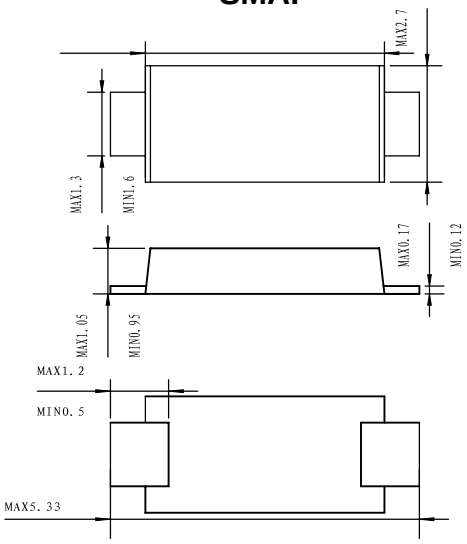
RS1AAF--RS1MAF

Surface Mount Rectifiers

SMAF



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
- Plastic package has underwriters, laborator flammability classification 94V-0

MECHANICAL DATA

- Case :JEDEC SMAFL, molded plastic over passivated chip
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: color band denotes cathode end

Maximum Ratings (@TA = 25°C unless otherwise specified)

Characteristic	Symbol	RS1AAF	RS1BAF	RS1DAF	RS1GAF	RS1JAF	RS1KAF	RS1MAF	UNITS
Marking code		**RS1A**	**RS1B**	**RS1D**	**RS1G**	**RS1J**	**RS1K**	**RS1M**	**UNITS**
Maximum recurrent 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
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current T_L=90℃	$I_{F(AV)}$	1.0							A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load	I_{FSM}	30							A

Thermal Characteristics

Characteristic	Symbol	RS1AAF	RS1BAF	RS1DAF	RS1GAF	RS1JAF	RS1KAF	RS1MAF	UNITS
Typical junction capacitance (Note2)	C_J	10					7.0		p F
Typical thermal resistance (Note3)	$R_{\Theta JL}$	17							℃/W
Operating junction and storage temperature range	T_J T_{STG}	- 55 ------ + 150							℃

Electrical Characteristics (@TA = 25°C unless otherwise specified)

Characteristic	Symbol	RS1AAF	RS1BAF	RS1DAF	RS1GAF	RS1JAF	RS1KAF	RS1MAF	UNITS
Maximum instantaneous forward voltage at1.0 A	V_F	1.30							V
Maximum reverse current @T_A=25 ℃	I_R	5.0							μ A
at rated DC blocking voltage @T_A=125℃		50.0							
Typical reverse recovery time (Note1)	t_{rr}	150				250	500		ns

