US1J

SURFACE MOUNT
ULTRAFAST RECTIFIER

VOLTAGE： 600V　　CURRENT： 1.0A

GULF SEMI

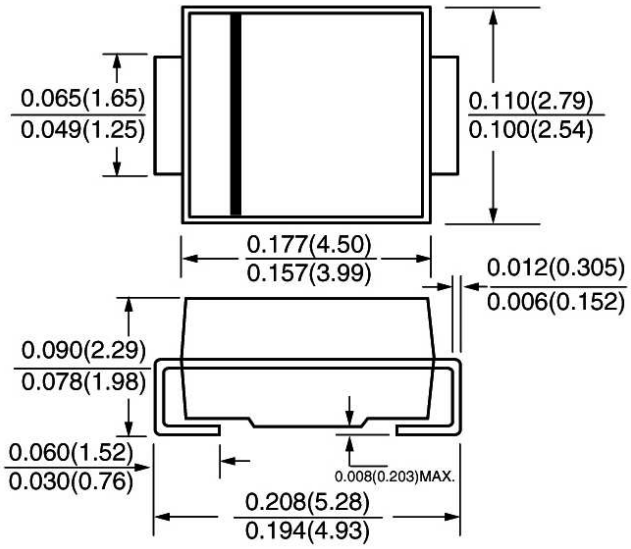
FEATURE

Ideal for surface mount pick and place application
Low profile package
Built-in strain relief
High surge capability
High temperature soldering guaranteed
260℃/10sec/at terminals
Glass passivated chip
Ultrafast recovery time for high efficiency

MECHANICAL DATA

Terminal：Solder plated, solderable per MIL-STD-750, Method 2026
Case： JEDEC DO-214AC molded plastic over glass passivated chip
Polarity：Color band denotes cathode

SMA / DO-214AC



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(single-phase, half-wave, 60HZ, resistive or inductive load rating at 25℃, unless otherwise stated, for capacitive load, derate current by 20%)

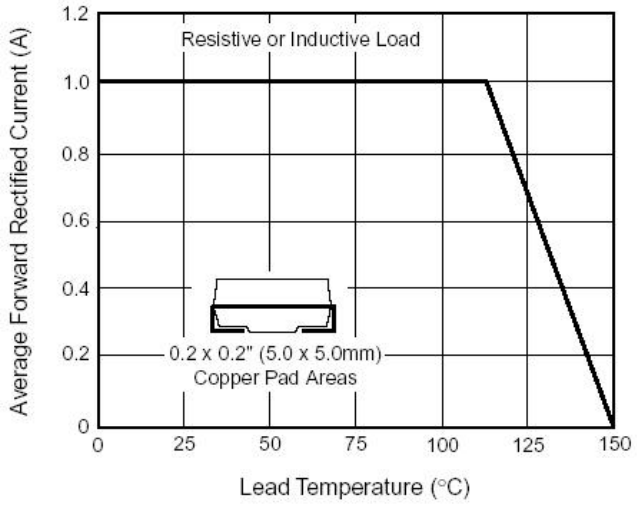
	SYMBOL	US1J	units
Maximum Recurrent Peak Reverse Voltage	Vrrm	600	V
Maximum RMS Voltage	Vrms	280	V
Maximum DC blocking Voltage	Vdc	600	V
Maximum Average Forward Rectified Current 3/8″ lead length at T_L =110℃	If(av)	1.0	A
Peak Forward Surge Current 8.3ms single half sine- wave superimposed on rated load	Ifsm	30.0	A
Maximum Forward Voltage at rated forward current	Vf	1.7	V
Maximum DC Reverse Current Ta =25℃ at rated DC blocking voltage Ta =100℃	Ir	10.0 100.0	μA μA
Maximum Reverse Recovery Time (Note1)	Trr	75	nS
Typical Junction Capacitance (Note 2)	Cj	18.0	pF
Typical Thermal Resistance (Note 3)	R(jl)	30.0	℃/W
Storage and Operating Junction Temperature	Tstg, Tj	-50 to +150	℃

Note：

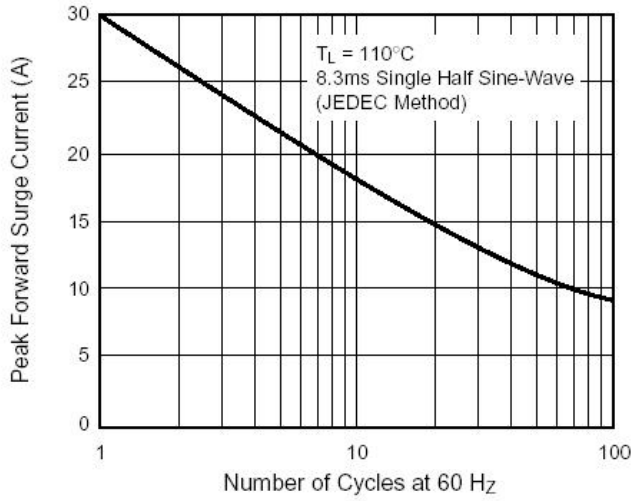
1. Reverse Recovery Condition If =0.5A, Ir =1.0A, Irr =0.25A
2. Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc
3. Thermal Resistance from Junction to terminal mounted on 5×5mm copper pad area[1]

RATINGS AND CHARACTERISTIC CURVES US1J

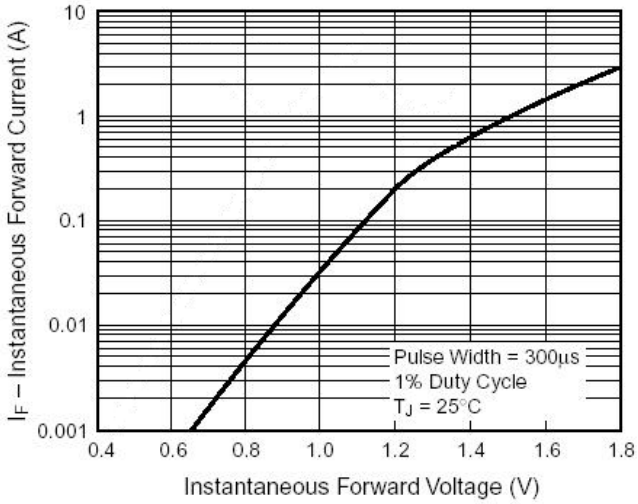
Forward Current Derating Curve



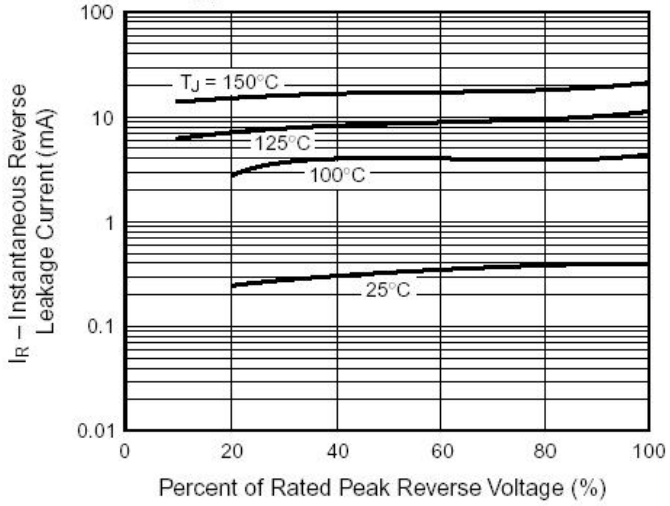
Maximum Non-Repetitive Peak Forward Surge Current



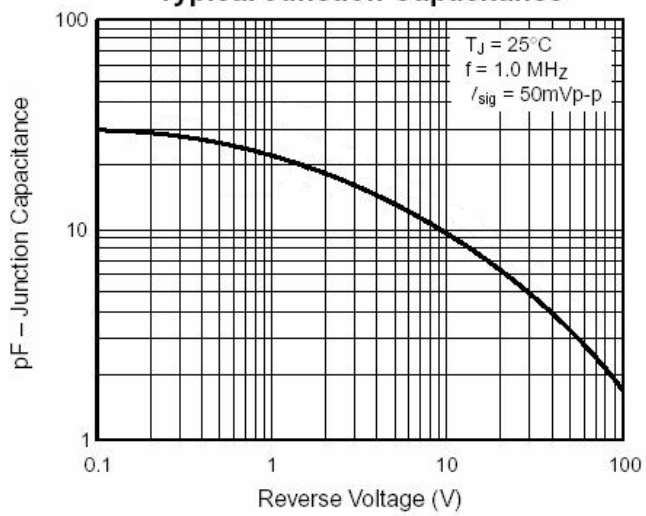
Typical Instantaneous Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



Typical Transient Thermal Impedance