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CR05BS-8

Thyristor

Low Power Use

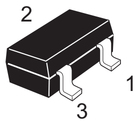
REJ03G0347-0200
Rev.2.00
Mar 22, 2007

Features

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

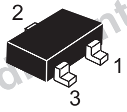
Outline

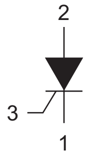
RENESAS Package code: PRSS0004ZA-A
(Package name:MPAK)



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

to be discontinued PKG





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, Ta = 55°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	Tj	– 40 to +125	°C	
Storage temperature	Tstg	– 40 to +125	°C	
Mass	—	11	mg	Typical value

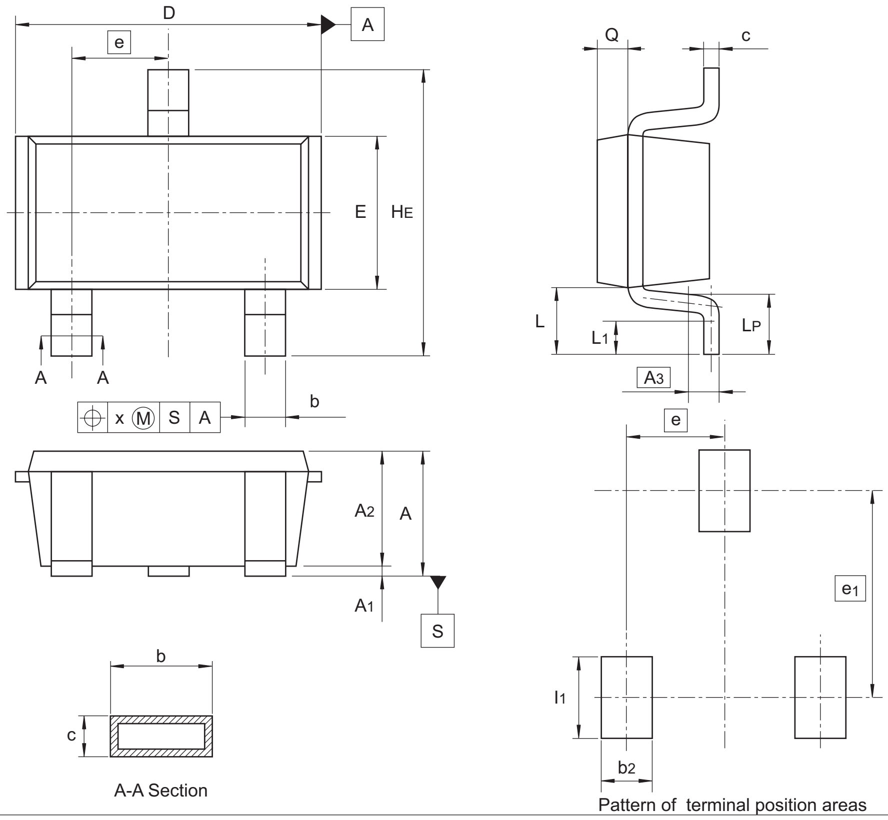
Notes: 1. With gate to cathode resistance R_{GK} = 1 kΩ.

Electrical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test conditions
Repetitive peak reverse current	I_{RRM}	—	—	0.1	mA	Tj = 125°C, V_{RRM} applied
Repetitive peak off-state current	I_{DRM}	—	—	0.1	mA	Tj = 125°C, V_{DRM} applied, R_{GK} = 1 kΩ
On-state voltage	V_{TM}	—	—	1.9	V	Ta = 25°C, I_{TM} = 1.5 A, instantaneous value
Gate trigger voltage	V_{GT}	—	—	0.8	V	Tj = 25°C, V_D = 6 V, I_T = 0.1 A
Gate non-trigger voltage	V_{GD}	0.2	—	—	V	Tj = 125°C, V_D = 1/2 V_{DRM}, R_{GK} = 1 kΩ
Gate trigger current	I_{GT}	20	—	100	μA	Tj = 25°C, V_D = 6 V, I_T = 0.1 A
Holding current	I_H	—	—	3.0	mA	Tj = 25°C, V_D = 12 V, R_{GK} = 1 kΩ
Thermal resistance	$R_{th\ (j\text{-}a)}$	—	—	500	°C/W	Junction to ambient

