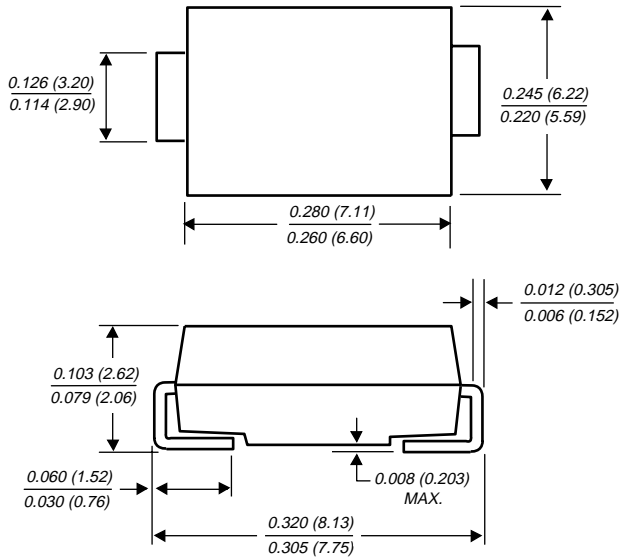


RS3A THRU RS3K

SURFACE MOUNT FAST SWITCHING RECTIFIER

Reverse Voltage - 50 to 800 Volts Forward Current - 3.0 Amperes

DO-214AB MODIFIED J-BEND



Dimensions in inches and (millimeters)

FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ For surface mount applications
- ◆ Low profile package
- ◆ Built-in strain relief, ideal for automated placement
- ◆ Fast switching for high efficiency
- ◆ Easy pick and place
- ◆ Glass passivated chip junction
- ◆ High temperature soldering: 250°C/10 seconds at terminals



MECHANICAL DATA

Case: JEDEC DO-214AB molded plastic body over passivated chip

Terminals: Solder plated, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Weight: 0.007 ounce, 0.25 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	RS3A	RS3B	RS3D	RS3G	RS3J	RS3K	UNITS
Device marking code		RA	RB	RD	RG	RJ	RK	
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	Volts
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	Volts
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	Volts
Maximum average forward rectified current at $T_L=75^\circ\text{C}$	$I_{(AV)}$	3.0						Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) $T_L=75^\circ\text{C}$	I_{FSM}	100.0						Amps
Maximum instantaneous forward voltage at 2.5A	V_F	1.3						Volts
Maximum DC reverse current at Rated DC blocking voltage	I_R	$T_A=25^\circ\text{C}$: 10.0 $T_A=125^\circ\text{C}$: 250						μA
Maximum reverse recovery time (NOTE 1)	t_{rr}	150				250	500	ns
Typical junction capacitance (NOTE 2)	C_J	60.0						pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$ $R_{\theta JL}$	50.0 15.0						$^\circ\text{C/W}$
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150						$^\circ\text{C}$

NOTES:

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

(2) Measured at 1.0 MHz and applied $V_R=4.0$ Volts

(3) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.3 x 0.3" (8.0 x 8.0mm) copper pad areas

