

# CR05BS-8

Thyristor

Low Power Use

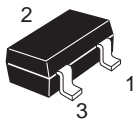
R07DS0136EJ0300  
 (Previous: REJ03G0347-0200)  
 Rev.3.00  
 Oct 13, 2010

## Features

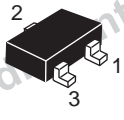
- $I_{T(AV)}$  : 0.1 A
- $V_{DRM}$  : 400 V
- $I_{GT}$  : 100  $\mu$ A
- Non-Insulated Type
- Planar Passivation Type
- Surface Mounted type
- Completed Pb free product

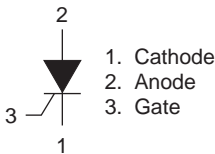
## Outline

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 <sup>Note1</sup>	$V_{DRM}$	400	V
DC off-state voltage <sup>Note1</sup>	$V_{D(DC)}$	320	V

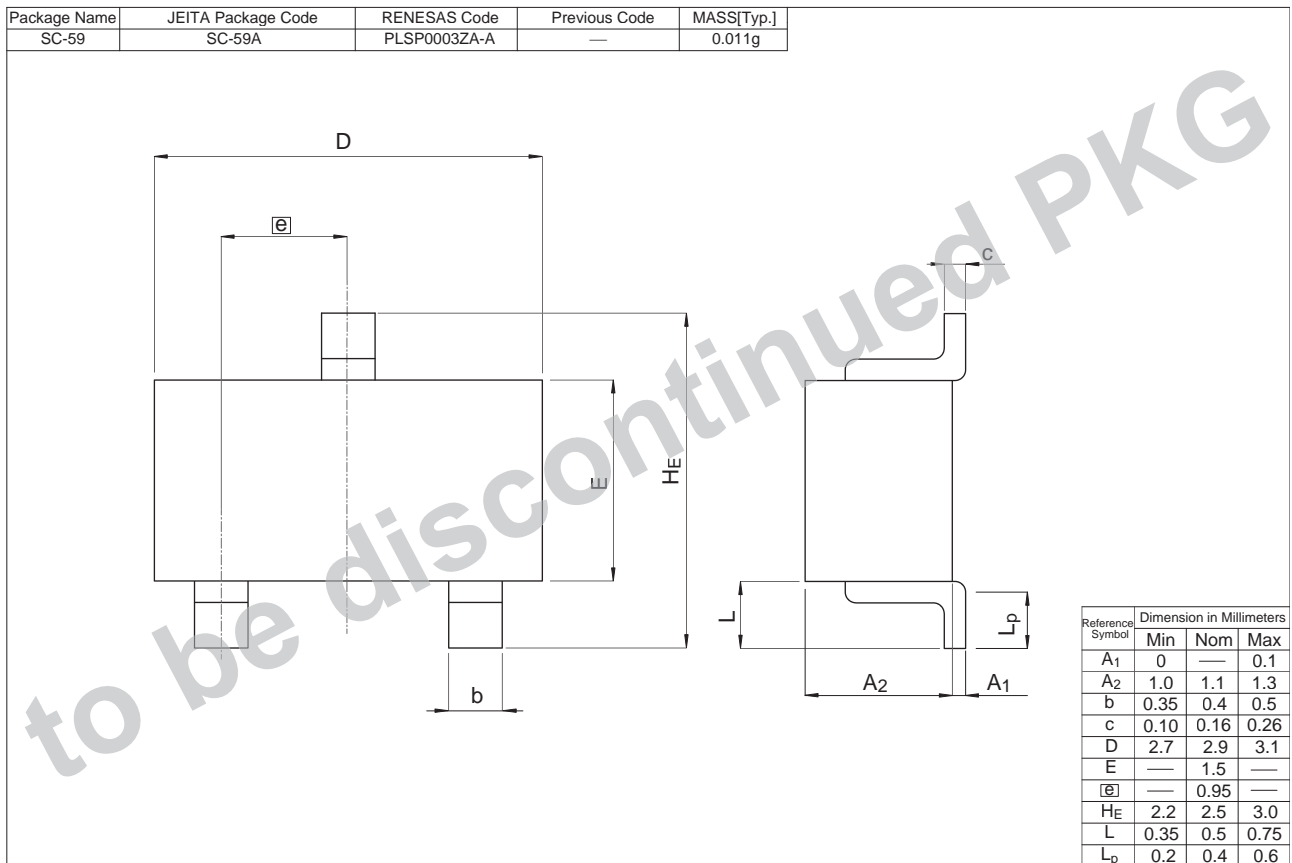
