

RS3A - RS3K

PRV : 50 - 800 Volts
Io : 3.0 Amperes

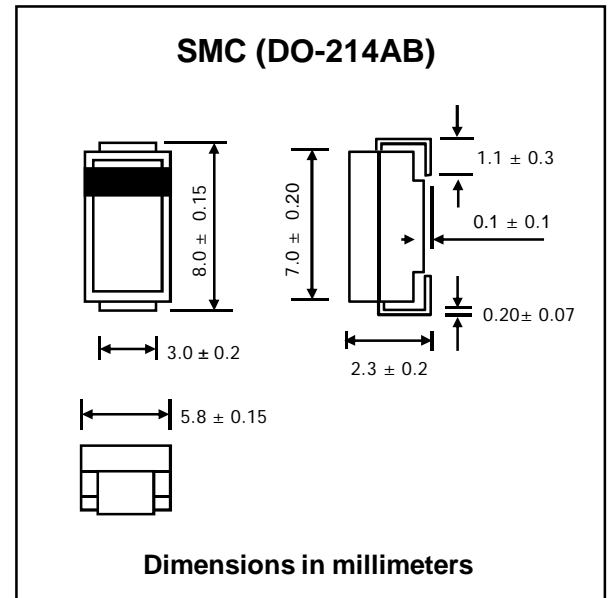
FEATURES :

- * 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 $T_L = 55\text{ °C}$ | $I_{F(AV)}$ | 3.0 | | | | | | A |
| Maximum Peak Forward Surge Current, 8.3ms Single half sine wave superimposed on rated load (JEDEC Method) $T_L = 75\text{ °C}$ | I_{FSM} | 100 | | | | | | A |
| Maximum Instantaneous Forward Voltage at $I_F = 3.0\text{ A}$ | V_F | 1.3 | | | | | | V |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | I_R | 10 | | | | | | μA |
| | $I_{R(H)}$ | 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

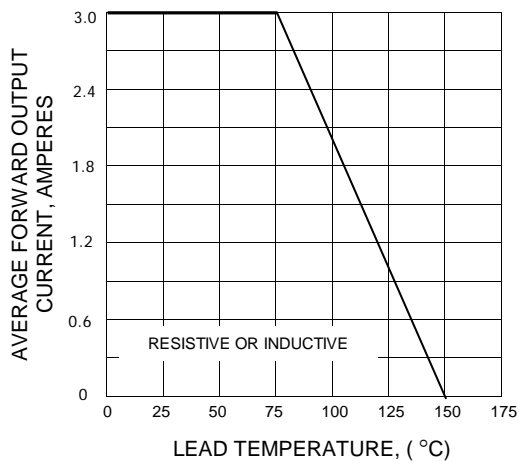


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

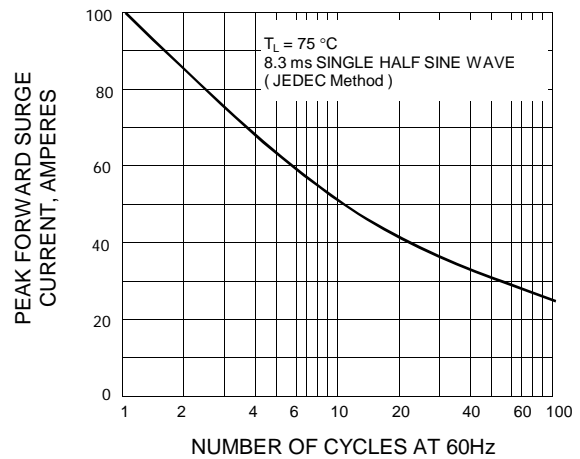


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

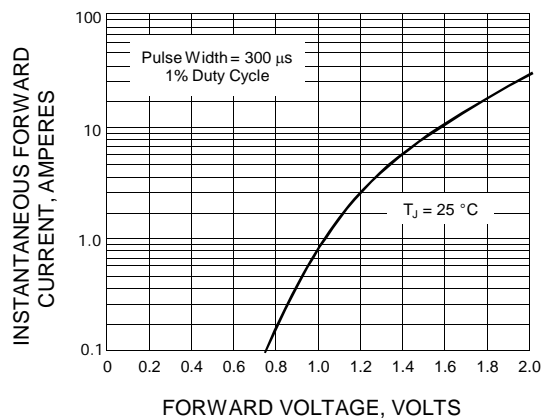


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

