RECTRON SEMICONDUCTOR
TECHNICAL SPECIFICATION

HFM101F THRU HFM108F

SURFACE MOUNT GLASS PASSIVATED HIGH EFFICIENCY SILICON RECTIFIER

VOLTAGE RANGE 50 to 1000 Volts CURRENT 1.0 Ampere

FEATURES

* Glass passivated device
* Ideal for surface mounted applications
* Low leakage current
* Metallurgically bonded construction
* Mounting position: Any

MECHANICAL DATA

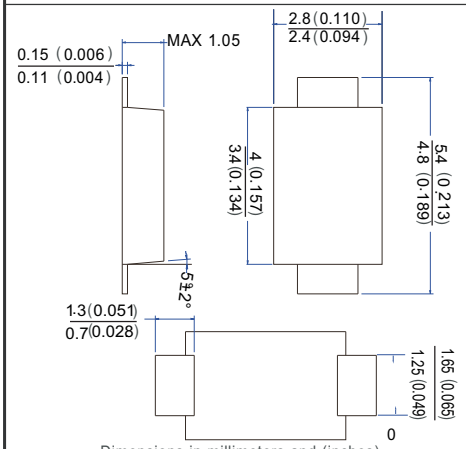
* Epoxy: Device has UL flammability classification 94V-O

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
resistive or inductive load.



SMAF



Dimensions in millimeters and (inches)

MAXIMUM RATINGS (@ TA=25 °C unless otherwise noted)

RATINGS	SYMBOL	HFM101F	HFM102F	HFM103F	HFM104F	HFM105F	HFM106F	HFM107F	HFM108F	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	300	400	600	800	1000	Volts
Maximum RMS Voltage	V_{RMS}	35	70	140	210	280	420	490	700	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	300	400	600	800	1000	Volts
Maximum Average Forward Rectified Current at T_A = 50°C	I_O	1.0								Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	30								Amps
Current Squared Time	I^2t	3.7								A^2S
Typical Thermal Resistance (Note 1)	$R_{\theta JL}$	27								°C/W
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	75								°C/W
Typical Junction Capacitance (Note 2)	C_J	15					12			pF
Operating Temperature Range	T_J	150								°C
Storage Temperature Range	T_{STG}	-55 to + 150								°C

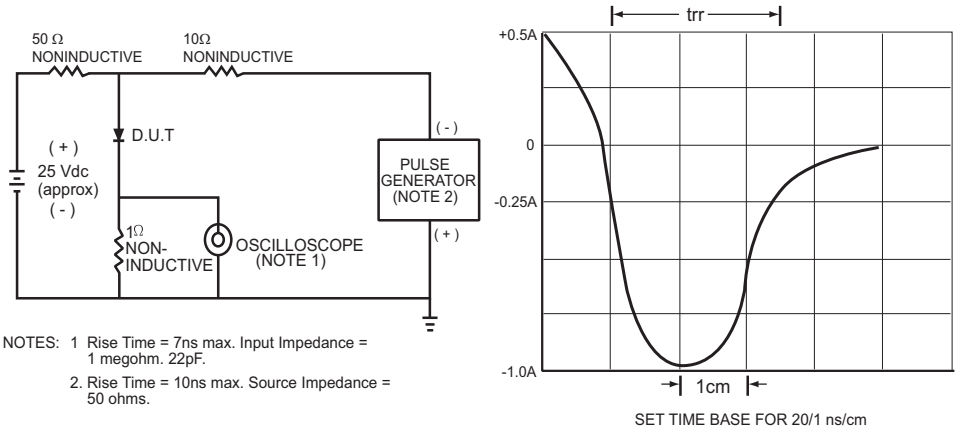
ELECTRICAL CHARACTERISTICS(@TA=25 °C unless otherwise noted)

CHARACTERISTICS		SYMBOL	HFM101F	HFM102F	HFM103F	HFM104F	HFM105F	HFM106F	HFM107F	HFM108F	UNITS
Maximum Instantaneous Forward Voltage at 1.0A DC		V_F	1.0			1.3		1.7			Volts
Maximum Full Load Reverse Current, Full cycle Average T_A =55°C		I_R	50								uA
Maximum Average Reverse Current	@T_A = 25°C		5.0								uA
at Rated DC Blocking Voltage	@T_A = 150°C		1.0								mA
Maximum Reverse Recovery Time (Note 4)		trr	50					75			nSec

NOTES : 1. Thermal Resistance : Mounted on PCB.
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
3. " ROHS compliant"
4. Test Conditions: I_F= 0.5A, I_R= -1.0A, I_{RR}= -0.25A.

2019-07
REV:B

RATING AND CHARACTERISTICS CURVES (HFM101F THRU HFM108F)



NOTES: 1 Rise Time = 7ns max. Input Impedance = 1 megohm. 22pF.

2. Rise Time = 10ns max. Source Impedance = 50 ohms.

FIG.1 TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

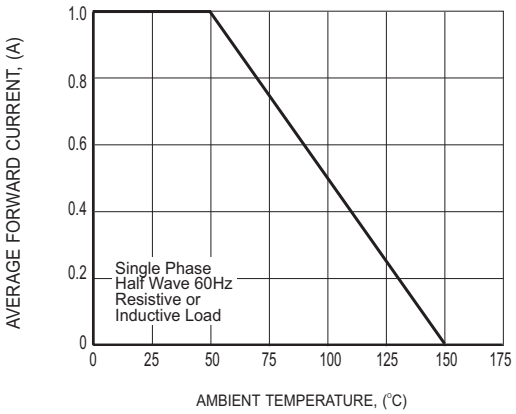


FIG.2 TYPICAL FORWARD CURRENT DERATING CURVE

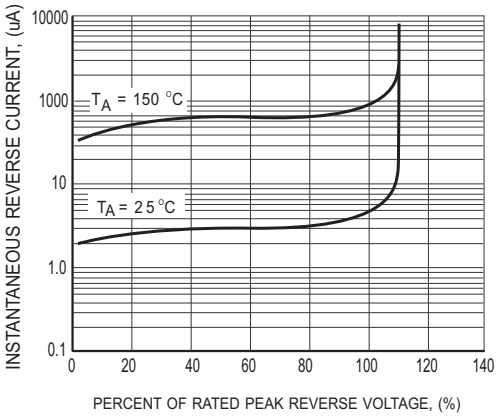


FIG.3 MAXIMUM REVERSE CHARACTERISTICS

RATING AND CHARACTERISTICS CURVES (HFM101F THRU HFM108F)

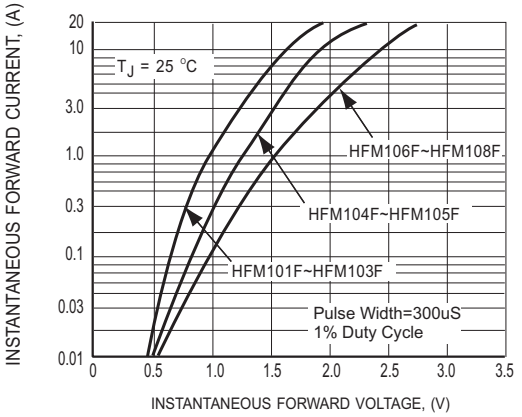


FIG.4 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS

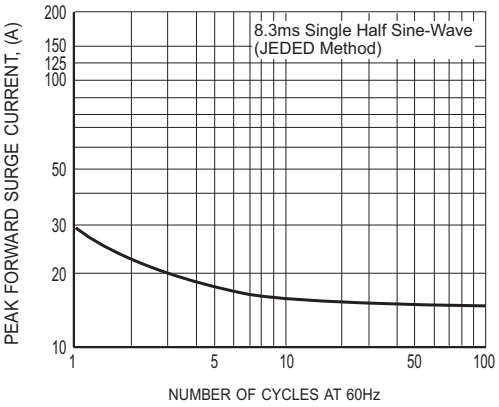


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

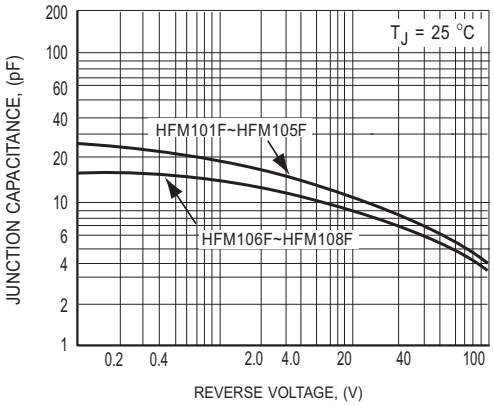
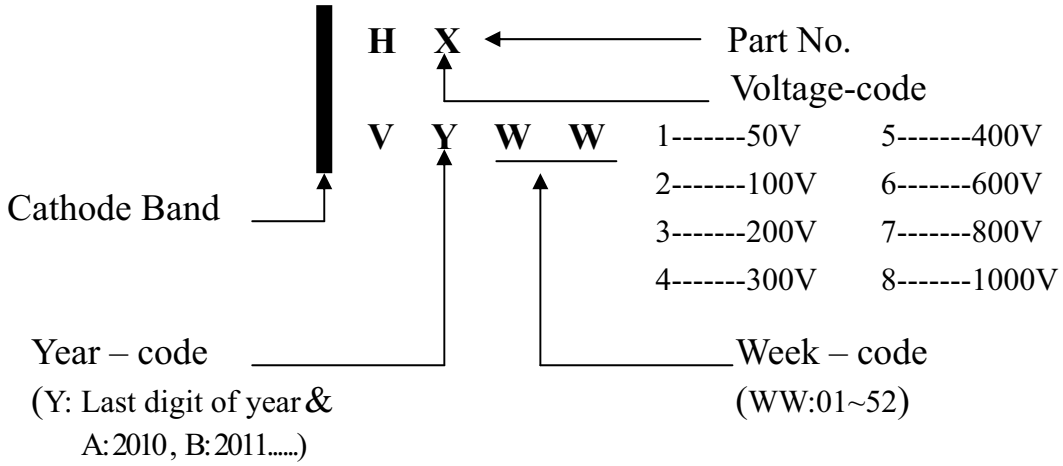
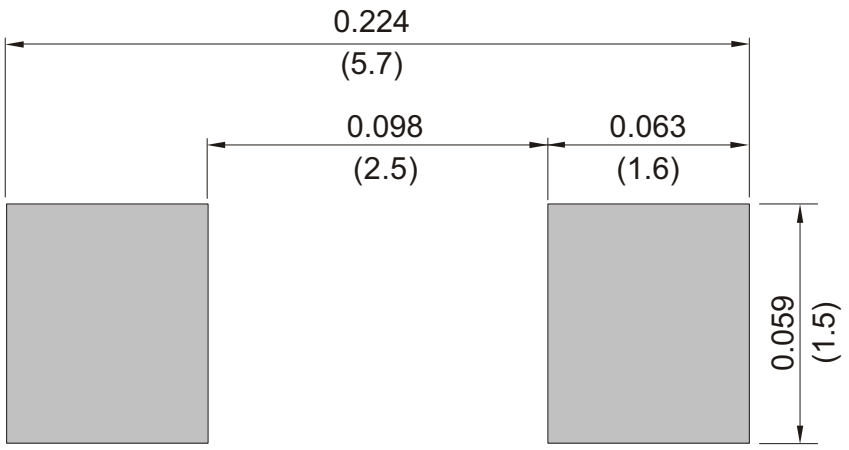


FIG.6 TYPICAL JUNCTION CAPACITANCE

Marking Description



Mounting Pad Layout



Dimensions in inches and (millimeters)

REEL TAPING SPECIFICATIONS FOR SURFACE MOUNT DEVICES-FLAT MELF (SMAF)

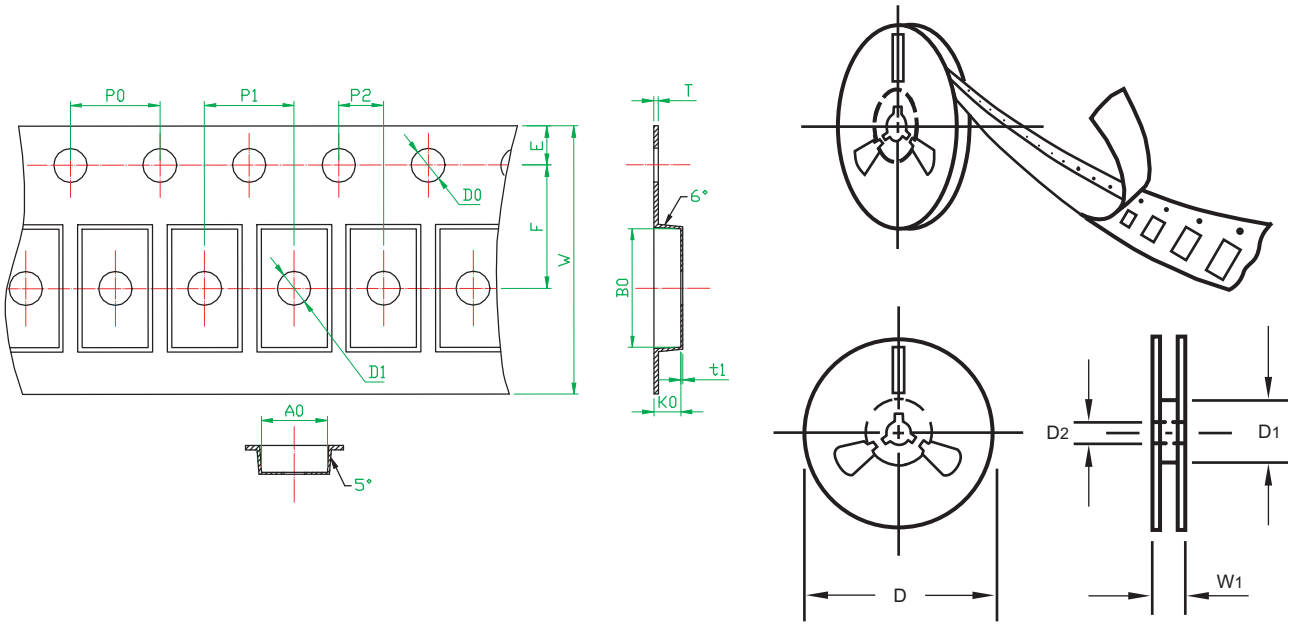


Fig.: Configuration of FLAT MELF TAPING (SMAF)

ITEM	SYMBOL	SMAF mm(inch)
Carrier width	A	2.9 ± 0.10 (0.114 ± 0.004)
Carrier length	B	5.35 ± 0.10 (0.211 ± 0.004)
Carrier depth	C	1.15 ± 0.10 (0.045 ± 0.004)
Sprocket hole	D_0	1.55 ± 0.05 (0.061 ± 0.002)
Reel outside diameter	D	178 ± 2.0 (7.0 ± 0.079)
Reel inner diameter	D_1	50 Min.
Feed hole diameter	D_2	13 ± 0.5 (0.512 ± 0.020)
Stroket hole position	E	1.75 ± 0.1 (0.069 ± 0.004)
Punch hole position	F	5.50 ± 0.05 (0.217 ± 0.002)
Punch hole pitch	P	4.0 ± 0.1 (0.157 ± 0.004)
Sprocket hole pitch	P_0	4.0 ± 0.1 (0.157 ± 0.004)
Embossment center	P_1	2.0 ± 0.05 (0.079 ± 0.002)
Totall tape thickness	T	0.23 ± 0.02 (0.009 ± 0.001)
Tape width	W	$12.0^{+0.3}_{-0.1}$ ($0.472^{+0.012}_{-0.004}$)
Reel width	W_1	16.8 ± 2.0 (0.661 ± 0.079)

Note: 1.Devices are packed in accordance with EIA standard RS-481-D and specification given above.
2.Available on 7 inch (1500 ct.) or 13 inch (5000 ct.) diameter reels.

PACKAGING OF DIODE AND BRIDGE RECTIFIERS

REEL PACK

PACKAGE	PACKING CODE	EA PER REEL	EA PER INNER BOX	COMPONENT SPACE (mm)	TAPE SPACE (mm)	REEL DIA (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
SMAF	-T	3,000	12,000	---	---	178	390*205*310	96,000	---

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