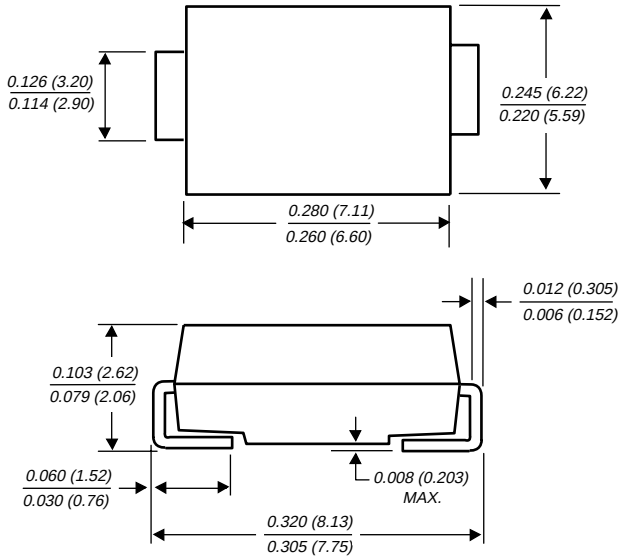
RS3A THRU RS3K

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°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°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 T_A=25°C T_A=125°C	I_R	10.0 250						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						°C/W
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150						°C

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

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RATINGS AND CHARACTERISTIC CURVES RS3A THRU RS3K

FIG. 1 - FORWARD CURRENT DERATING CURVE

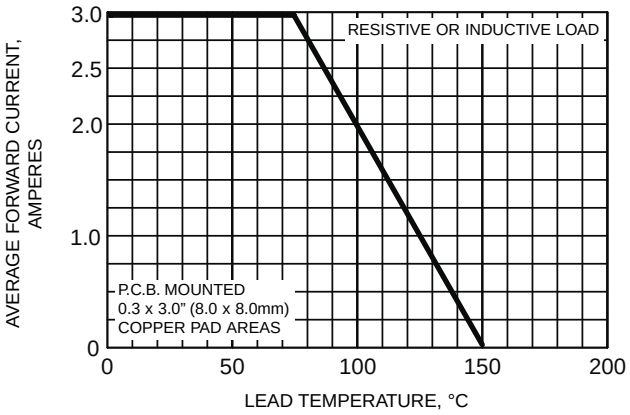


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

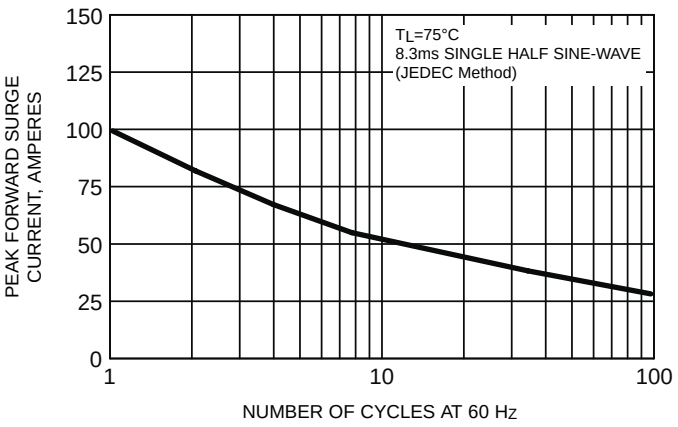


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

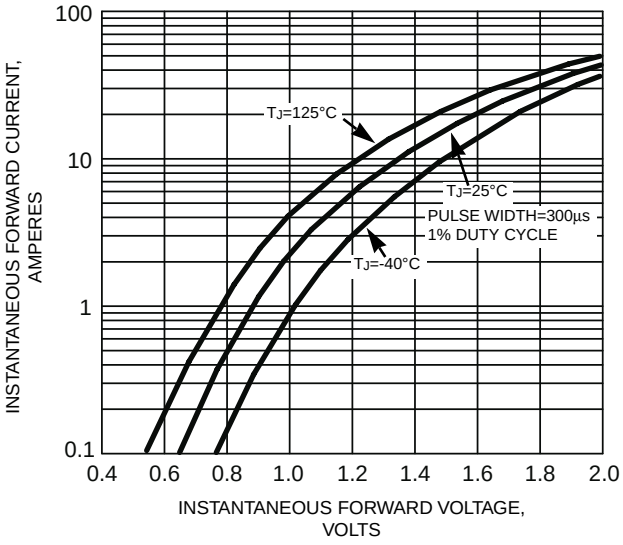


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

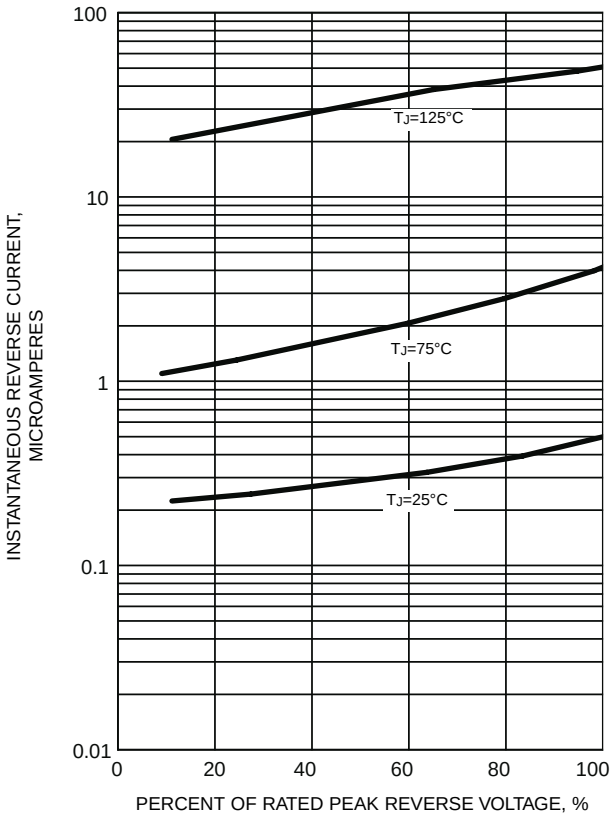
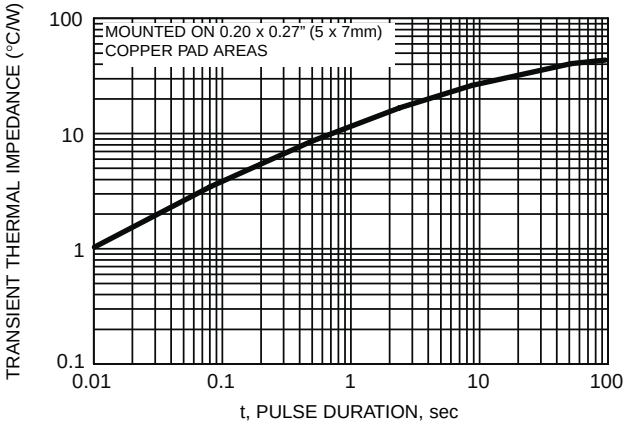


FIG. 5 - TYPICAL TRANSIENT THERMAL IMPEDANCE



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