

RS3A - RS3K

PRV : 50 - 800 Volts

Io : 3.0 Amperes

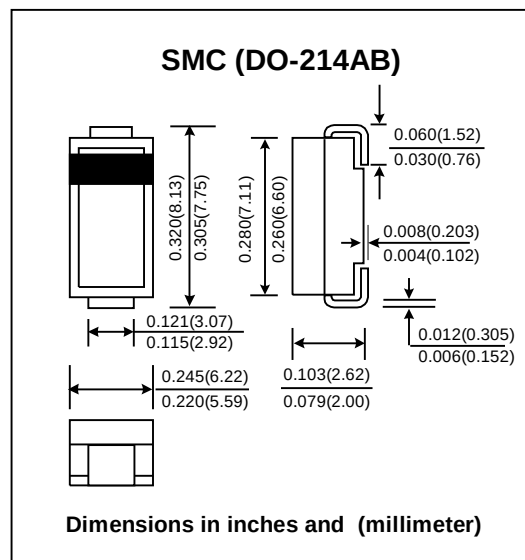
FEATURES :

- * For surface mount applications
- * Low profile package
- * Built-in strain relief, ideal for automated placement
- * Fast switching for high efficiency
- * Glass passivated chip junction
- * High temperature soldering : 250 °C/10 seconds at terminals
- * Pb / RoHS Free

MECHANICAL DATA :

- * Case : SMC Molded plastic
- * Epoxy : UL94V-O rate flame retardant
- * Lead : Lead Formed for Surface Mount
- * Polarity : Color band denotes cathode end
- * Mounting position : Any
- * Weight : 0.21 gram

SURFACE MOUNT FAST RECOVERY RECTIFIERS



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

RATING	SYMBOL	RS3A	RS3B	RS3D	RS3G	RS3J	RS3K	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	V
Maximum Average Forward Rectified Current at $T_L = 55\text{ }^{\circ}\text{C}$	$I_{F(AV)}$	3.0						A
Maximum Peak Forward Surge Current, 8.3ms Single half sine wave superimposed on rated load (JEDEC Method) $T_L = 75\text{ }^{\circ}\text{C}$	I_{FSM}	100						A
Maximum Instantaneous Forward Voltage at $I_F = 3.0\text{ A}$	V_F	1.3						V
Maximum DC Reverse Current $T_A = 25\text{ }^{\circ}\text{C}$	I_R	10						μA
at Rated DC Blocking Voltage $T_A = 125\text{ }^{\circ}\text{C}$	$I_{R(H)}$	250						μA
Maximum Reverse Recovery Time (Note 1)	T_{rr}	150				250	500	ns
Typical Junction Capacitance (Note 2)	C_j	60						pF
Typical thermal resistance (Junction to Ambient) (Note 3)	$R_{\theta JA}$	50						$^{\circ}\text{C/W}$
Typical thermal resistance (Junction to Lead) (Note 3)	$R_{\theta JL}$	15						$^{\circ}\text{C/W}$
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 reverse voltage of 4.0 VDC
- (3) On P.C.B with 0.3 x 0.3" (8.0 x 8.0 mm) copper pad areas.

RATING AND CHARACTERISTIC CURVES (RS3A - RS3K)

FIG.1 - FORWARD CURRENT DERATING CURVE

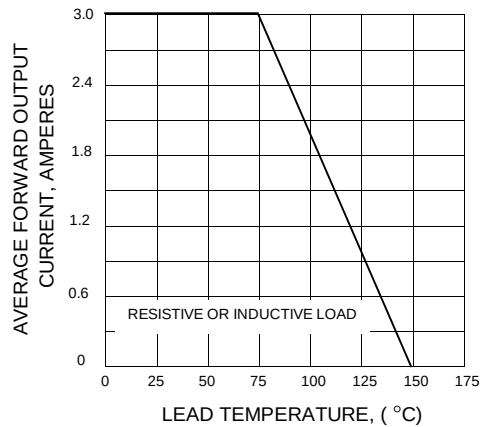


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

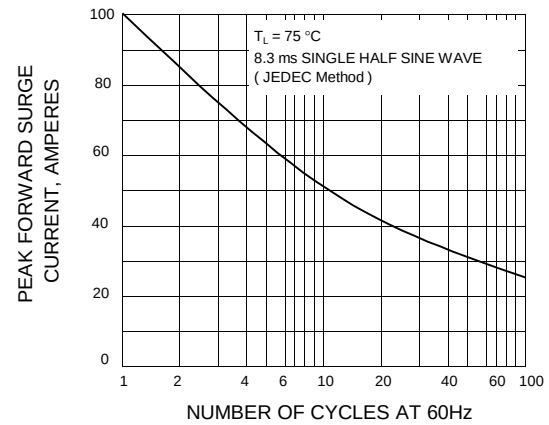


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

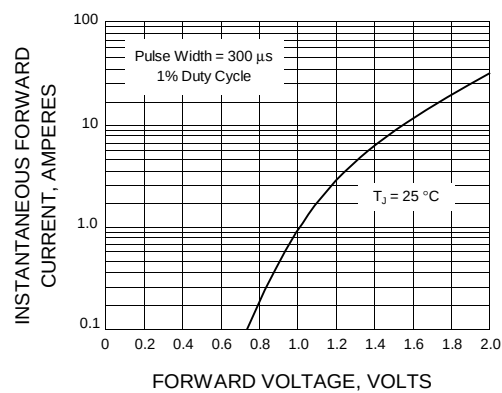


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

