FS2MED(LS)

SURFACE MOUNT GLASS PASSIVATED RECTIFIER

REVERSE VOLTAGE – 1000 Volts FORWARD CURRENT –2.0 Ampere

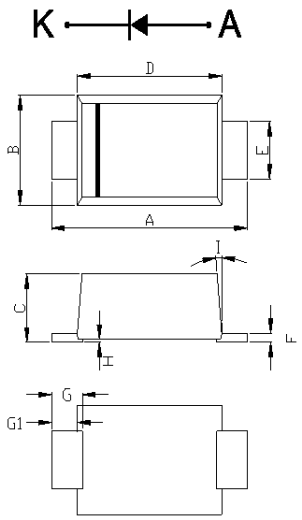
FEATURES

- 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

- Package: JEDEC DO-219AA
- Package 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: 2MD
- 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	0.90	1.00	1.10
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 =125°C	$I_{(AV)}$	2.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load.	I_{FSM}	50	A
I^2t rating for fusing (t = 8.3ms)	I^2t	20.75	A^2S
Operating junction temperature range	T_J	-55 to +150	°C
Storage temperature range	T_{STG}	-55 to +150	°C

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITIONS	SYMBOL	TYP.	MAX	UNIT
Forward voltage	I_F = 2A T_J =25°C T_J =125°C	V_F	-- 0.86	1.1 --	V
Leakage current	V_R = 1000V T_J =25°C T_J =125°C	I_R	-- --	5.0 500	uA
Typical junction capacitance (Note 4)		C_T	12.3		pF

THERMAL CHARACTERISTICS

THERMAL CHARACTERISTIC	SYMBOL	TYP.	UNIT
Typical thermal resistance (Note 5)	R_{thJC} R_{thJL} R_{thJA}	18 28 42	°C/W

DYNAMIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION	SYMBOL	MIN.	MAX	UNIT
Reverse recovery time	I_F= 0.5A, I_{rr}= 0.25A, I_R =1.0A T_J=25°C	t_{rr}	500	1000	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 5 mm x 7 mm copper pad per pin.