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

2. Measured at 1.0MHz and applied reverse voltage of 4.0 Volts

3. Thermal resistance from junction to lea

Fig. 1 — Forward Current Derating Curve

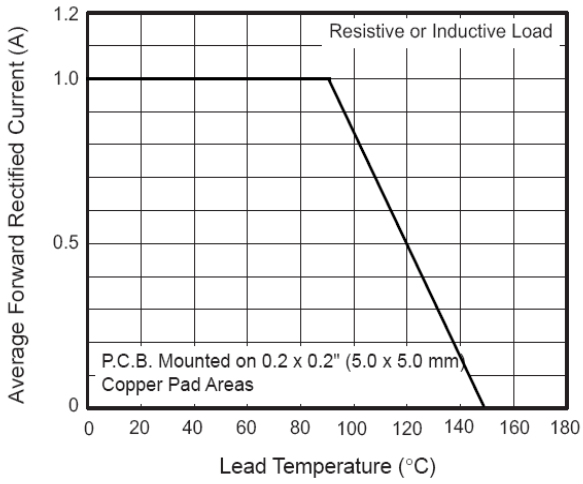


Fig. 2 — Maximum Non-Repetitive Peak Forward Surge Current

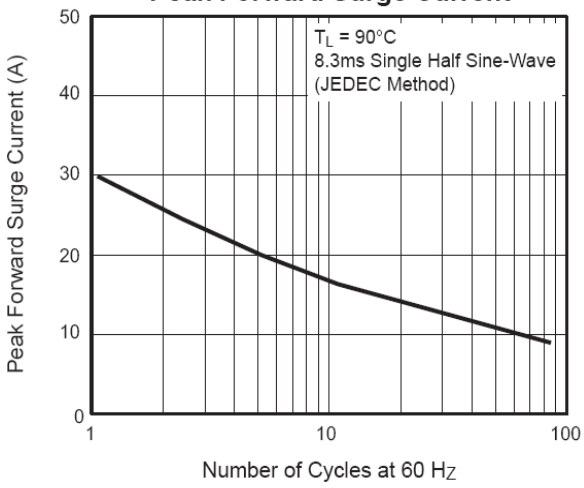


Fig. 3 — Typical Instantaneous Forward Characteristics

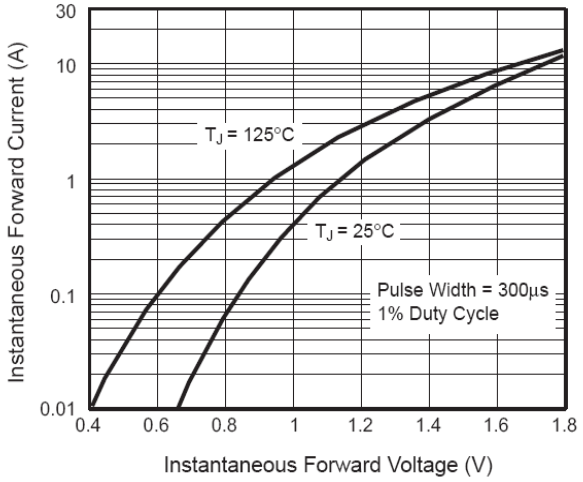


Fig. 4 — Typical Reverse Characteristics

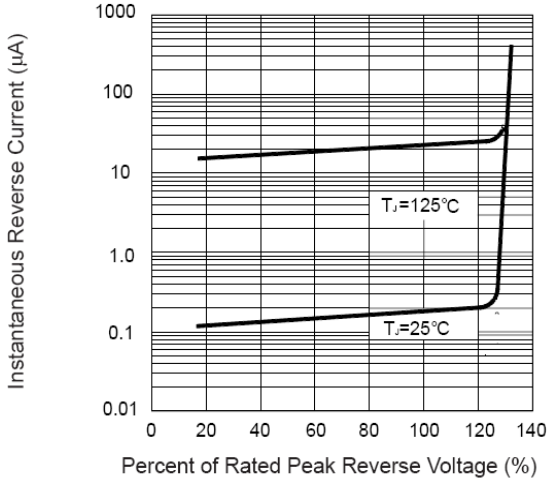


Fig. 5 — Typical Junction Capacitance

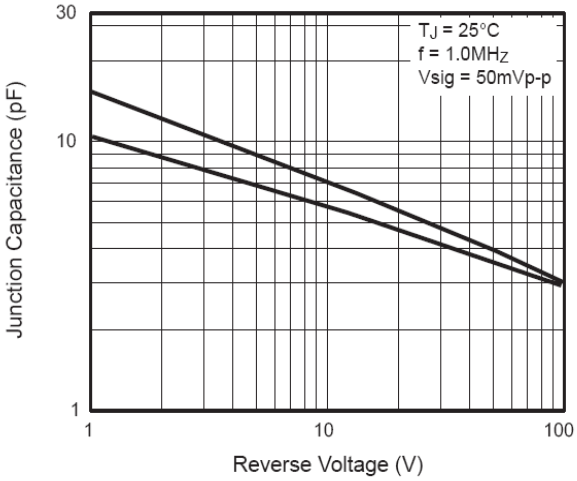
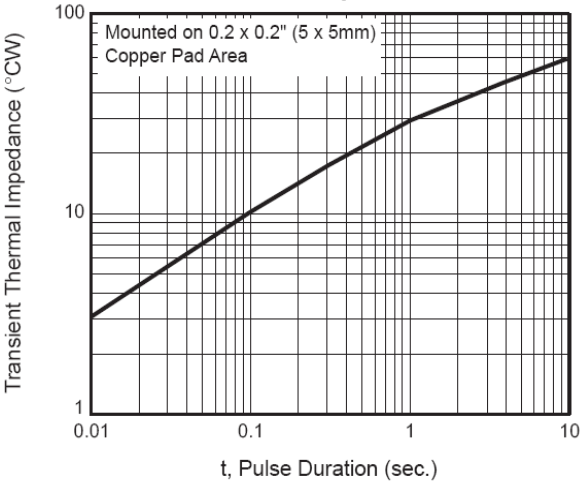


Fig. 6 — Typical Transient Thermal Impedance



PACKAGE	SPQ/PCS	CARTON SPQ/PCS	CARTON SIZE/CM	CARTON GW/KG	CARTON NW/KG
SMAF	3000/REEL	120000	30.5X30.5X42.5	12.00	11.00
PACKAGE	SPQ/PCS	CARTON SPQ/PCS	CARTON SIZE/CM	CARTON GW/KG	CARTON NW/KG
SMAF	5000/REEL	100000	30.5X30.5X42.5	10.00	9.00