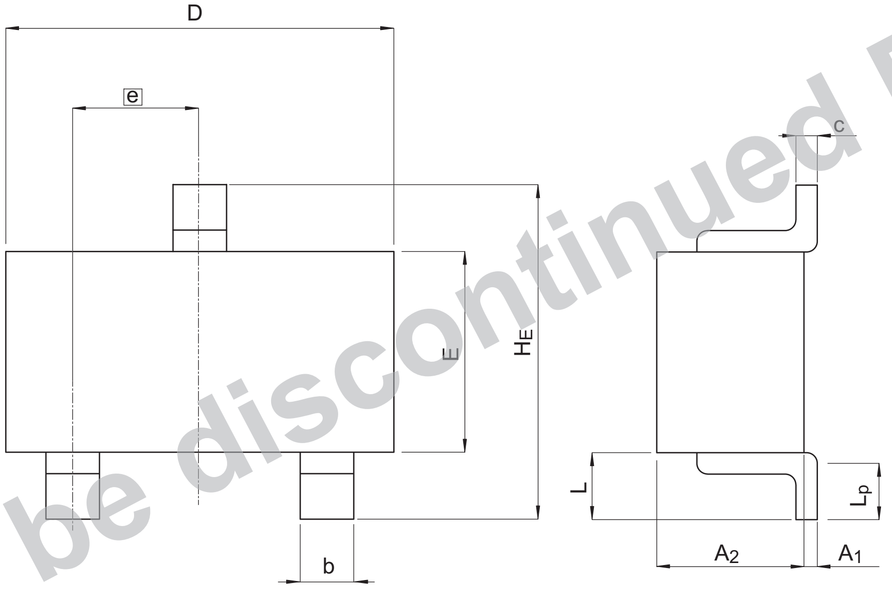
Package Dimensions

Package Name	JEITA Package Code	RENESAS Code	Previous Code	MASS[Typ.]
MPAK	SC-59A	PLSP0003ZB-A	MPAK(T) / MPAK(T)V	0.011g



Reference Symbol	Dimension in Millimeters		
	Min	Nom	Max
A	1.0	–	1.3
A_1	0	–	0.1
A_2	1.0	1.1	1.2
$\boxed{A_3}$	–	0.25	–
b	0.35	0.4	0.5
c	0.1	0.16	0.26
D	2.7	–	3.1
E	1.35	1.5	1.65
$\boxed{e}$	–	0.95	–
H_E	2.2	2.8	3.0
L	0.35	–	0.75
L_1	0.15	–	0.55
L_P	0.25	–	0.65
x	–	–	0.05
b_2	–	–	0.55
$\boxed{e_1}$	–	1.95	–
l_1	–	–	1.05
Q	–	0.3	–

Package Name	JEITA Package Code	RENESAS Code	Previous Code	MASS[Typ.]
SC-59	SC-59A	PLSP0003ZA-A	—	0.011g



to be discontinued PKG

Reference Symbol	Dimension in Millimeters		
	Min	Nom	Max
A_1	0	—	0.1
A_2	1.0	1.1	1.3
b	0.35	0.4	0.5
c	0.10	0.16	0.26
D	2.7	2.9	3.1
E	—	1.5	—
$\boxed{e}$	—	0.95	—
H_E	2.2	2.5	3.0
L	0.35	0.5	0.75
L_p	0.2	0.4	0.6

Order Code

Lead form	Standard packing	Quantity	Standard order code	Standard order code example
Surface-mounted type	Taping	3000	Type name – ET +Direction (1 or 2) +3	CR05BS-8-ET13

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

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