RATING AND CHARACTERISTIC CURVES
FS2MED

FIG.1- FORWARD CURRENT DERATING CURVE

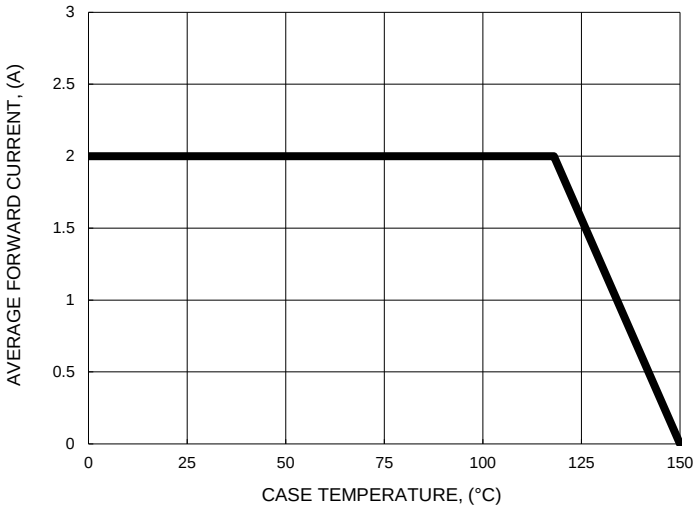


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

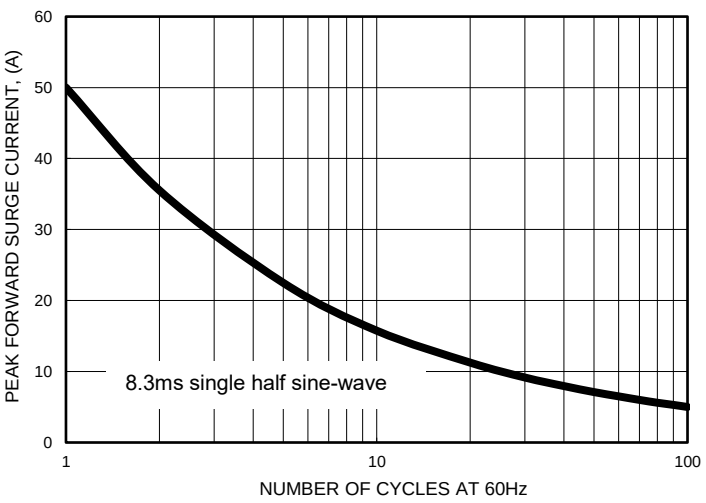


FIG.3- TYPICAL FORWARD CHARACTERISTICS

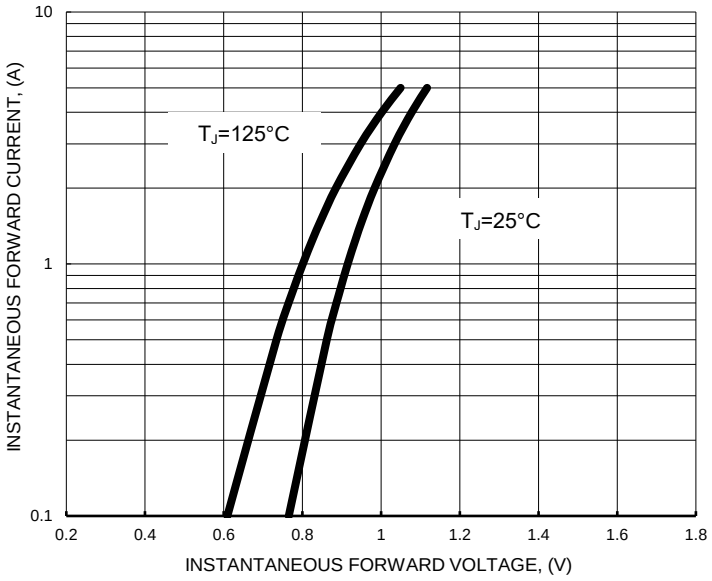


FIG.4- TYPICAL JUNCTION CAPACITANCE

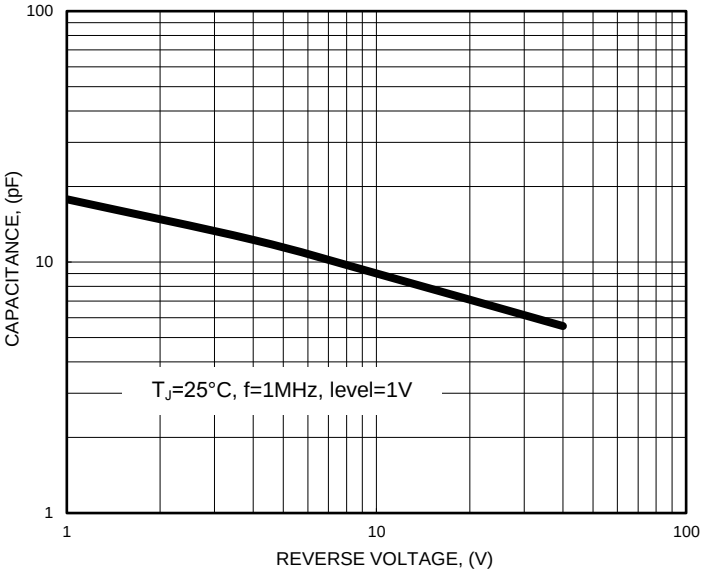
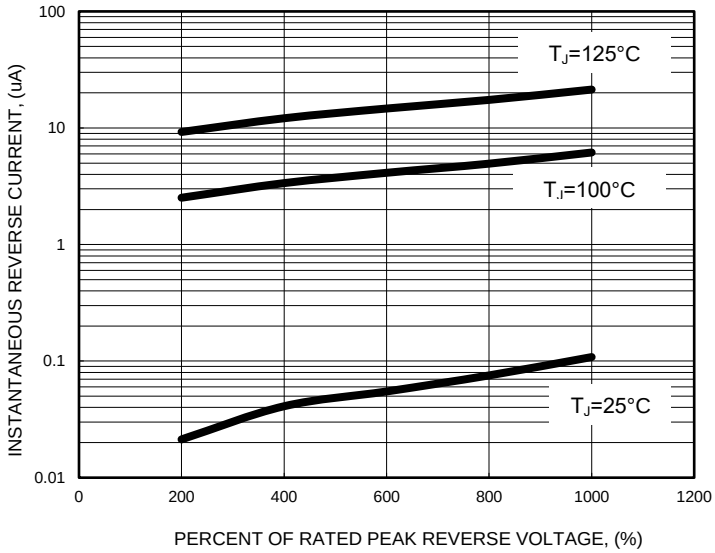


