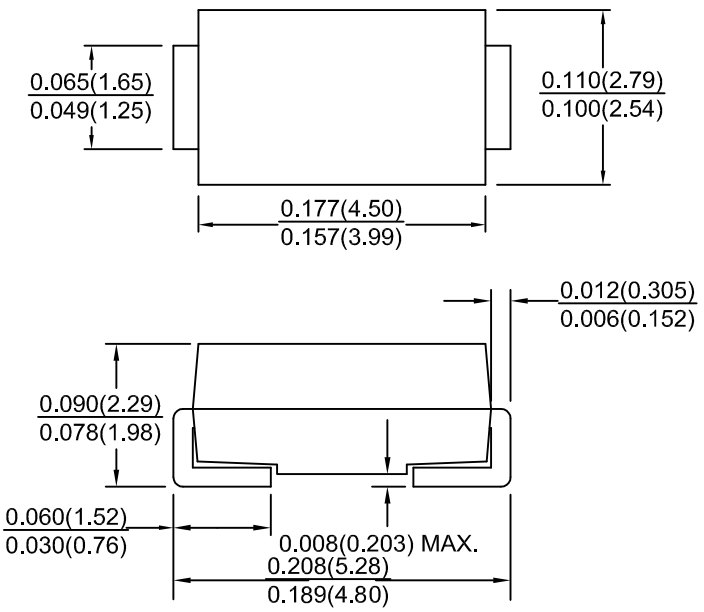
US1A THUR US1M

ULTRA FAST RECOVERY GLASS PASSIVATED RECTIFIERS

FEATURES:

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Glass passivated chip junctions
- Low profile package
- Easy pick and place
- Ultrafast recovery times for high efficiency
- Low forward voltage, low power loss
- Built-in strain relief, ideal for automated placement
- High temperature soldering guaranteed : 250° C/10 seconds at terminals

SMA/DO-214AC



Dimensions in inches and (millimeters)

MECHANICAL DATA

Case : JEDEC DO-214AC molded plastic body over passivated chip

Terminals : Solder plated, solderable per MIL-STD-750, Method 2026

Polarity : Color band denotes cathode end

Weight : 0.002 ounce, 0.064 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25° C ambient temperature unless otherwise specified.

Characteristic	Symbol	US1A	US1B	US1D	US1G	US1J	US1K	US1M	Units
Maximum recurrent 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 at T_L= 55 ° C	I_O	1.0							Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load(JEDEC Method)	I_{FSM}	30.0							Amps
Maximum instantaneous forward voltage at 1.0 A	V_F	1.0			1.3	1.7			Volts
Maximum DC reverse current Ta=25° C at rated DC blocking voltage Ta=100° C	I_R	5.0 50.0							μA
Maximum reverse recovery time (NOTE 1)	trr	50.0				75.0			nS
Typical junction capacitance (NOTE 2)	C_J	17.0				15.0			pF
Maximum thermal resistance (NOTE 3)	R_{th-JA} R_{th-JL}	75.0 27.0							° C/W
Operating and storage temperature range	T_J,Tstg	-65 to +150							° C

NOTES:

(1) Reverse recovery test condition : I_F=0.5A, I_R=1.0A, I_{rr}=0.25A

(2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts

(3) P.C.B. mounted on 0.2X0.2"(5.0x5.0mm) copper pad area

FIG.1 - FORWARD CORRENT DERATING CURVE

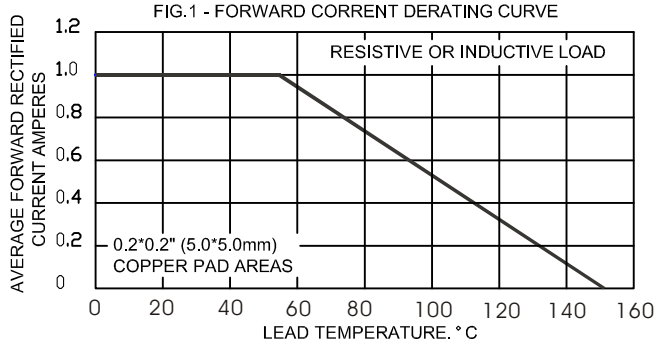


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

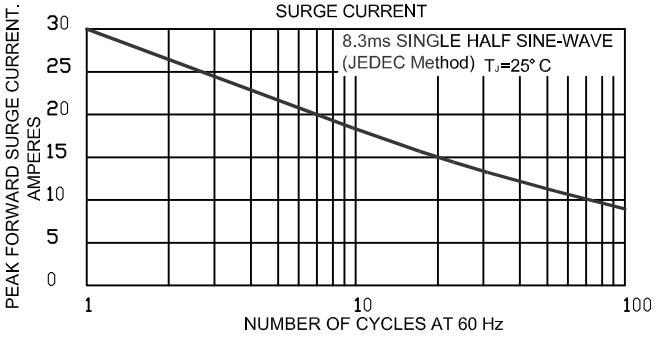


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC

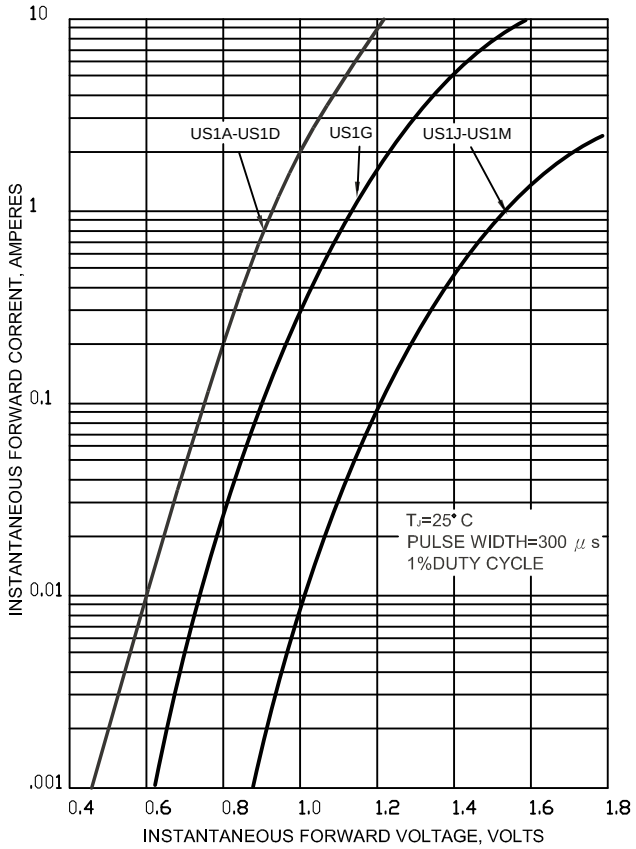


FIG.4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS

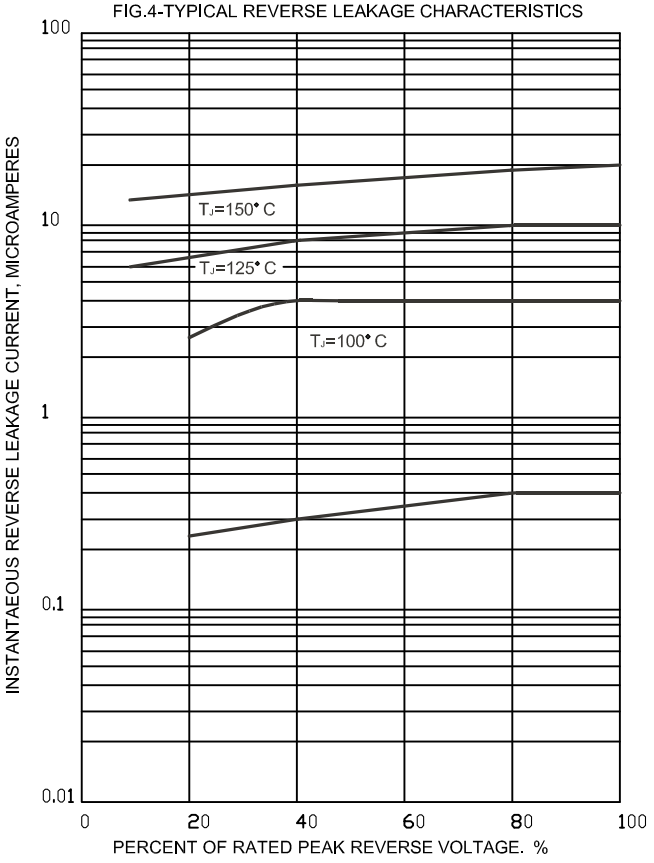


FIG.5-TYPICAL JUNCTION CAPACITANCE

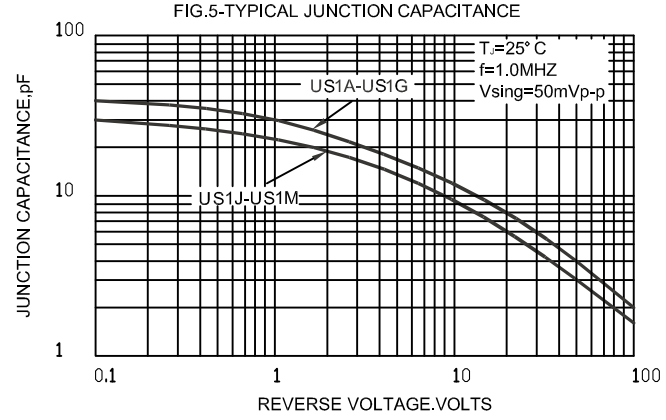


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE