RECTRON SEMICONDUCTOR
TECHNICAL SPECIFICATION

FFM201 THRU FFM207

SURFACE MOUNT GLASS PASSIVATED FAST RECOVERY SILICON RECTIFIER

VOLTAGE RANGE 50 to 1000 Volts CURRENT 2.0 Amperes

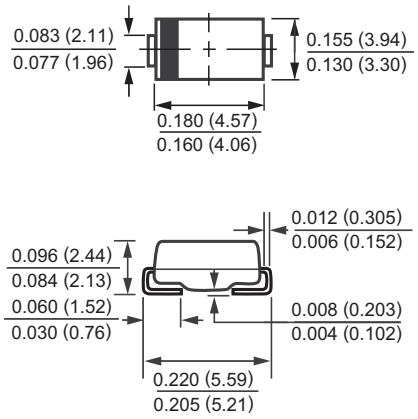
FEATURES

* Glass passivated device
* Ideal for surface mounted applications
* Low leakage current
* Metallurgically bonded construction
* Mounting position: Any
* Weight: 0.098 gram
* P/N suffix V means AEC-Q101 qualified, e.g:FFM201V
* P/N suffix V means Halogen-free

MECHANICAL DATA

* Epoxy : Device has UL flammability classification 94V-0

DO-214AA



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

MAXIMUM RATINGS (At T_A = 25°C unless otherwise noted)

RATINGS	SYMBOL	FFM201	FFM202	FFM203	FFM204	FFM205	FFM206	FFM207	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current at T_A = 55°C	I_O	2.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	60							Amps
Typical Current Squared Time	I^2T	15							A^2S
Maximum Thermal Resistance	(Note 2) $R\theta_{JL}$	20							°C/W
	(Note 3) $R\theta_{JA}$	60							°C/W
Typical Junction Capacitance (Note 1)	C_J	50							pF
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to + 150							°C

ELECTRICAL CHARACTERISTICS (At T_A = 25°C unless otherwise noted)

CHARACTERISTICS		SYMBOL	FFM201	FFM202	FFM203	FFM204	FFM205	FFM206	FFM207	UNITS
Maximum Forward Voltage at 2.0A DC		V_F	1.3							Volts
Maximum Full Load Reverse Current,Full cycle Average at T_A=55°C		I_R	20							uAmps
Maximum DC Reverse Current at	@T_A = 25°C		2.0							uAmps
Rated DC Blocking Voltage	@T_A = 150°C		2.0							mAmps
Maximum Reverse Recovery Time (Note 4)		trr	150				250	500		nSec

NOTES : 1. Measured at 1.0 MHz and applied average voltage of 4.0VDC
2. Thermal resistance junction to terminal 6.0mm² copper pads to each terminal.
3. Thermal resistance junction to ambient, 6.0mm² copper pads to each terminal.
4. Test Conditions: I_F = 0.5A, I_R = -1.0A, I_{RR} = -0.25A

2019-06
REV:E

RATING AND CHARACTERISTIC CURVES (FFM201 THRU FFM207)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

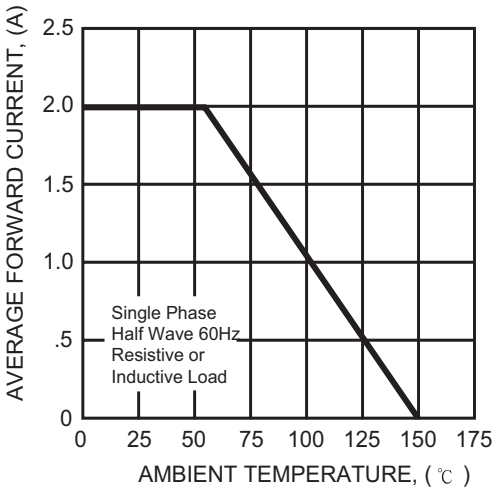


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

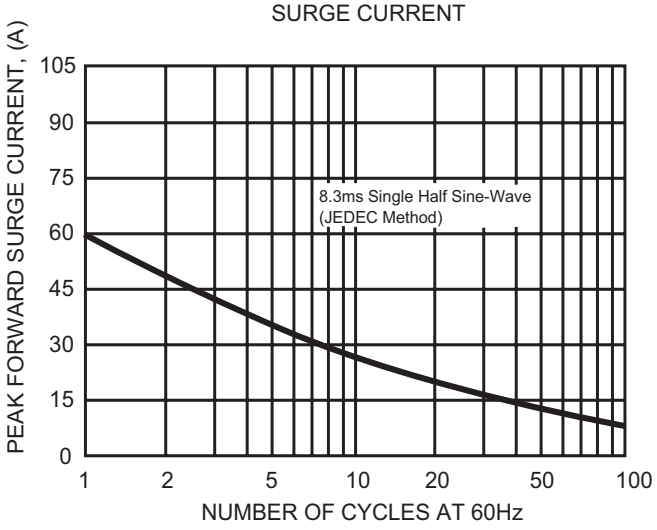


FIG. 3 - MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS

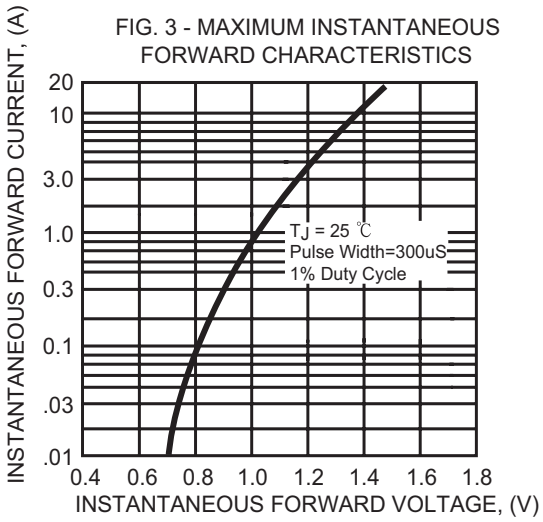


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

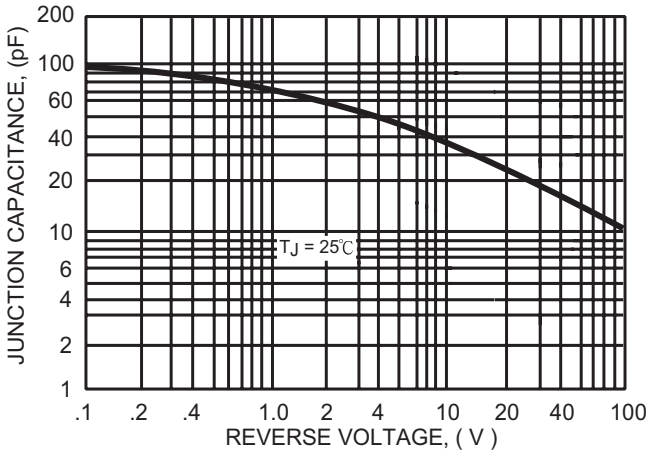
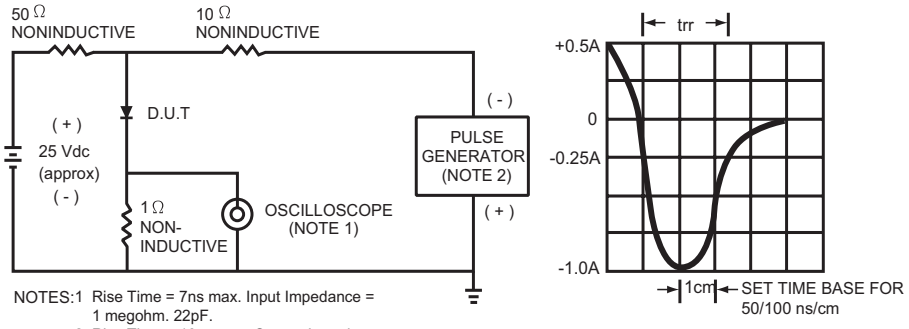
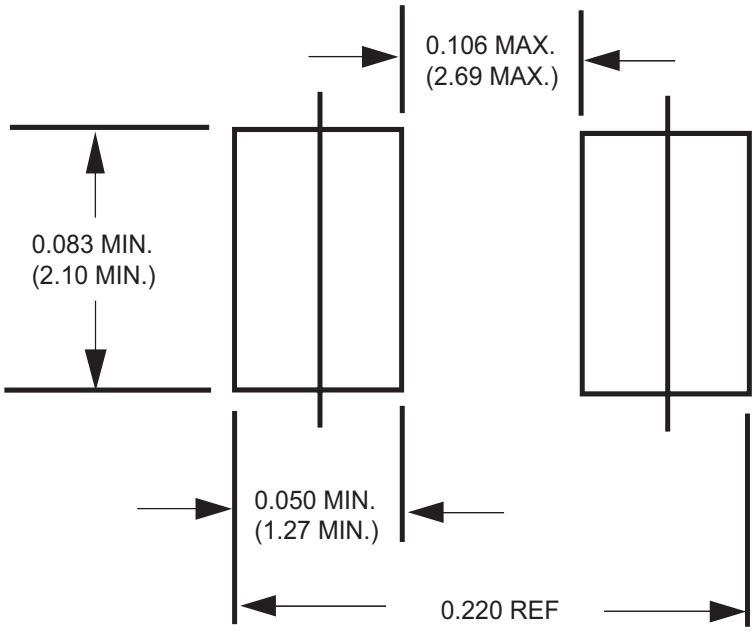


FIG. 5 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES:1 Rise Time = 7ns max. Input Impedance = 1 megohm. 22pF.
2. Rise Time = 10ns max. Source Impedance = 50 ohms.

Mounting Pad Layout



Dimensions in inches and (millimeters)

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)
SMB	-W/T	3,000	6,000	---	---	330	360*355*360	48,000	13.90

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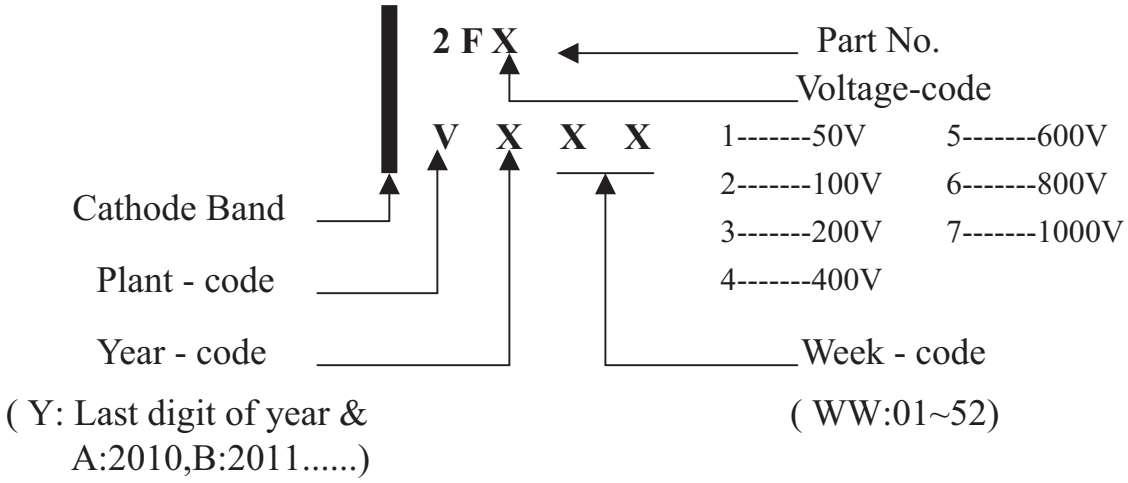
Attachment information about FFM20X

1. Internal Circuit

2. Marking on the body



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Attachment information about FFM20X

3. Items marked on the reel box and carton

3.1 On the reel (for –T & -W)

CUSTOMER
TYPE
QUANTITY
LOT NO.
Q.A.
REMARK

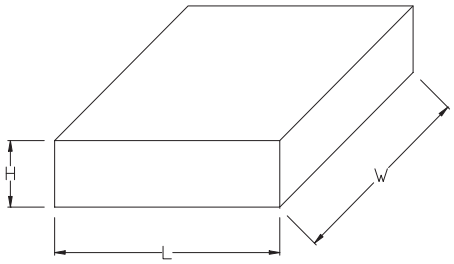
3.2 On the box (for –T & -W)

TYPE
QUANTITY
LOT NO.
Q.A.

3.3 On the carton

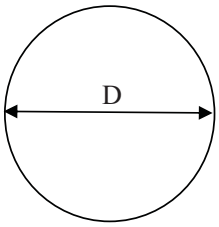
CUSTOMER
TYPE
QUANTITY
LOT NO.
REMARK

1. BOX



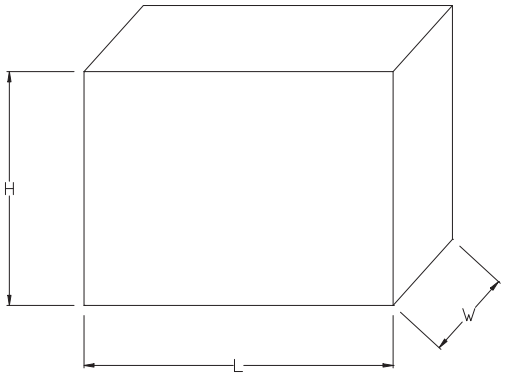
Packing Code	L (mm)	W (mm)	H (mm)
-W/-T	338	338	40

2. REEL



Packing Code	D (mm)
-W/-T	330

3. CARTON



Packing Code	L (mm)	W (mm)	H (mm)
-W/-T	360	355	360

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