

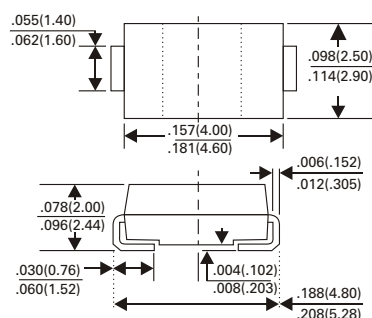
US1A thru US1M

SURFACE MOUNT REVERSE VOLTAGE 50 TO 1000 VOLTS

ULTRA FAST RECTIFIERS FORWARD CURRENT - 1.0 AMPERES



SMA/DO-214AC



Dimensions in inches and (millimeters)

FEATURES

- Glass passivated chip
- Ultra fast switching for high efficiency
- For surface mount applications
- Low forward voltage drop and high current capability
- Low reverse leakage current
- Plastic material UL flammability classification 94V-0
- High temperature soldering : 260°C/10seconds at terminals
- Pb free product are available : 99% Sn above can meet RoHS Environment substance directive request

MECHANICAL DATA

Case : JEDEC DO-214AC molded plastic
Case : Molded plastic
Polarity : Indicated by cathode band
Weight : 0.002 ounce, 0.064grams

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%

	SYMBOL	US1A	US1B	US1D	US1G	US1J	US1K	US1M	UNITS
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 _L = 75°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 Forward Voltage at 1.0A DC	V _F	1.0			1.3	1.5	1.7		Volts
Maximum DC Reverse Current @T _J =25°C at Rated DC Blocking Voltage @T _J =100°C	I _R	10 100							μ A
Maximum Reverse Recovery Time (NOTE 1)	C _J	20					10		pF
Typical Junction Capacitance (NOTE 2)	T _{RR}	50					75		nS
Typical Thermal Resistance (NOTE 3)	R θ JC	30							°C / W
Operating Temperature Rang	T _J	-55 to +150							°C
Storage Temperature Range	T _{STG}	-55 to +150							°C

NOTES :

1. Measured at 1 MHz and applied reverse Voltag of 4.0VDC
2. Rverse Recovery Test Condibons $I_F = 5A$, $I_R = 1A$, $I_{RR} = 25A$
3. Thermal Resistance from Junction ambient and from Junction to lead 0.375" (9.5mm) P.C.B mounted

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RATINGS AND CHARACTERISTIC CURVES US1A THRU US1M

Fig. 1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

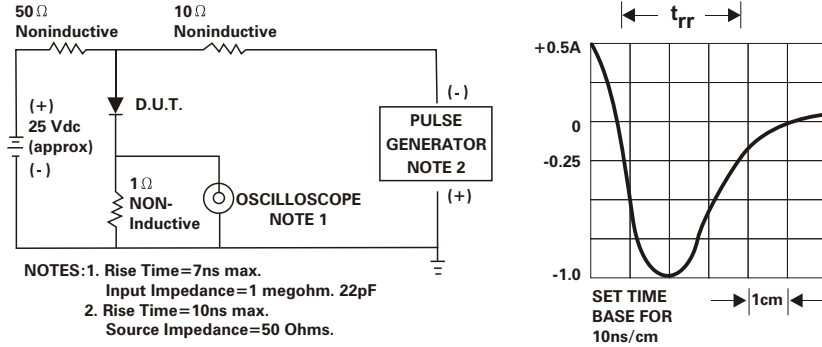


Fig. 2 - FORWARD CHARACTERISTICS

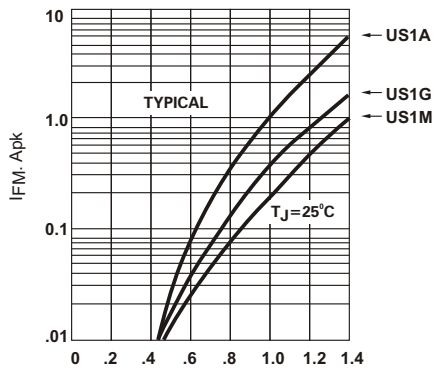


Fig. 3 - FORWARD CURRENT DERATING CURVE

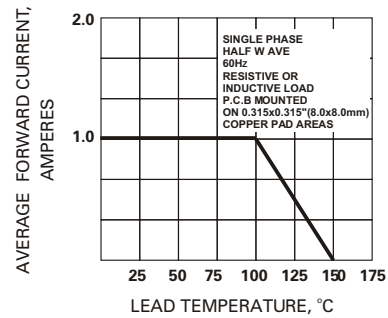


Fig. 4 - TYPICAL JUNCTION CAPACITANCE

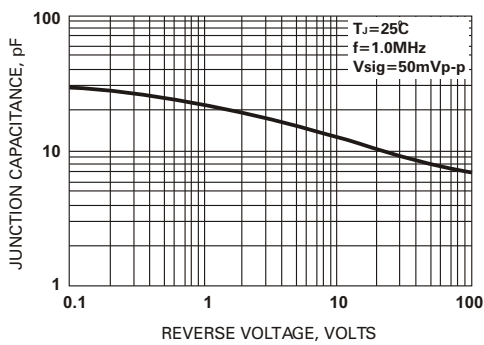


Fig. 5 - PEAK FORWARD SURGE CURRENT