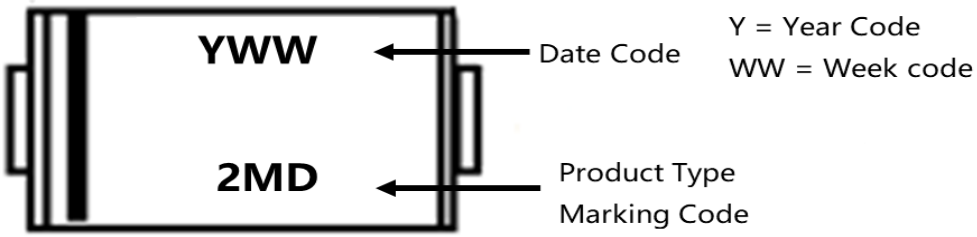
FIG.5- TYPICAL REVERSE CHARACTERISTICS



Ordering Information :

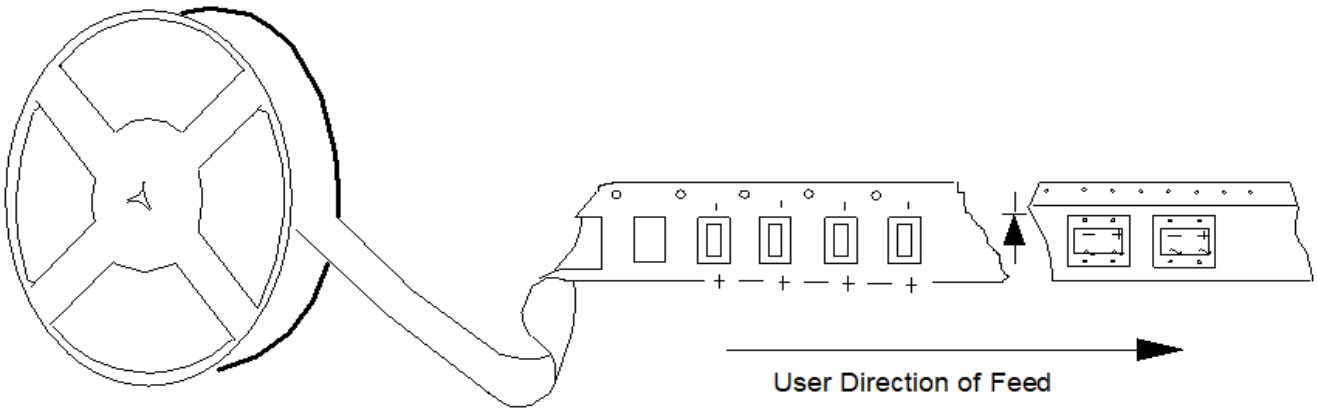
Part Number	Package	Packing	
		Qty.	Carrier
FS2MED_HF	F1-A	10000	Tape & Reel

Marking Information :



