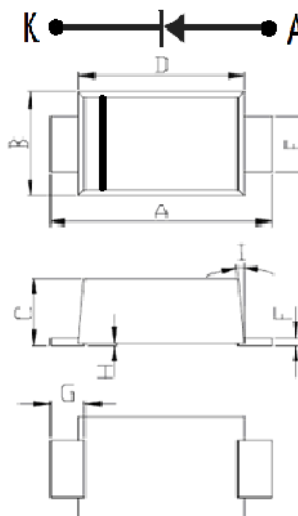


**SURFACE MOUNT
GLASS PASSIVATED RECTIFIER**
**REVERSE VOLTAGE – 1000 Volts
FORWARD CURRENT –1.0 Ampere**
FEATURES

- For surface mounted applications.
- Low reverse leakage current
- Low forward voltage drop
- High current capability
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

MECHANICAL DATA

- Case: JEDEC DO-219AA
- Case Material: "Green" molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl.) "Halogen-free"
- Terminals: Lead Free Plating (Matte Tin Finish.)
- Component in accordance to RoHS 2002/95/EC
- Marking code: S1M
- Weight: 16.3 mg (Approximate)

F1-A


F1-A			
DIM.	MIN.	TYP.	MAX.
A	3.50	3.80	3.90
B	1.70	1.90	2.00
C	0.81	1.18	1.20
D	2.70	2.80	2.90
E	0.80	1.00	1.35
F	0.05	0.15	0.30
G	0.35	0.60	0.85
H	0.03	0.07	0.10
I	0°	5°	8°
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
Average rectified output current $T_C = 100^\circ\text{C}$	$I_{(AV)}$	1.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load.	I_{FSM}	30	A
I^2t rating for fusing ($t = 8.3\text{ms}$)	I^2t	3.74	A^2S
Operating junction temperature range	T_J	-55 to +150	$^\circ\text{C}$
Storage temperature range	T_{STG}	-55 to +150	$^\circ\text{C}$

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITIONS	SYMBOL	TYP.	MAX	UNIT
Forward voltage	$I_F = 1\text{A}$ $T_J = 25^\circ\text{C}$ $T_J = 125^\circ\text{C}$	V_F	-- 0.86	1.1 --	V
Leakage current	$V_R = 1000\text{V}$ $T_J = 25^\circ\text{C}$ $T_J = 125^\circ\text{C}$	I_R	-- --	5.0 500	μA
Typical junction capacitance (Note 4)		C_T	7.6		pF

THERMAL CHARACTERISTICS

THERMAL CHARACTERISTIC	SYMBOL	TYP.	UNIT
Typical thermal resistance (Note 5)	R_{thJC} R_{thJL} R_{thJA}	53 45 152	$^\circ\text{C/W}$

DYNAMIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION	SYMBOL	MIN.	MAX	UNIT
Reverse recovery time	$I_F = 0.5\text{A}$, $I_{rr} = 0.25\text{A}$, $I_R = 1.0\text{A}$ $T_J = 25^\circ\text{C}$	t_{rr}	1000	1600	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. Measured at 1.0MHz and applied voltage of 4.0VDC.

 5. Thermal resistance test performed in accordance with JESD-51. Unit mounted on glass-epoxy substrate with 1oz/ft² 3 mm x 3 mm copper pad per pin.

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FIG.1- FORWARD CURRENT DERATING CURVE

