

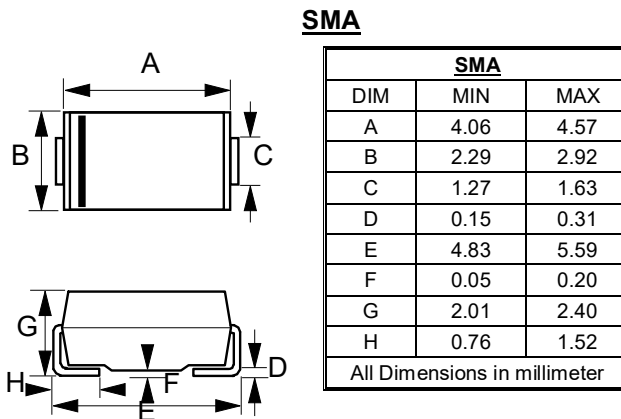
**SURFACE MOUNT
ULTRA FAST RECTIFIER**
REVERSE VOLTAGE – 50 to 400 Volts
FORWARD CURRENT – 1.0 Amperes

FEATURES

- Glass passivated chip
- Ultra fast switching for high efficiency
- Low forward voltage drop and high current capability
- Low reverse leakage current

MECHANICAL DATA

- Case : Molded plastic
- Case Material: "Green" Molding compound, UL flammability classification 94V- 0,"Halogen-free"
- Polarity : Indicated by cathode band
- Weight: 0.002 ounces , 0.069 grams (Approximate)


MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

ABSOLUTE RATINGS

PARAMETER	SYMBOL	US1A	US1B	US1D	US1G	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	V
Maximum DC Blocking voltage	V_{DC}	50	100	200	400	V
Maximum Average rectified forward current	@ $T_L=110^\circ\text{C}$ I_F	1.0				A
Peak forward surge single half sine-wave	@ $t_p=8.3\text{ms}$ I_{FSM}	30				A
Operating and Storage temperature range	T_J, T_{STG}	-55 ~ +150				°C

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION	SYMBOL	MAX	UNIT
Forward voltage (Note 1)	$I_F=1\text{A}$ $T_J=25^\circ\text{C}$	V_F	1.0	V
Reverse leakage current at Rated DC blocking voltage	$T_J=25^\circ\text{C}$ $T_J=100^\circ\text{C}$	I_R	5.0 100	uA
Typical junction capacitance(Note 2)		C_j	20	pF

THERMAL PERFORMANCE

PARAMETER	SYMBOL	TYP	UNIT
Typical thermal resistance(Note 3)	R_{thJA} R_{thJL} R_{thJC}	60 22 18	°C/W

DYNAMIC ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBOL	MAX	UNIT
Reverse recovery time	$I_F=0.5\text{A}, I_{rr}=0.25\text{A}, I_R=1.0\text{A}$ T_{rr}	50	nS

Note :

- (1) 300us pulse with, 2% duty cycle
- (2) Measured at 1.0MHz and reverse voltage of 4.0V DC.
- (3) Thermal resistance junction to Ambient, Lead and Case

