



SURFACE MOUNT FAST SWITCHING RECTIFIER

RSM101 THRU RSM107

VOLTAGE RANGE

50 to 1000 Volts

CURRENT

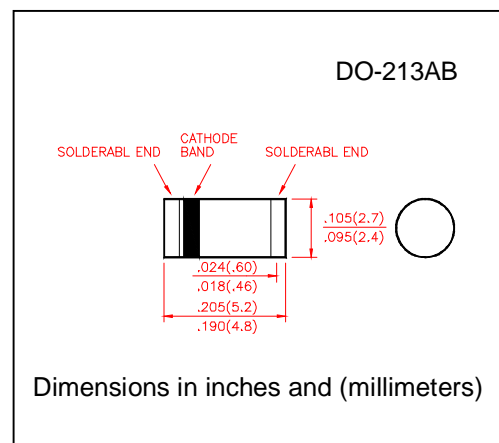
1.0 Ampere

FEATURES

- For surface mounted applications
- Glass passivated chip junction
- Low leakage current
- Fast switching speed
- Plastic package has underwrites laboratory flammability Classification 94V-0
- High temperature soldering guaranteed 250°C/10 second at terminals

MECHANICAL DATA

- Case: molded plastic
- Polarity: band indicate cathode
- Mounting position: Any
- Weight: 0.12 grams



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

	SYMBOLS	RSM 101	RSM 102	RSM 103	RSM 104	RSM 105	RSM 106	RSM 107	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current $T_T=100^\circ\text{C}$	$I_{(AV)}$	1.0							Amps
Peak Forward Surge Current 8.3ms single half sine wave superimposed on rated load (JEDEC method)	I_{FSM}	30							Amps
Maximum Instantaneous Forward Voltage at 1.0A	V_F	1.3							Volts
Maximum DC Reverse Current at rated DC Blocking Voltage at	$T_A = 25^\circ\text{C}$	5.0							μA
	$T_A = 125^\circ\text{C}$	100							
Typical Reverse Recovery Time (NOTE 1) $T_J=25^\circ\text{C}$	T_{rr}	150				250	500		nS
Typical Junction Capacitance (Note 2)	C_J	15							PF
Typical Thermal Resistance (Note 3)	$R_{\theta JT}$	40							$^\circ\text{C}/\text{W}$
Operating 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 1.0MHz and applied reverse voltage of 4.0 Volts DC.
3. Thermal resistance from Junction to terminal 6.0mm² copper pads to each terminal.



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FIG.1-FORWARD CURRENT DERATING CURVE

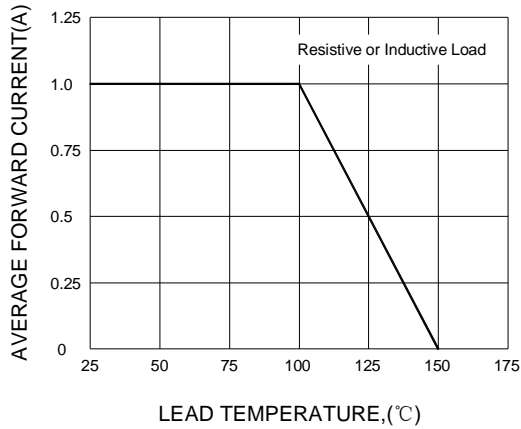


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

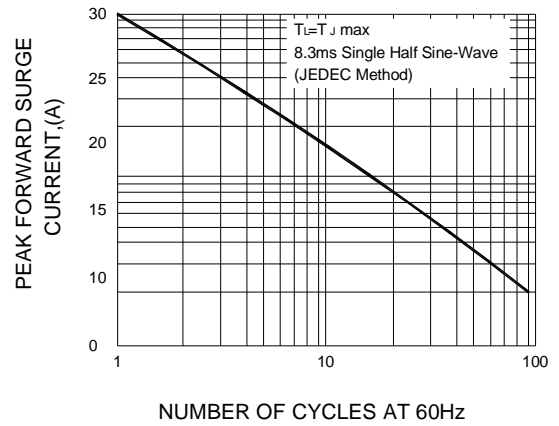


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

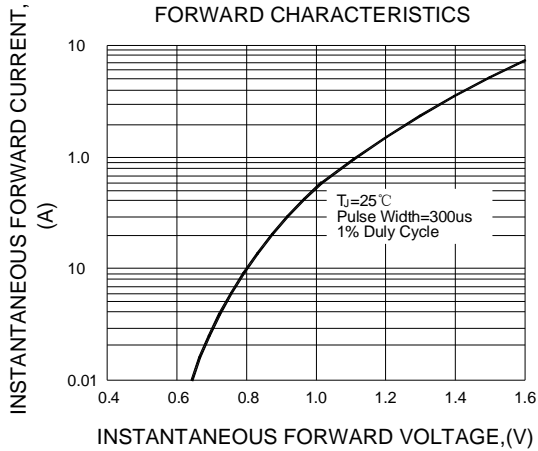


FIG.4-TYPICAL REVERSE CHARACTERISTICS

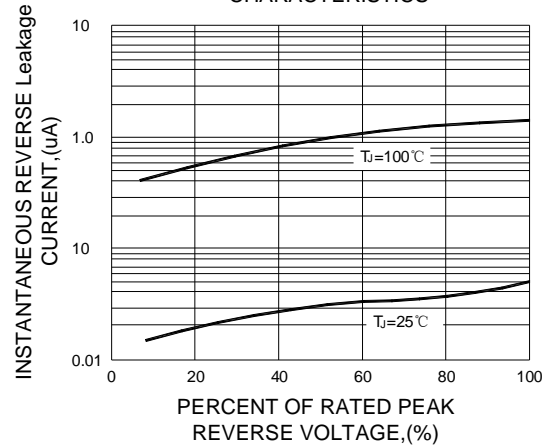


FIG.5-TYPICAL JUNCTION CAPACITANCE

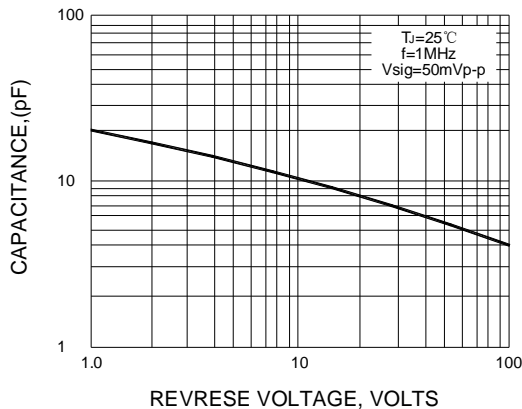


FIG.6-TRANSIENT THERMAL IMPEDANCE

