

**SURFACE MOUNT
ULTRA FAST RECTIFIER**

**REVERSE VOLTAGE – 1000 Volts
FORWARD CURRENT – 2 Amperes**

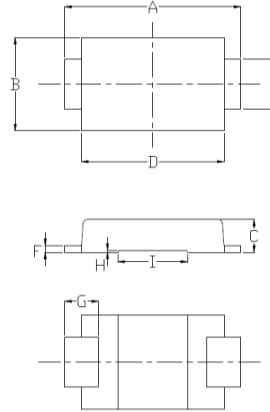
FEATURES

- 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
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. “Green” Device (Note 3)**

MECHANICAL DATA

- Package: JEDEC DO-221AC
- Package Material: “Green” Molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl.) “Halogen-free”.
- Moisture Sensitivity: Level 1 per J-STD-020C
- Lead Free Finish, RoHS compliant
- Marking :FUS2MD
- Weight: 0.035 grams (Approximate)

F3-D



F3-D			
DIM.	MIN.	TYP.	MAX
A	4.80	5.20	5.60
B	2.25	2.80	2.95
C	0.90	1.00	1.10
D	3.95	4.20	4.60
E	1.25	1.50	1.65
F	0.15	0.20	0.40
G	0.75	1.00	1.50
H	0.025	0.05	0.075
I	1.90	2.05	2.20

All dimension in millimeter

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

ABSOLUTE RATINGS

PARAMETER	SYMBOL	VALUE	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	1000	V
Maximum DC blocking voltage	V_{DC}	1000	V
Maximum Average rectified forward current	$I_{(AV)}$	2	A
Peak forward surge 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	50	A
Operating and Storage temperature range	T_J, T_{STG}	-55 ~ +150	°C

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION	SYMBOL	TYP	MAX	UNIT
Forward voltage (Note 4)	$I_F = 2A$ $T_J = 25^\circ C$	V_F	--	1.7	V
Reverse leakage current	$V_R = 1000V$ $T_J = 25^\circ C$ $T_J = 100^\circ C$	I_R	--	5 100	μA
Typical junction capacitance (Note 5)		C_T		15	pF

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	TYP	UNIT
Typical thermal resistance (Note 6,7)	R_{thJC}	14	°C/W

DYNAMIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION	SYMBOL	MAX	UNIT
Reverse Recovery Time	$I_F = 0.5A, I_R = 1.0A, I_{rr} = 0.25A$	t_{rr}	75	ns

- Note:**
1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
 2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
 3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
 4. 300us pulse width, 2% duty cycle.
 5. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
 6. Thermal resistance Junction to Case and Ambient.
 7. Device mounted on 20mm x 20 mm, FR-4 PCB with 2oz copper pad.