RATINGS AND CHARACTERISTIC CURVES RS3A THRU RS3K

FIG. 1 - FORWARD CURRENT DERATING CURVE

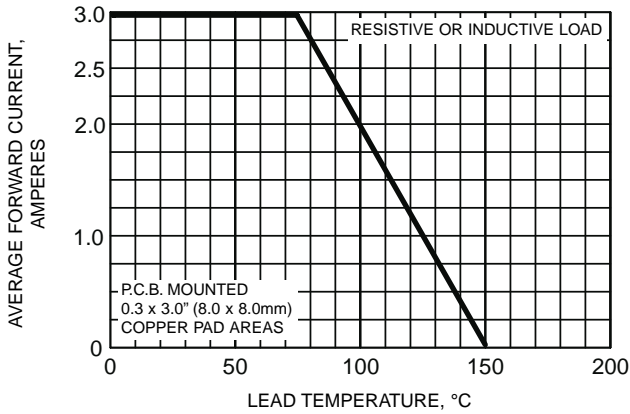


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

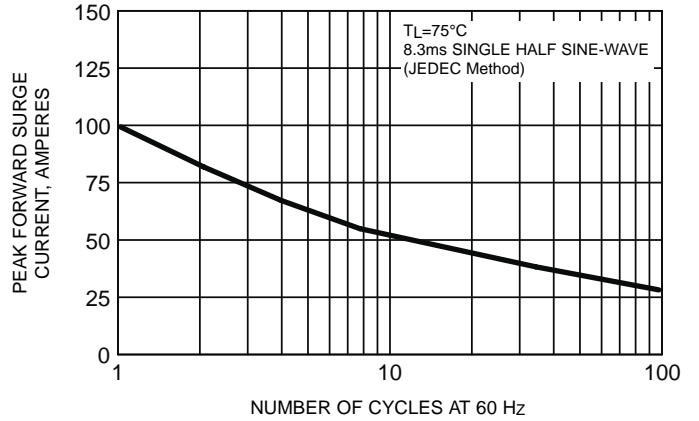


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

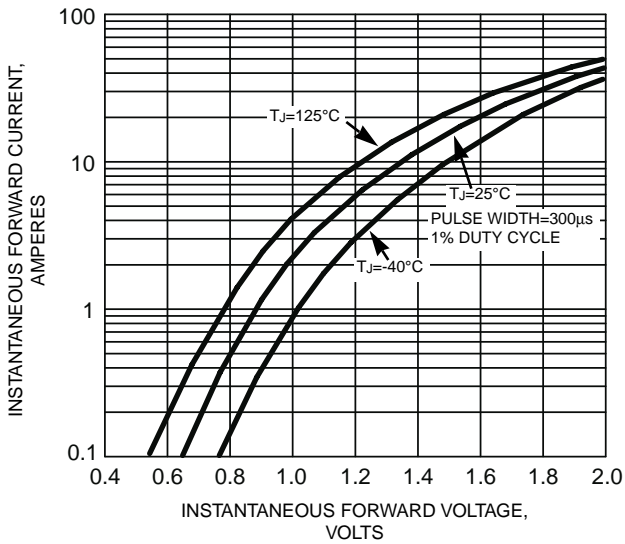


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

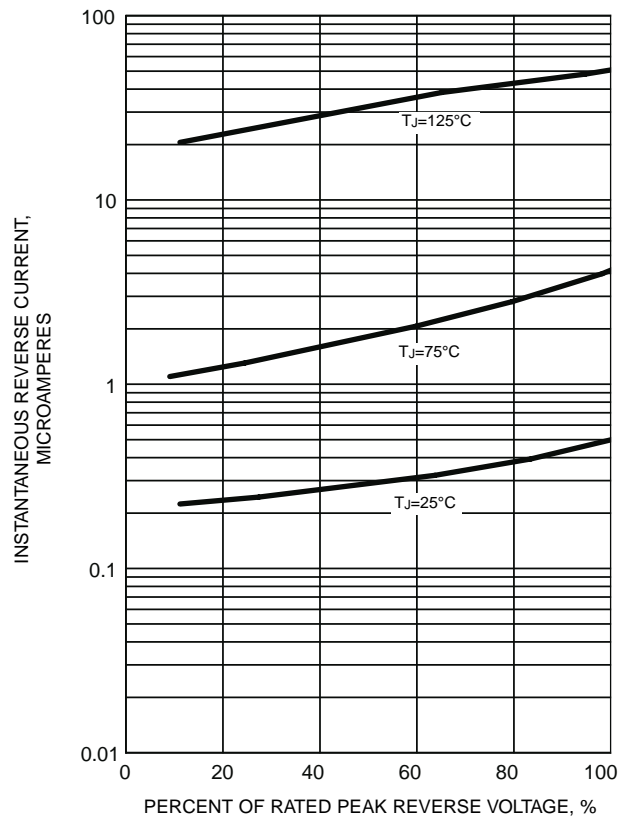


FIG. 5 - TYPICAL TRANSIENT THERMAL IMPEDANCE