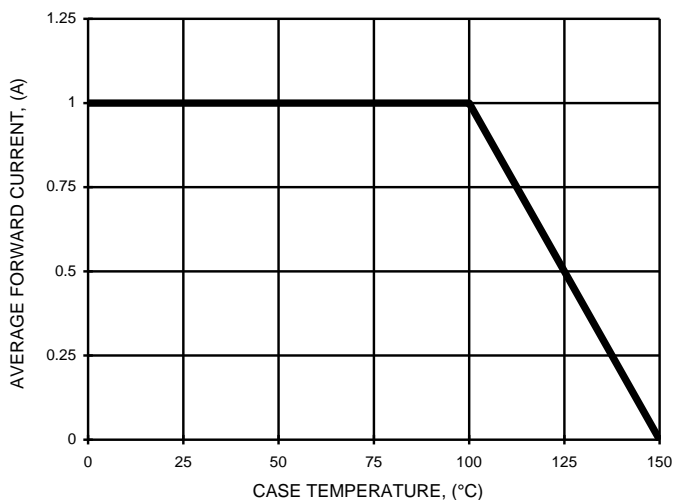


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

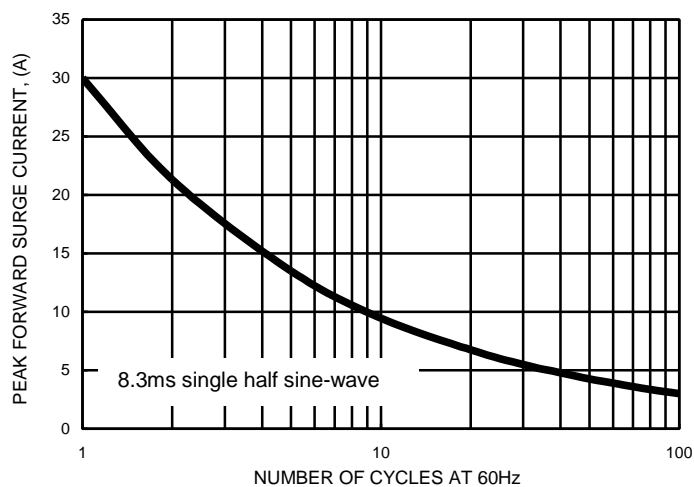


FIG.3- TYPICAL FORWARD CHARACTERISTICS

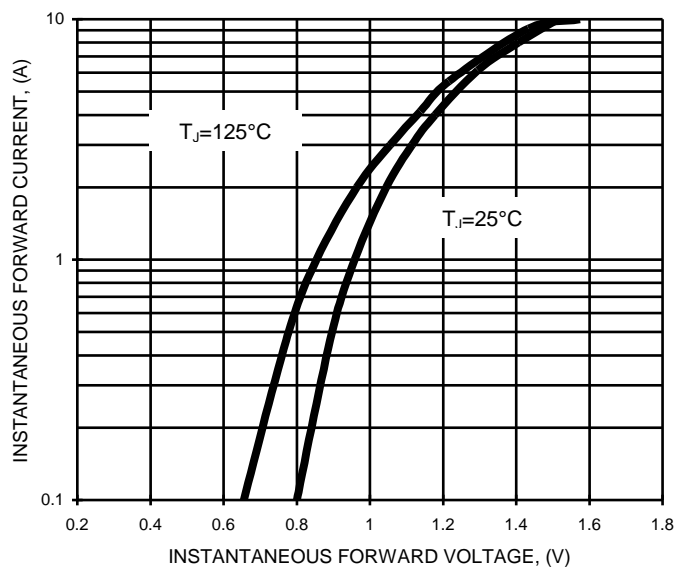


FIG.4- TYPICAL JUNCTION CAPACITANCE

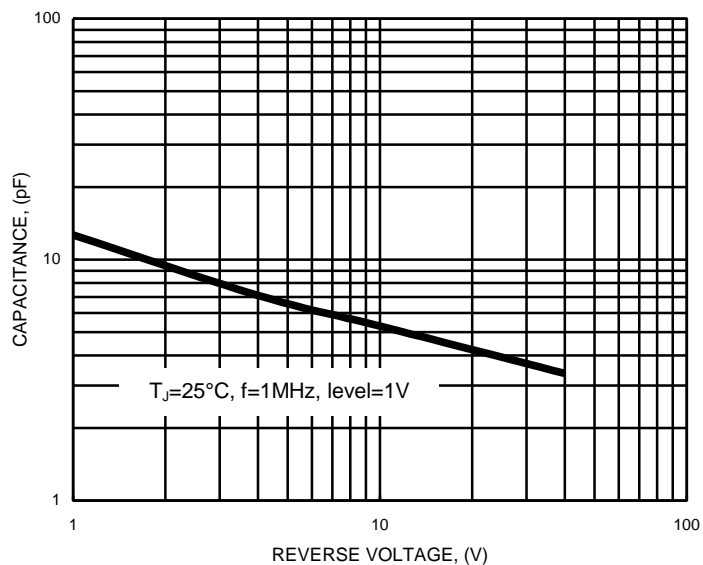
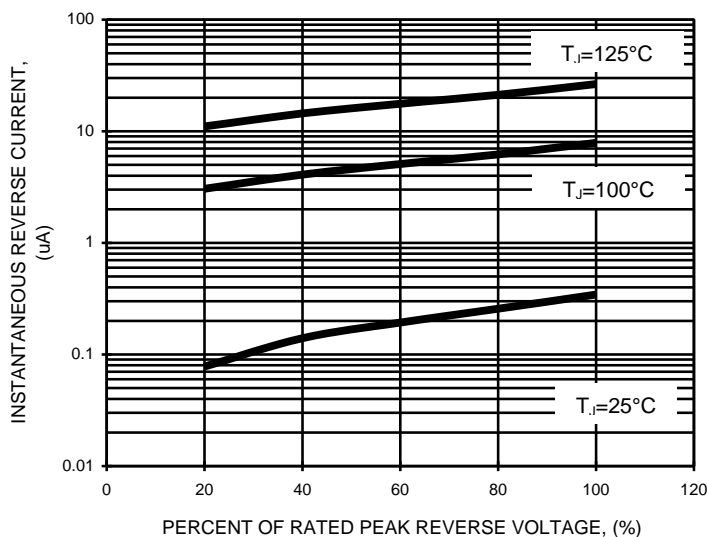


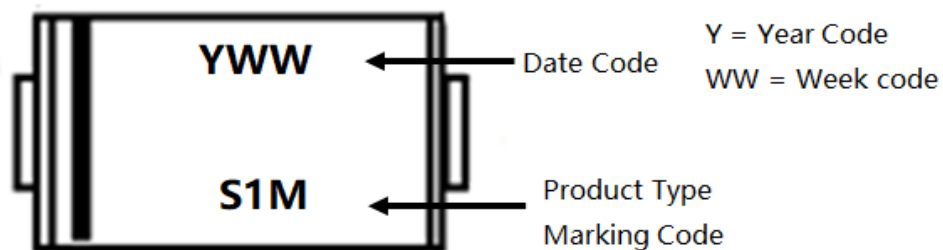
FIG.5- TYPICAL REVERSE CHARACTERISTICS



Ordering Information :

Part Number	Package	Packing	
		Qty.	Carrier
FS1ME_HF	F1-A	10000	Tape & Reel
FS1ME_HF-07	F1-A	2500	Tape & Reel

Marking Information:



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