



SEMICONDUCTOR

DATA SHEET

US1A~US1M

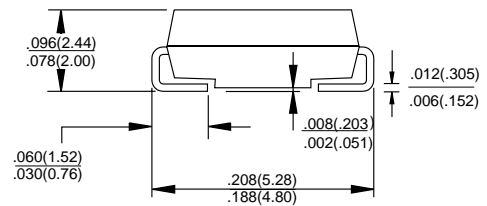
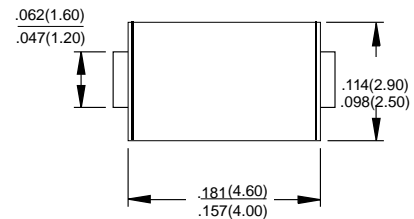
SURFACE MOUNT REVERSE VOLTAGE - 50 to 1000 Volts
ULTRA FAST RECTIFIERS FORWARD CURRENT - 1.0 Ampere



FEATURES

- Glass passivated chip
- Ultra fast switching for high efficiency
- For surface mounted applications
- Low forward voltage drop and high current capability
- Low reverse leakage current
- Plastic material has UL flammability classification 94V-0
- High temperature soldering : 260°Cx10 seconds at terminals
- Pb free product at available : 99% Sn above meet RoHS environment substance directive request

SMA/DO-214AC Unit:inch(mm)



MECHANICAL DATA

- Case: ITO-220AB full molded plastic package
- Case : Molded plastic
- Polarity : Indicated by cathode band
- Weight : 0.002 ounces, 0.064 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%

CHARACTERISTICS	SYMBOL	US1A	US1B	US1D	US1G	US1J	US1K	US1M	UNITS
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	VRMS	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	VDC	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current @TL =75°C	IAV	1.0							A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC METHOD)	IFSM	30							A
Maximum forward Voltage at 1.0A DC	VF	1.0		1.3	1.5	1.7		V	
Maximum DC Reverse Current @TJ =25°C at Rated DC Blocking Voltage @TJ =100°C	IR	5 100							µA
Maximum Reverse Recovery Time (Note 1)	CJ	20			10			pF	
Typical Junction Capacitance (Note 2)	TRR	50			75			ns	
Typical Thermal Resistance (Note 3)	R JC	30							°C/W
Operating Temperature Range	TJ	-55 to +150							°C
Storage Temperature Range	TSTG	-55 to +150							°C

NOTES:

1. Measured at 1 MHz and applied reverse voltage of 4.0 VDC.
2. Reverse Recovery Test Conditions: IF=.5A, IR=1A, Irr=.25A.
3. Thermal resistance from Junction to ambient and from junction to lead 0.375" (9.5mm) P.C.B mounted.

RATING AND CHARACTERISTIC CURVES

US1A~US1M

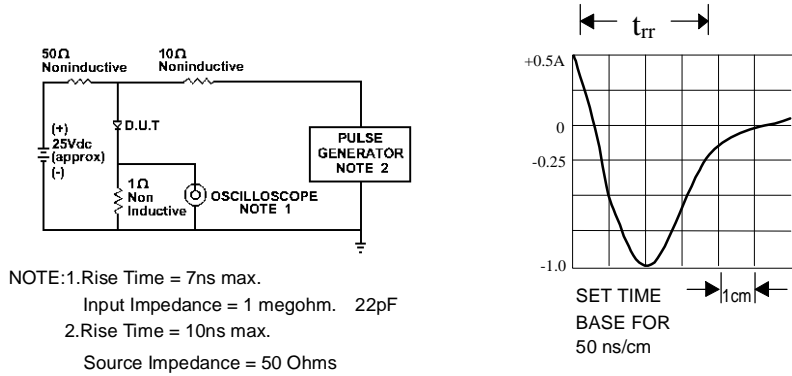


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

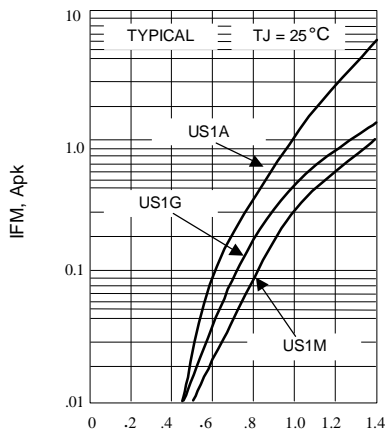


Fig. 2-FORWARD CHARACTERISTICS

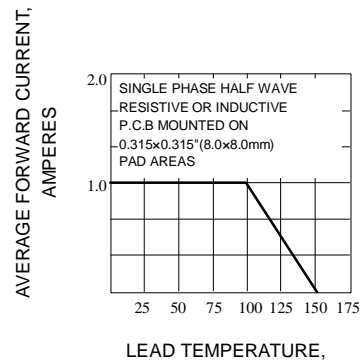


Fig. 3-FORWARD CURRENT DERATING CURVE

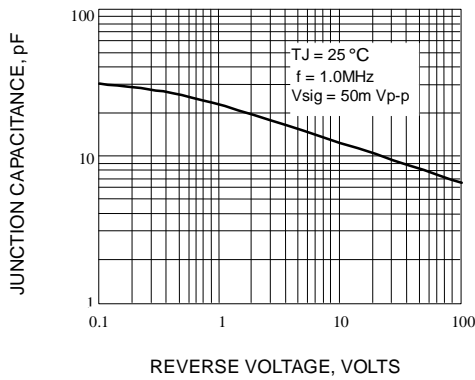


Fig. 4-TYPICAL JUNCTION CAPACITANCE

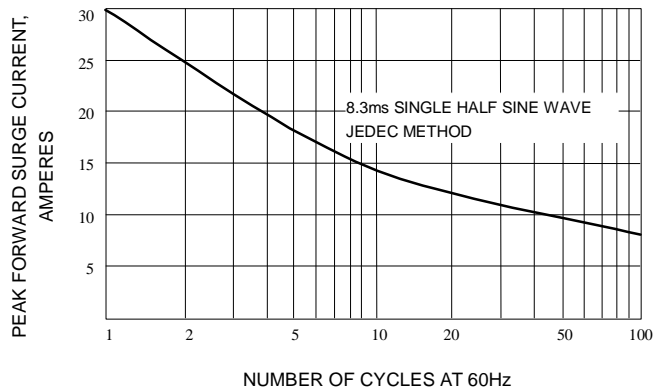


Fig. 5-PEAK FORWARD SURGE CURRENT