REV.-11, Oct-2019, KSFA01

RATING AND CHARACTERISTIC CURVES
US1A thru US1G



FIG.1- FORWARD CURRENT DERATING CURVE

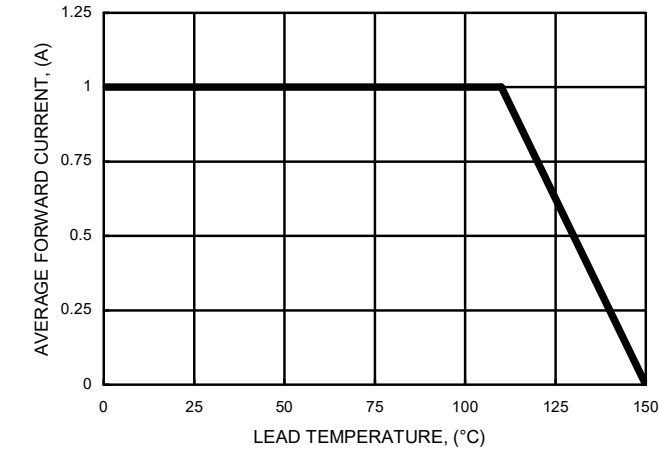


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

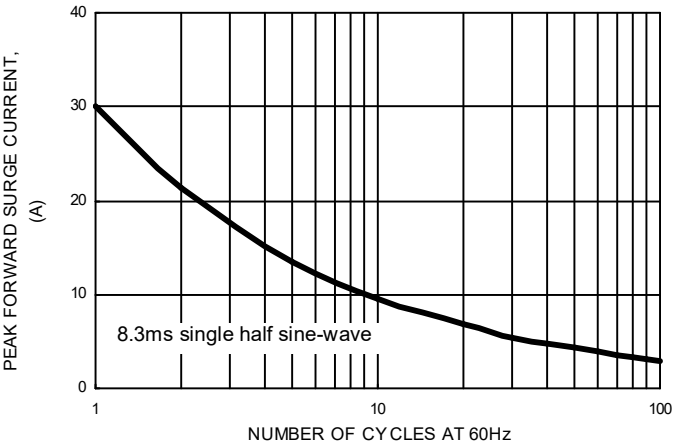


FIG.3- TYPICAL FORWARD CHARACTERISTICS

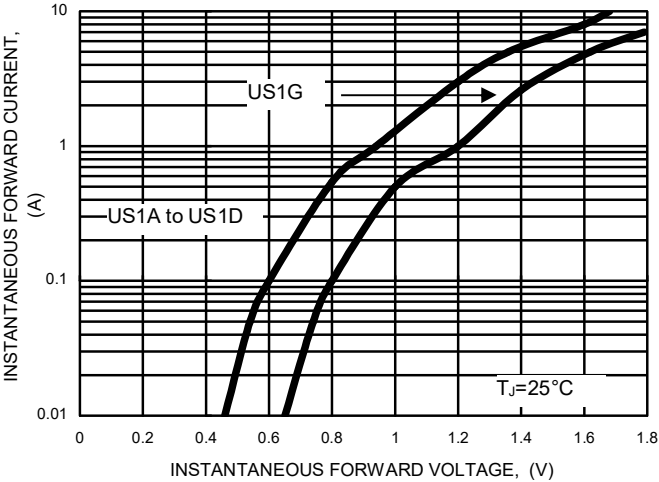


FIG.4- TYPICAL JUNCTION CAPACITANCE

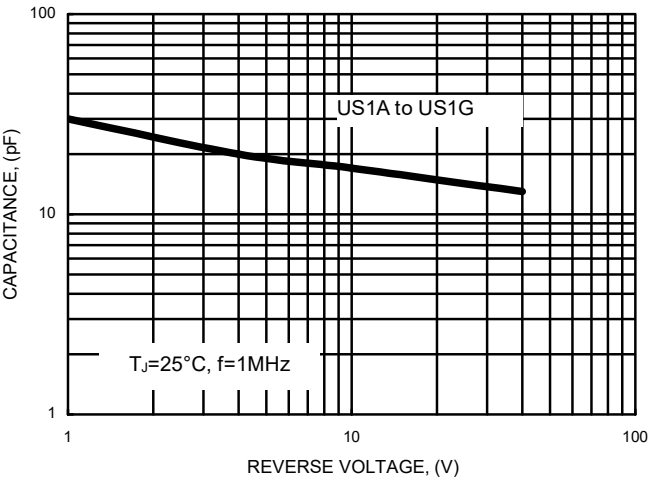
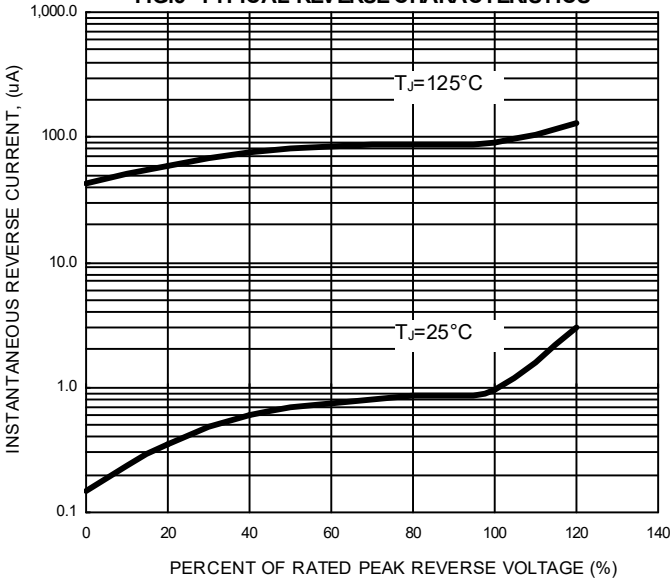


FIG.5- TYPICAL REVERSE CHARACTERISTICS



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