Packaging Information

Polar Units

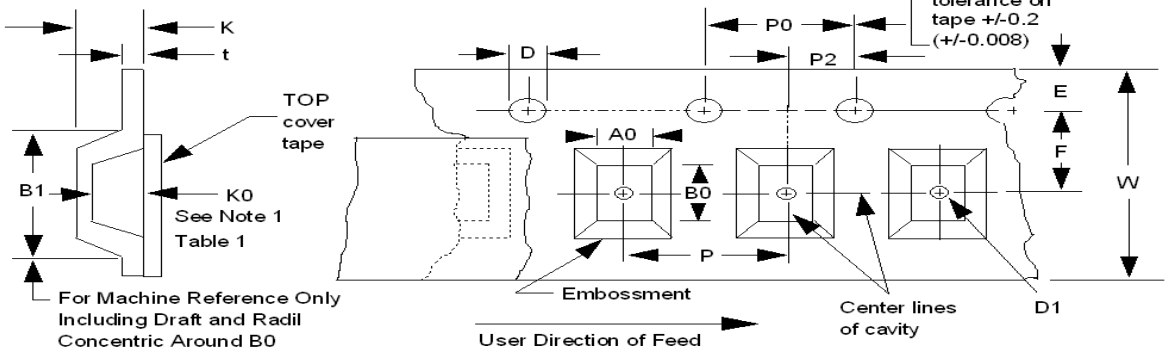


DEVICE	Q'TY/REEL (PCS)	REEL DIA. (mm)	BOX SIZE (mm)	Q'TY/BOX (PCS)	CARTON SIZE (mm)	Q'TY/CARTON (PCS)
FS2MED	10K	330	334X334X21	10K	350X350X340	120K

Embossed Carrier Dimensions Information

Packed per EIA/JEDEC standard RS-481
8, 12 ,16 ,24mm Tape only

Embossed Carrier Dimensions



TAPE SIZE	D	E	PO	t(MAX)	W	P	UNIT
12mm	1.55+0.10/-0.0	1.75±0.10	4.0+0.1	0.4	12.0±0.30	4.0±0.1	mm
	B1(MAX)	D1(MIN)	F	K(MAX)	P2	A0B0K0	
	8.2	1.5	5.5±0.1	4.5	2.0±0.05	SEE NOTE 1	

Note 6: A0B0K0 are determined by component size. The clearance between the component and the cavity must be within 0.05 min. to 0.50 max.for 8 mm tape. 0.05 min. to 0.65 max. for 12mm tape. 0.15 min. to 0.90 max. for 16mm tape and 0.05 min. to 1.00 max. for 24 mm tape and larger.

PACKAGING AND CARRIER DIMENSIONS INFORMATION
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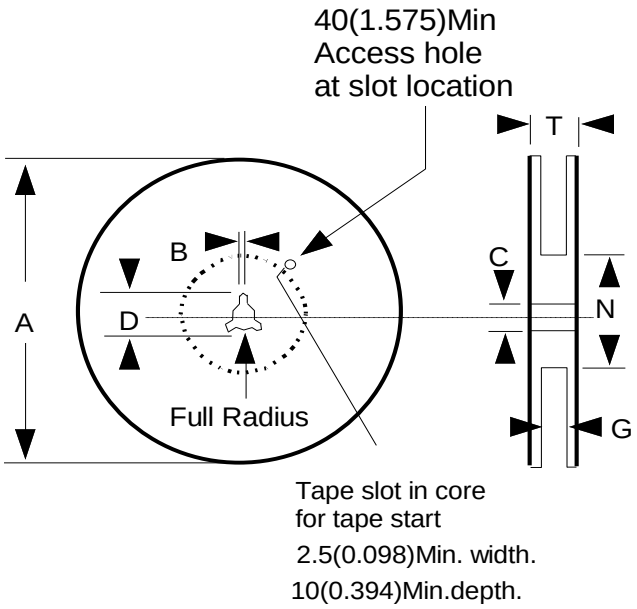

TAPE SIZE	A MAX	B MIN	C	D MIN	N	G	T MAX	UNIT
12mm	178/330	1.5	13.0+/-0.5	20.2	75	12.4+2.0/-0.0	18.4	mm

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