RATING AND CHARACTERISTIC CURVES
FUS2MD

FIG.1- FORWARD CURRENT DERATING CURVE

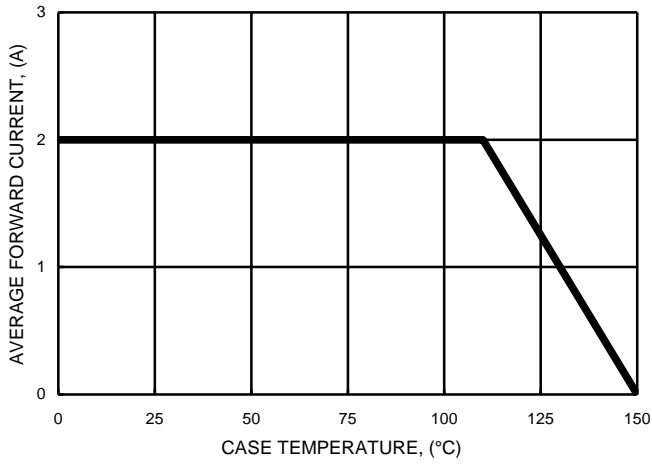


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

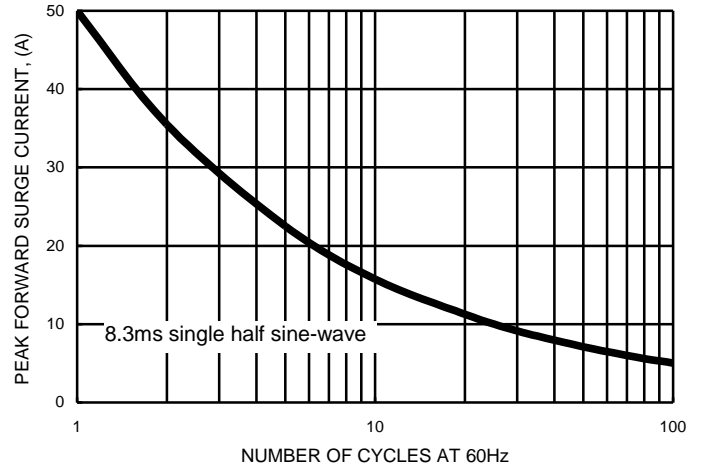


FIG.3- TYPICAL FORWARD CHARACTERISTICS

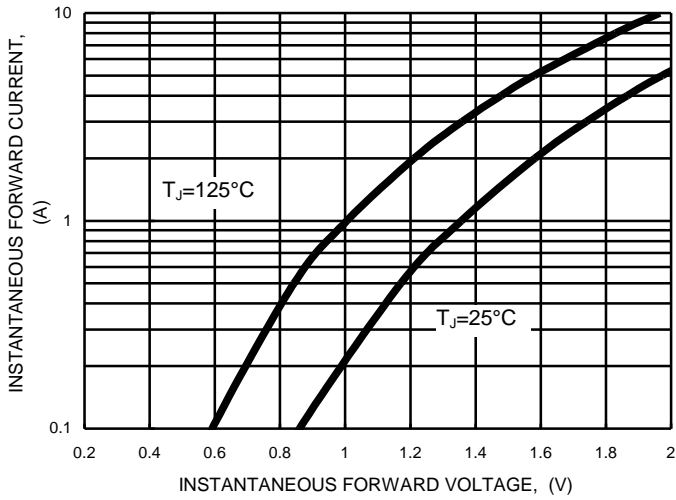


FIG.4- TYPICAL JUNCTION CAPACITANCE

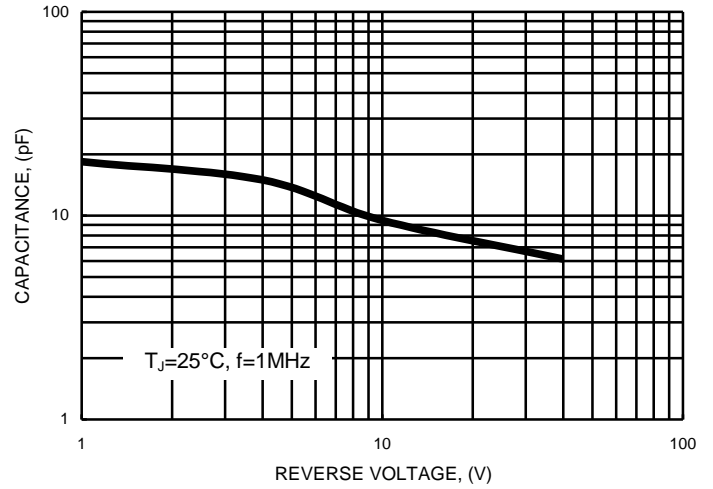
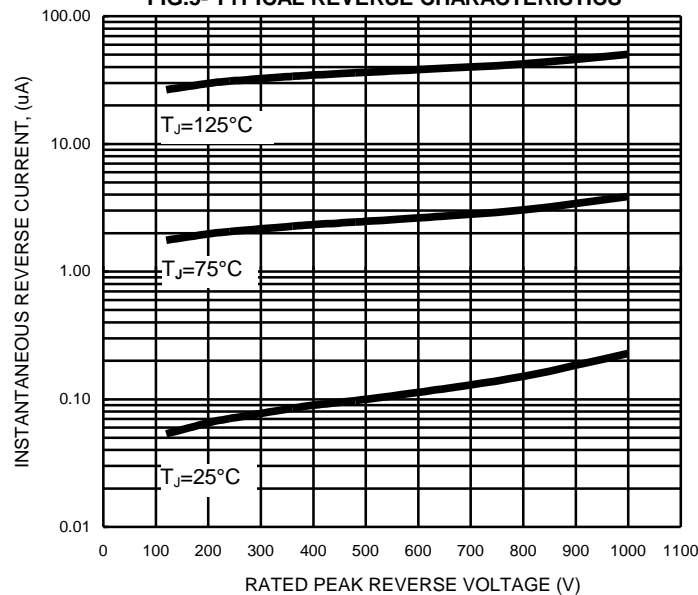


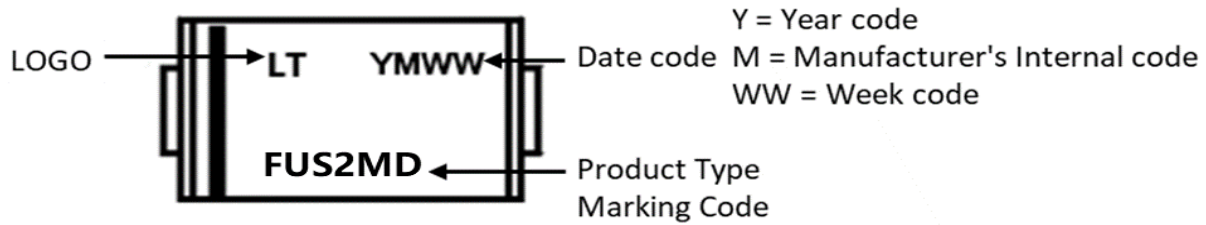
FIG.5- TYPICAL REVERSE CHARACTERISTICS



Ordering Information :

Part Number	Package	Packing	
		Qty.	Carrier
FUS2MD_HF	F3-D	10000	Tape & Reel

Marking Information :



Packaging Information :

DEVICE	Q'TY/REEL (PCS)	REEL DIA. (INCH)	Q'TY/BOX (PCS)	Q'TY/CARTON (PCS)
FUS2MD	10000	13	10000	120K

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