Surface Mount Rectifier

Features:

- Low Profile Package
- For Surface Mounted Applications
- Built-In Strain Relief, Ideal for Automated Placement
- High Temperature Soldering : 260°C/10 seconds at Terminals

Mechanical Data

- Case : JEDEC SMA, molded plastic over passivated chip
- Terminals : solder plated, solderable per MIL-STD-750, method 2026
- Polarity : Colour band denotes cathode end
- Weight : 0.002oz, 0.064g

Maximum Ratings and Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified

Characteristic	Symbol	RS1D-13-F	RS1J-13-F	RS1K-13-F	RS1M-13-F	Units
Maximum repetitive peak reverse voltage	V_{RRM}	200	600	800	1,000	V
Maximum RMS voltage	V_{RMS}	140	420	560	700	V
Maximum DC blocking voltage	V_{DC}	200	600	800	1,000	V
Maximum average forward rectified current at T_L=90°C	$I_{F(AV)}$	1				A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load	I_{FSM}	30				A
Maximum Instantaneous Forward Voltage at 1A	V_F	1.3				V
Maximum DC reverse current T_A=25°C at rated DC blocking voltage T_A=125°C	I_R	5 50				µA
Typical reverse recovery time (Note 1)	t_{IT}	150	250	500		ns
Typical junction capacitance (Note 2)	C_J	10		7		pF
Typical thermal resistance (Note3)	$R_{\theta JA}$ $R_{\theta JL}$	105 32				°C/W
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +175				°C

Note:

(1) Reverse recovery time test conditions : I_F=0.5A, I_R=1.0A, I_{rr}=0.25A

(2) Measured at 1MHz and applied reverse voltage of 4V

(3) Thermal resistance from junction to lead

Fig. 1 — Forward Current Derating Curve

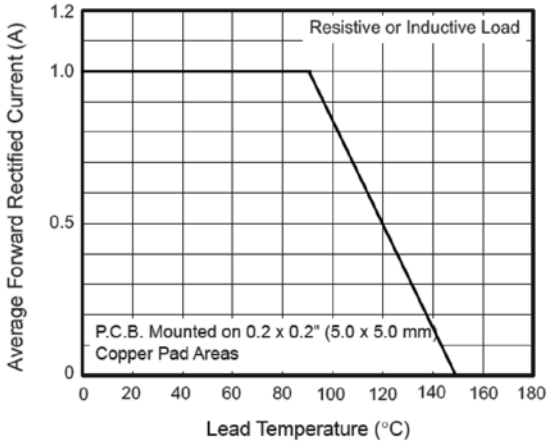


Fig. 2 — Maximum Non-Repetitive Peak Forward Surge Current

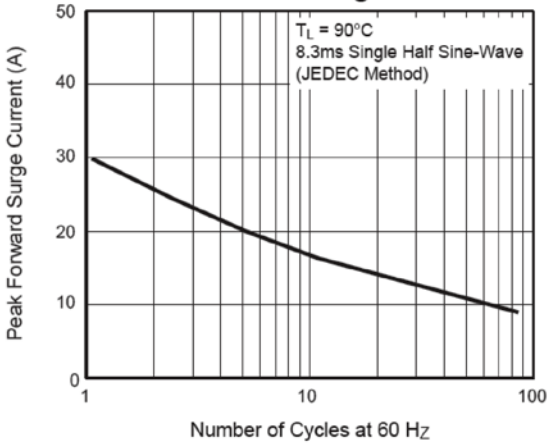


Fig. 3 — Typical Instantaneous Forward Characteristics

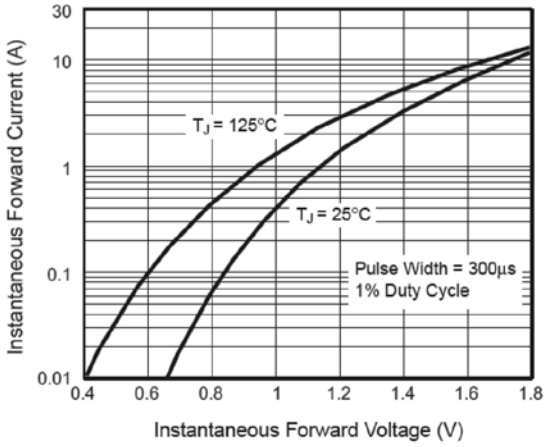


Fig. 4 — Typical Reverse Characteristics

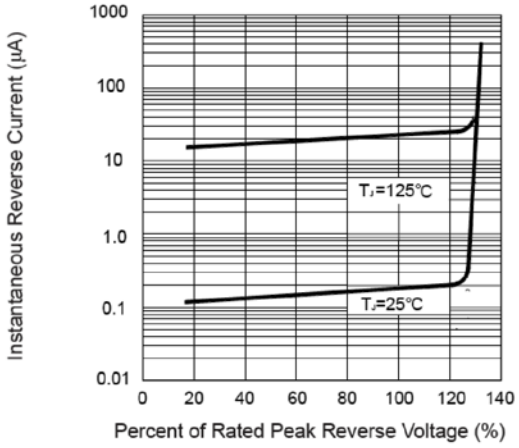


Fig. 5 — Typical Junction Capacitance

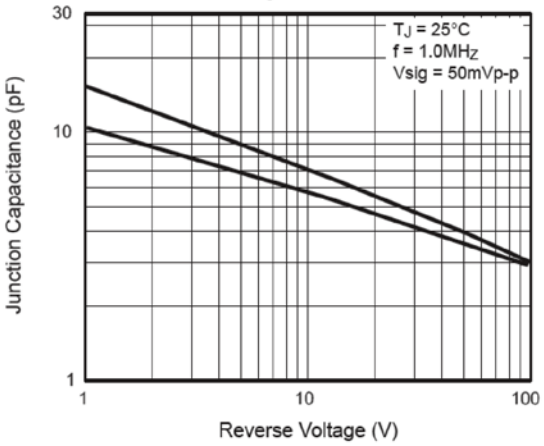
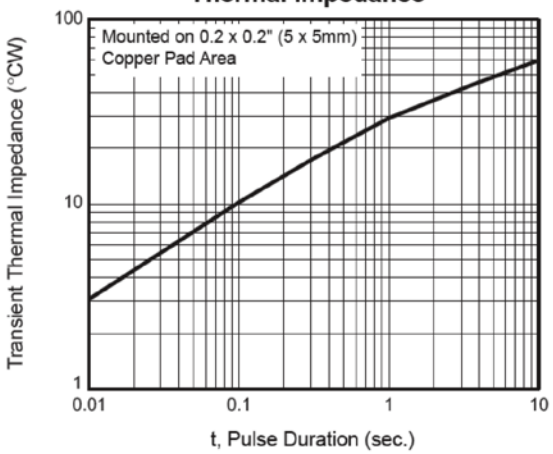
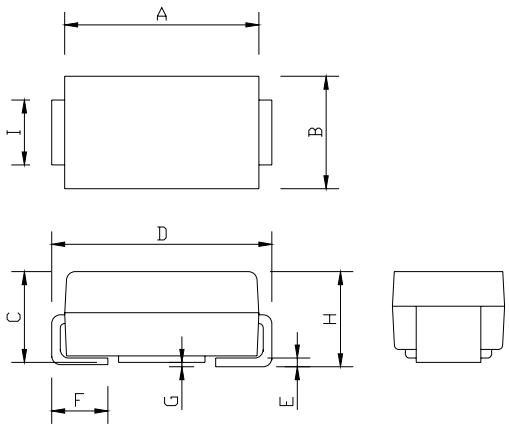


Fig. 6 — Typical Transient Thermal Impedance



Surface Mount Rectifier

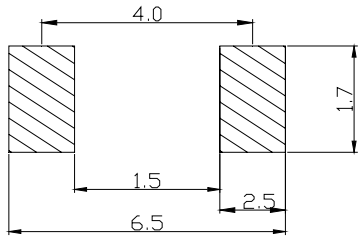
Package Outline Dimensions



DO-214AC(SMA)		
Dim.	**Min.**	**Max.**
A	4.25	4.65
B	2.4	2.8
C	1.85	2.15
D	4.85	5.35
E	0.2 Typ.	
F	0.9	1.5
G	0.2 Max.	
H	1.9	2.3
I	1.35	1.65

Dimensions : Millimetres

Soldering Footprint



Dimensions : Millimetres

Package Information

Device	Package	Shipping
RS1D-13-F RS1J-13-F RS1K-13-F RS1M-13-F	DO-214AC(SMA)	5,000 / Tape & Reel

Part Number Table

Description	Part Number
Surface Mount Rectifier	RS1D-13-F
	RS1J-13-F
	RS1K-13-F
	RS1M-13-F