

RS1AY-RS1MY

Feature

- I_o 1A
- V_{RRM} 50V-1000V
- Glass passivated chip
- High surge current capability

Application

- Rectifier

Marking

- RS1X X: From A to M



ABSOLUTE MAXIMUM RATINGS ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbo	RS1XY							Unit
		I	A	B	D	G	J	K	
Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
DC blocking voltage	VDC	50	100	200	400	600	800	1000	
Maximum average forward output current	$I_{F(AV)}$	1							A
Peak forward surge current, 8.3ms single half-sine-wave, @ $T_J = 25^\circ\text{C}$	I_{FSM}	30							A
Rating for fusing ($t < 8.3\text{ms}$)	I^2t	3.74							A^2sec
Junction Temperature	T_J	-55 ~ +150							$^\circ\text{C}$
Storage Temperature	T_{STG}	-55 ~ +150							$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Test Condition	RS1XY						Unit
			A	B	D	G	J	K	
Peak Forward Voltage	V_F	$I_F = 1.0\text{A}$	1.3						V
Maximum reverse recovery time	t_{rr}	$I_F = 0.5\text{A}, I_R = 1.0\text{A}, I_{rr} = 0.25\text{A}$	150			250	500		ns
Peak Reverse Current	I_{RRM1}	$V_{RM} = V_R$	$T_A = 25^\circ\text{C}$		5				μA
	I_{RRM2}	R_M	$T_A = 125^\circ\text{C}$		50				μA
Thermal Resistance(Typical)	$R_{\theta J-A}$	Between junction and ambient		61				$^\circ\text{C}/\text{W}$	
	$R_{\theta J-L}$	Between junction and terminal		6				$^\circ\text{C}/\text{W}$	

Note: Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas.

Typical Characteristics

Fig.1-Forward Current Derating Curve

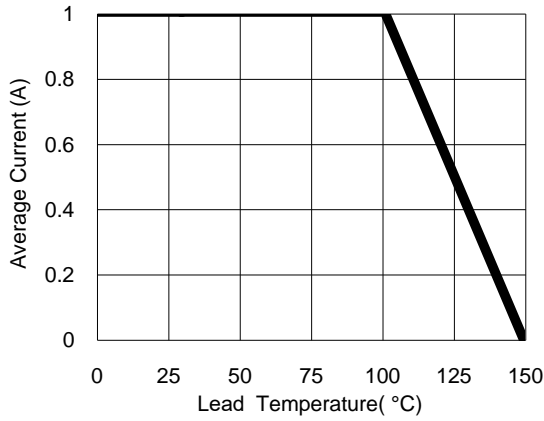


Fig.2- Surge Current Derating Curve

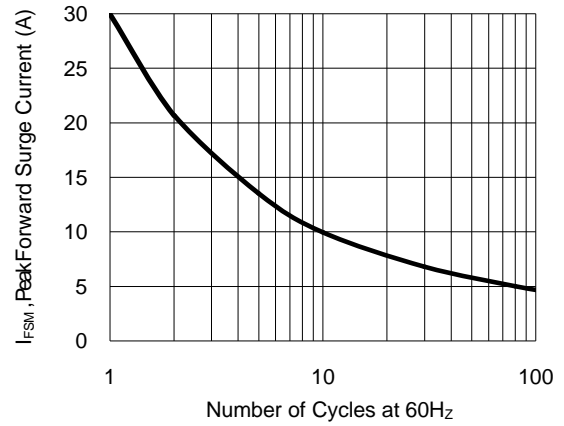


Fig.3- Typical Forward Voltage Characteristic

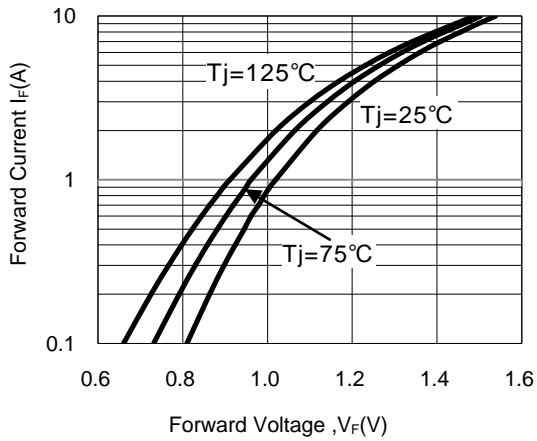
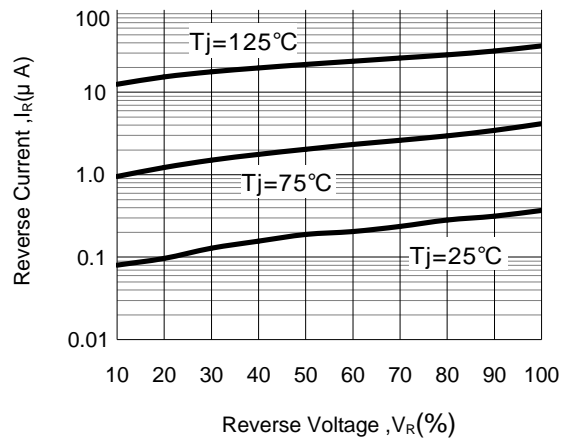
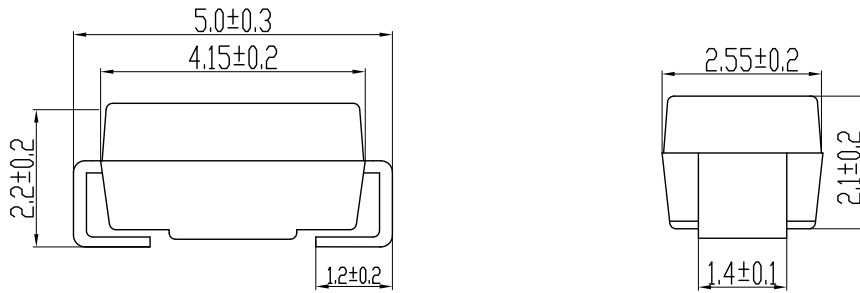


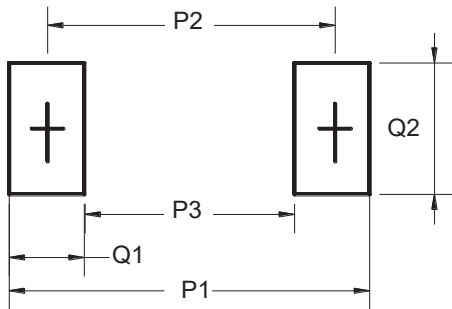
Fig.4- Typical Reverse Characteristic



SMA Package Outline Dimensions



Mounting Pad Layout(unit:mm)



Dim	Millimeters
P1	6.50
P2	4.00
P3	1.50
Q1	2.50
Q2	1.70

Attention:

- GreenPower Electronics reserves the right to improve product design function and reliability without notice.
- Any and all semiconductor products have certain probability to fail or malfunction, which may result in personal injury, death or property damage. Customer are solely responsible for providing adequate safe measures when design their systems.
- GreenPower Electronics products belong to consumer electronics or other civilian electronic products.