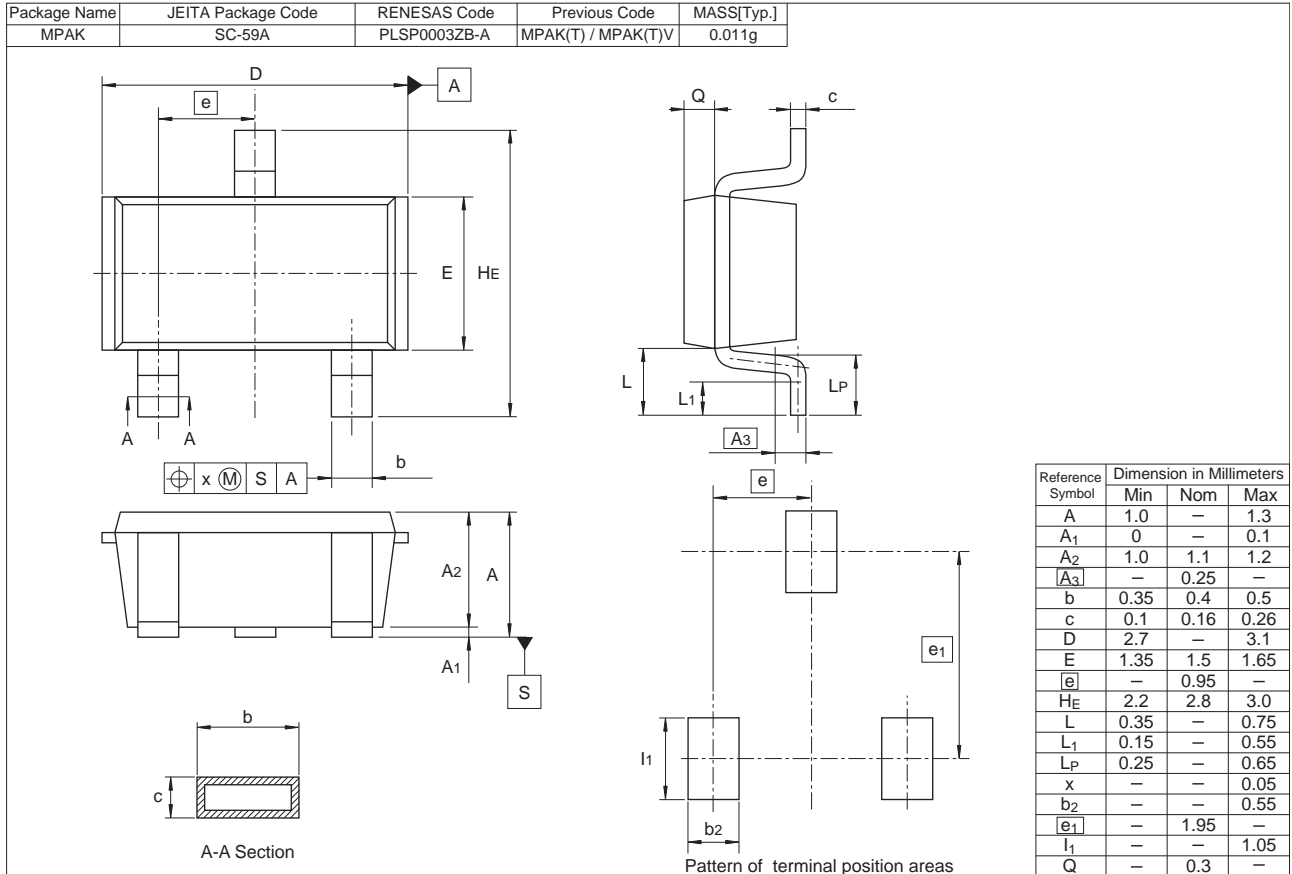
Parameter	Symbol	Ratings	Unit	Conditions
RMS on-state current	$I_{T(RMS)}$	0.15	A	
Average on-state current	$I_{T(AV)}$	0.1	A	Commercial frequency, sine half wave 180° conduction, $T_a = 55^\circ\text{C}$
Surge on-state current	$I_{TSM}$	10	A	60Hz sine half wave 1 full cycle, peak value, non-repetitive
$I^2t$ for fusing	$I^2t$	0.4	$\text{A}^2\text{s}$	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	$\mu\text{A}$	$T_j = 25^\circ\text{C}$ , $V_D = 6 \text{ V}$ , $I_T = 0.1 \text{ A}$
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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