US2A THRU US2M

2.0 Amps. Surface Mount Glass Passivated Ultra Fast Rectifiers

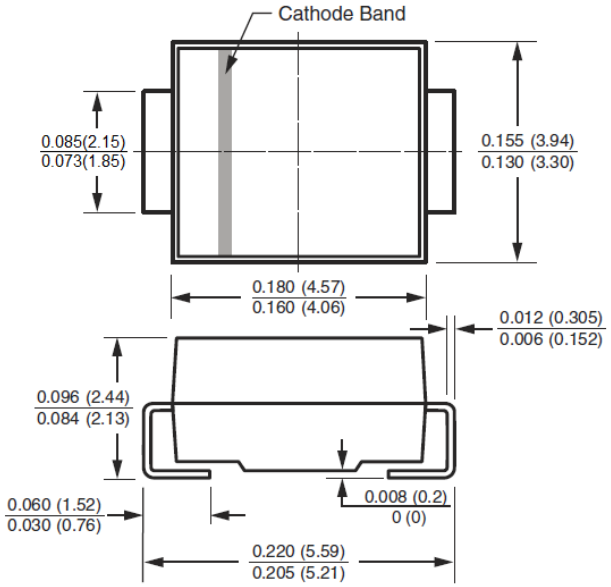
Features

* For surface mounted application
* Extremely Low Thermal Resistance
* Easy Pick and Place
* High Temp Soldering: 250℃ For 10seconds at Terminals
* Superfast Recovery Times For High Efficiency

RoHS COMPLIANT

Package Outline Dimensions in inches (millimeters)

SMB:



Mechanical Data

* Case: Molded plastic
* Terminals: Solder plated
* Polarity: Indicated by cathode band
* Standard packaging:
  12mm tape(ELA STD RS-481)

Maximum Ratings and Electrical Characteristics

Rating at 25 ℃ ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Type Number	Symbols	US2A	US2B	US2D	US2G	US2J	US2K	US2M	Unit
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum D.C Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current T_L=90℃	$I_{F(AV)}$	2							A
Peak Forward Surge Current, 8.3ms single half sine-wave	I_{FSM}	50							A
Maximum Instantaneous Forward Voltage at 2A(Note1)	V_F	1.0			1.3	1.7			V
Maximum D.C Reverse Current @ T_A=25℃ at Rated D.C Blocking Voltage @ T_A=125℃	I_R	5 350							μA
Maximum Reverse Recovery Time(Note2)	Trr	50				75			nS
Typical Junction Capacitance(Note3)	C_J	28							pF
Typical Thermal Resistance(Note4)	$R_{\theta jA}$	20							℃/W
Operating and Storage Temperature Range	T_J/T_{STG}	-50 to +150							℃

NOTE: 1、Pulse test: tp=300μS, 1% duty cycle 2、Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A.

3、Measured at 1MHz and applied reverse voltage of 4.0V D.C. 4、P.C.B. mounted with 0.2x0.2 ” (5.0x5.0mm) copper pad areas

Ratings and Characteristic Curves

FIG. 1- FORWARD CURRENT DERATING CURVE

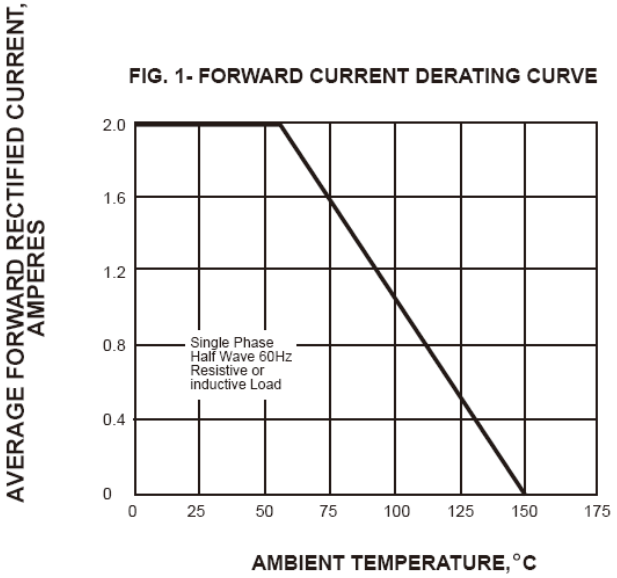


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

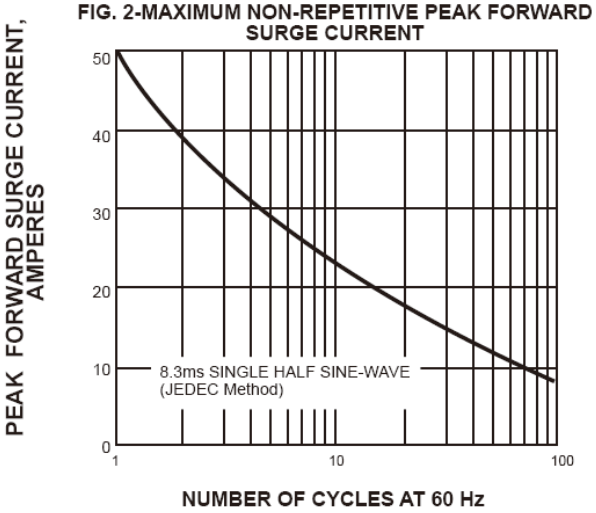


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

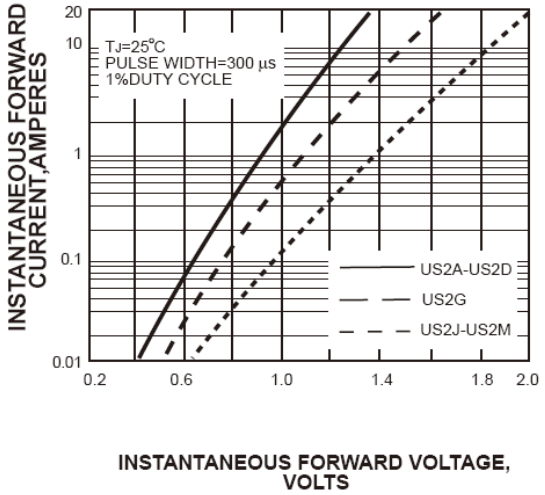


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

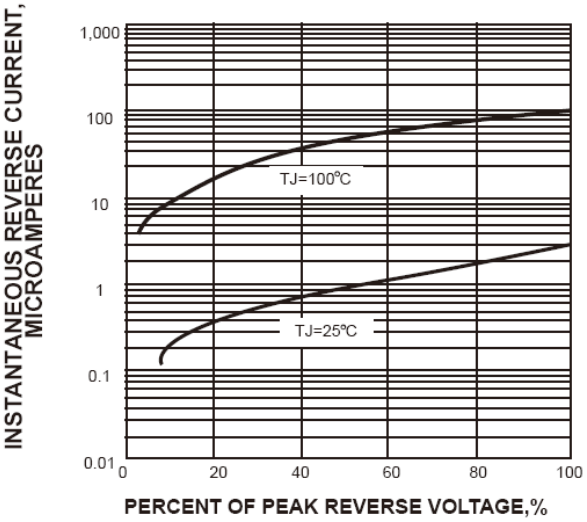


FIG. 5-TYPICAL JUNCTION CAPACITANCE

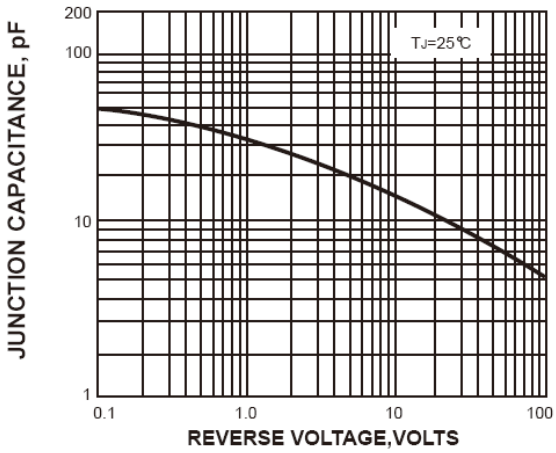
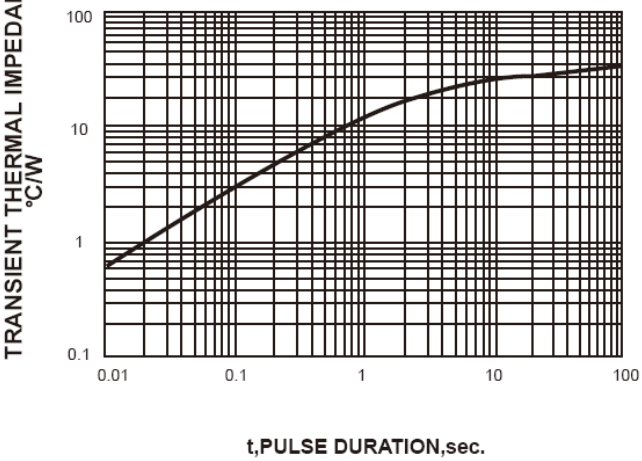


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



Ordering Information

Part No.	Package	Packing
US2A~US2M	SMB	3K/Reel