

**SURFACE MOUNT
ULTRA FAST RECTIFIERS**

REVERSE VOLTAGE - **50 to 1000** Volts
FORWARD CURRENT - **1.0** Ampere

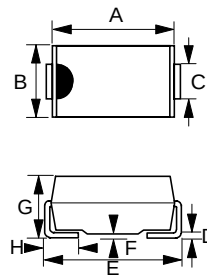
FEATURES

- 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

MECHANICAL DATA

- Case : Molded plastic
- Polarity : Indicated by cathode band
- Weight : 0.002 ounces, 0.064 grams

SMA



SMA		
DIM.	MIN.	MAX.
A	4.06	4.57
B	2.29	2.92
C	1.27	1.63
D	0.15	0.31
E	4.83	5.59
F	0.05	0.20
G	2.01	2.62
H	0.76	1.52
All Dimensions in millimeter		

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	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 DC Blocking Voltage	V _{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current @TL =75 °C	I(AV)	1.0							A
Peak Forward Surge Current 8.3ms single half sine-wave super imposed on rated load (JEDEC METHOD)	IFSM	30							A
Maximum forward Voltage at 1.0A DC	VF	1.0			1.3	1.7			V
Maximum DC Reverse Current @TJ =25°C at Rated DC Blocking Voltage @TJ =100°C	IR	5.0 100							uA
Maximum Reverse Recovery Time (Note 1)	TRR	50				75			ns
Typical Junction Capacitance (Note 2)	CJ	20				10			pF
Typical Thermal Resistance (Note 3)	RθJL	30							°C/W
Operating Temperature Range	TJ	-55 to +150							°C
Storage Temperature Range	TSTG	-55 to +150							°C

NOTES : 1.Reverse Recovery Test Conditions : I_F=0.5A, I_R=1.0A, I_{RR}=0.25A.
2.Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
3.Thermal Resistance junction to Lead.

REV. 2, 01-Dec-2000, KSFA01

FIG.1 - FORWARD CURRENT DERATING CURVE

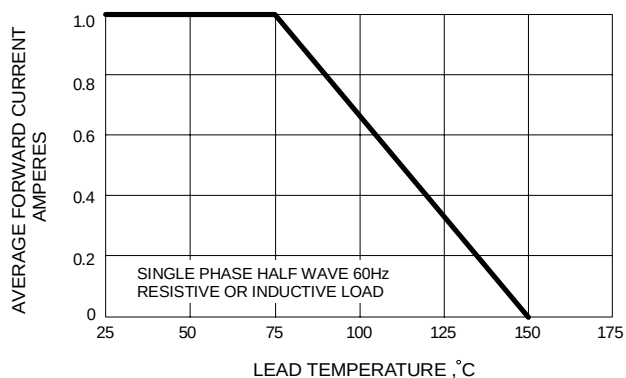


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

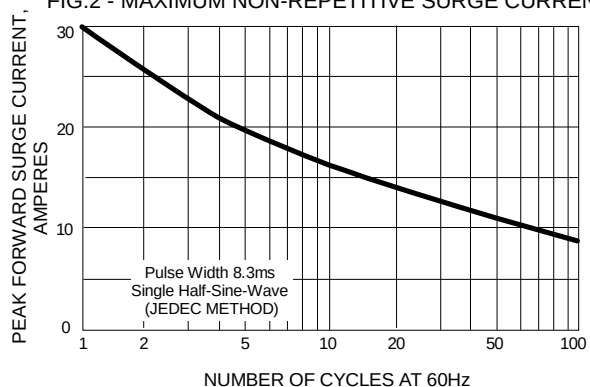


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

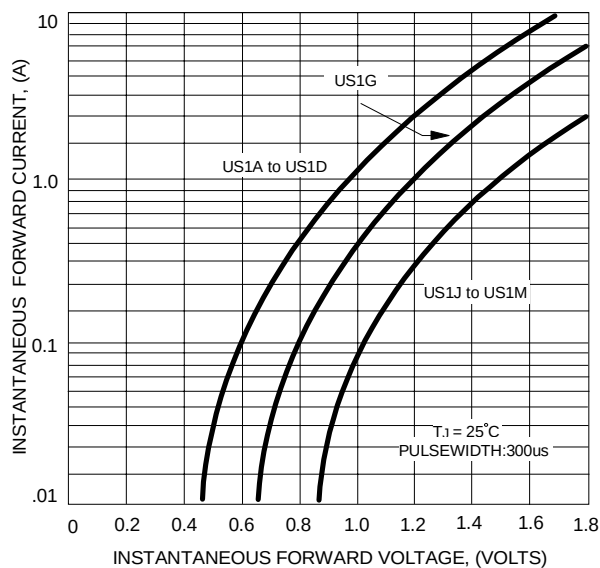


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

