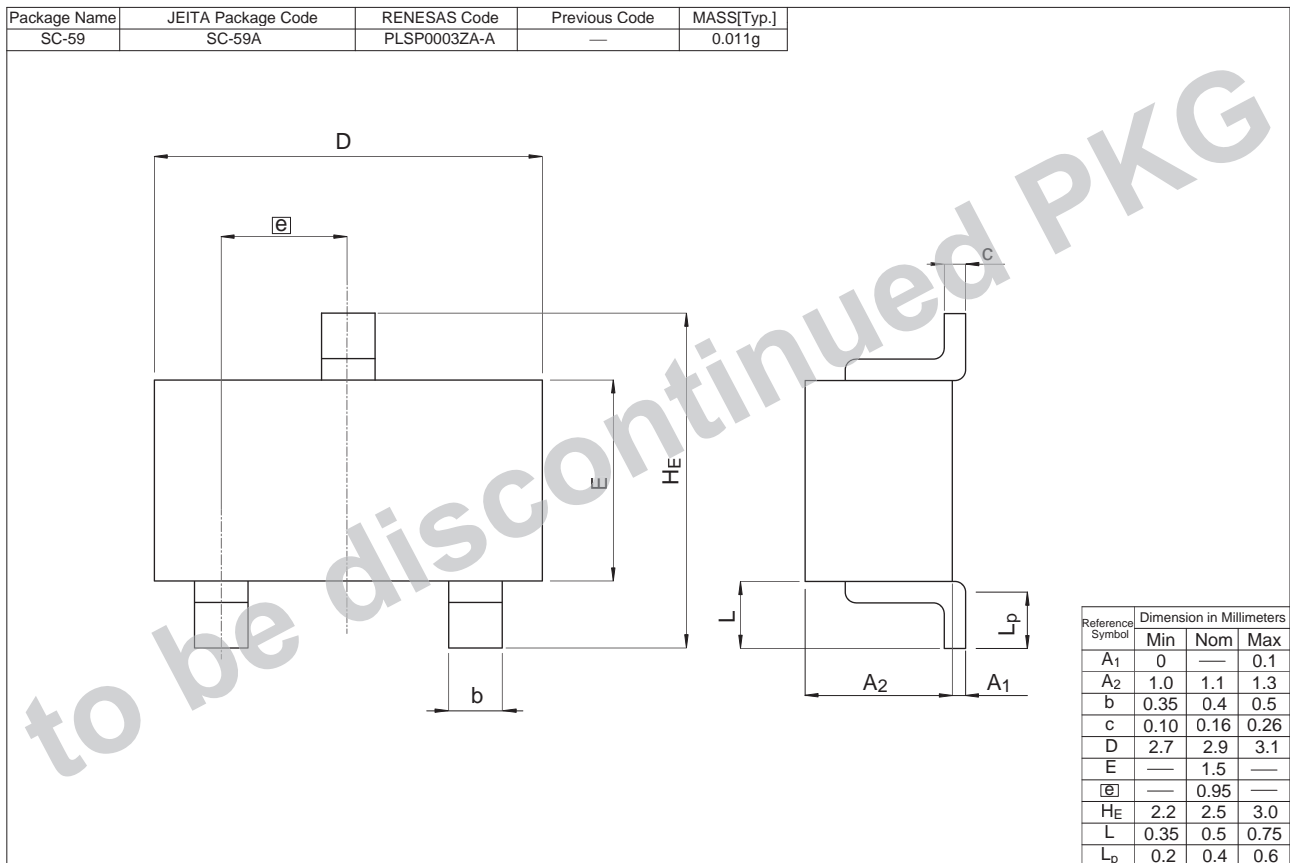
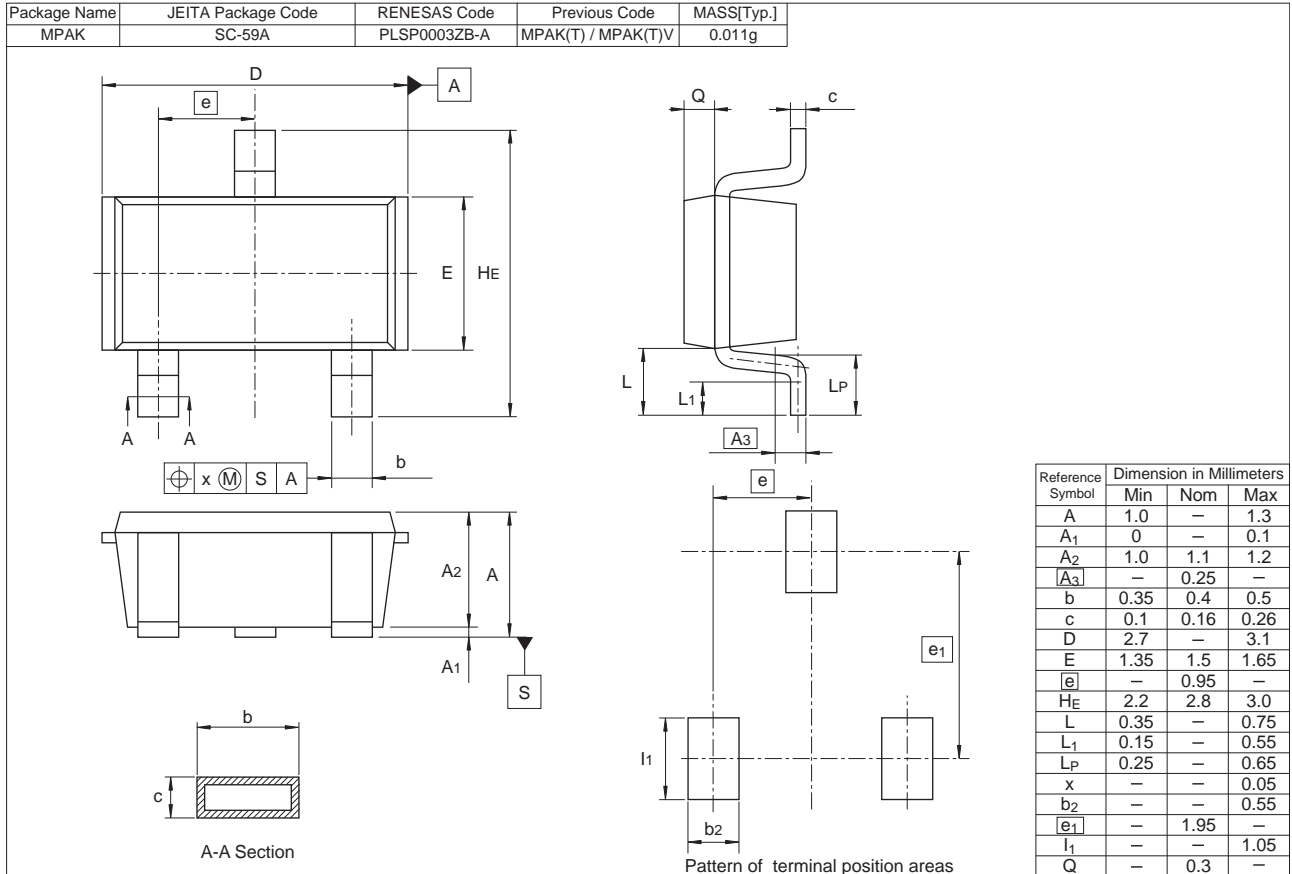
Parameter	Symbol	Ratings	Unit	Conditions
RMS on-state current	$I_{T(RMS)}$	0.15	A	
Average on-state current	$I_{T(AV)}$	0.1	A	Commercial frequency, sine half wave 180° conduction, $T_a = 55^\circ\text{C}$
Surge on-state current	I_{TSM}	10	A	60Hz sine half wave 1 full cycle, peak value, non-repetitive
I^2t for fusing	I^2t	0.4	A^2s	Value corresponding to 1 cycle of half wave 60Hz, surge on-state current
Peak gate power dissipation	P_{GM}	0.1	W	
Average gate power dissipation	$P_{G(AV)}$	0.01	W	
Peak gate forward voltage	V_{FGM}	6	V	
Peak gate reverse voltage	V_{RGM}	6	V	
Peak gate forward current	I_{FGM}	0.1	A	
Junction temperature	T_j	- 40 to +125	$^\circ\text{C}$	
Storage temperature	T_{stg}	- 40 to +125	$^\circ\text{C}$	
Mass	—	11	mg	Typical value

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

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
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}	—	—	1.9	V	$T_a = 25^\circ\text{C}$, $I_{TM} = 1.5 \text{ A}$, 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}	20	—	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	$R_{th(j-a)}$	—	—	500	$^\circ\text{C/W}$	Junction to ambient

Package Dimensions



Ordering Information

Orderable Part Number	Packing	Quantity	Remark
CR05BS-8-ET13#F10	Embossed Tape	3000 pcs.	—

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