

GLASS PASSIVATED SUPER FAST RECTIFIER

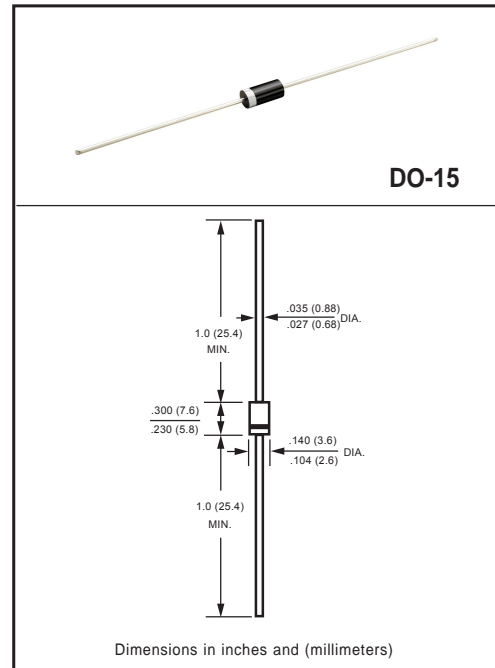
VOLTAGE RANGE 50 to 600 Volts CURRENT 2.0 Amperes

FEATURES

- * High reliability
- * Low leakage
- * Low forward voltage
- * High current capability
- * Super fast switching speed
- * High surge capability
- * Good for switching mode circuit

MECHANICAL DATA

- * Case: Molded plastic
- * Epoxy: Device has UL flammability classification 94V-O
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting position: Any
- * Weight: 0.40 g ram



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

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

RATINGS	SYMBOL	SF21	SF22	SF23	SF24	SF25	SF26	SF27	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	600	Volts
Maximum RMS Voltage	V_{RMS}	35	70	105	140	210	280	420	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	600	Volts
Maximum Average Forward Rectified Current at $T_A = 55^\circ\text{C}$	I_O	2.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	75							Amps
Current Squared Time	I^2t	23.3							A^2/Sec
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	40							$^\circ\text{C/W}$
	$R_{\theta JL}$	15							
Typical Junction Capacitance (Note 2)	C_J	50				30			pF
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to + 150							$^\circ\text{C}$

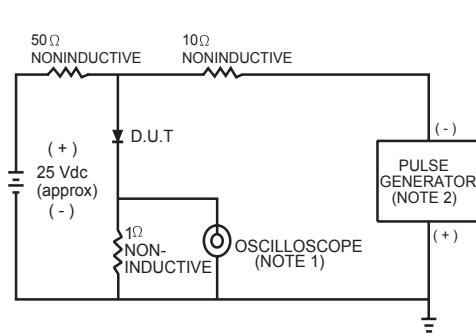
ELECTRICAL CHARACTERISTICS (@TA=25 °C unless otherwise noted)

CHARACTERISTICS	SYMBOL	SF21	SF22	SF23	SF24	SF25	SF26	SF27	UNITS	
Maximum Instantaneous Forward Voltage at 2.0A DC	V_F	0.95				1.25		1.50		Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@ $T_A = 25^\circ\text{C}$	5.0							uAmps	
	@ $T_A = 100^\circ\text{C}$	100								
Maximum Reverse Recovery Time (Note 1)	t_{rr}	35						50		nSec

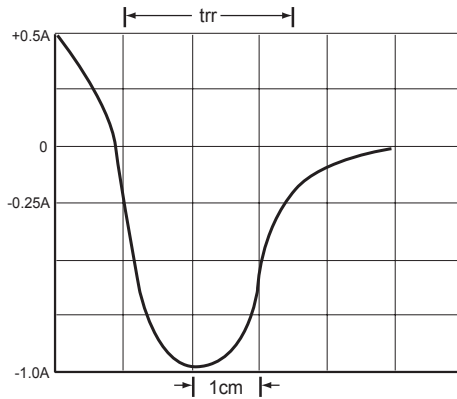
- NOTES : 1. Test Conditions: $I_F = 0.5\text{A}$, $I_R = -1.0\text{A}$, $I_{RR} = -0.25\text{A}$
 2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
 3. Typical Thermal Resistance : At 9.5mm lead lengths, PCB mounted.
 4. "Fully ROHS compliant", "100% Sn plating (Pb-free)"

2021-06
REV:B

RATING AND CHARACTERISTICS CURVES (SF21 THRU SF27)



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



SET TIME BASE FOR 10/1 ns/cm

FIG.1 TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

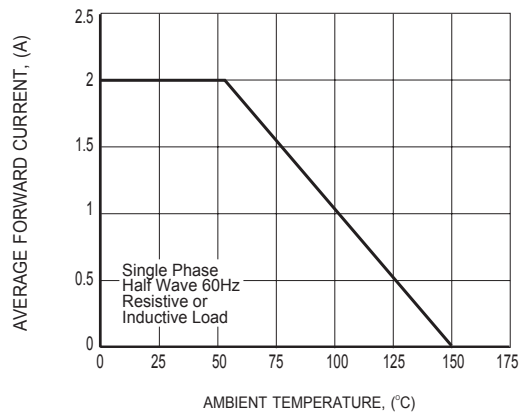


FIG.2 TYPICAL FORWARD CURRENT DERATING CURVE

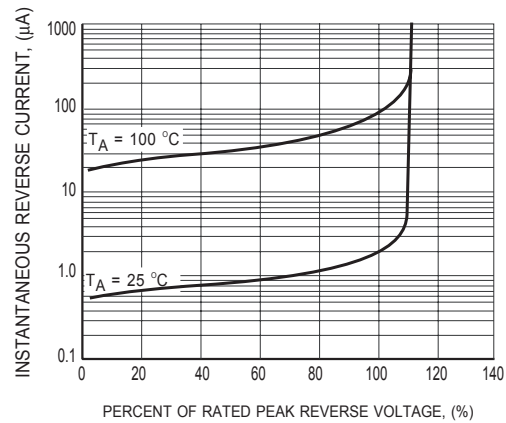


FIG.3 TYPICAL REVERSE CHARACTERISTICS

RATING AND CHARACTERISTICS CURVES (SF21 THRU SF27)

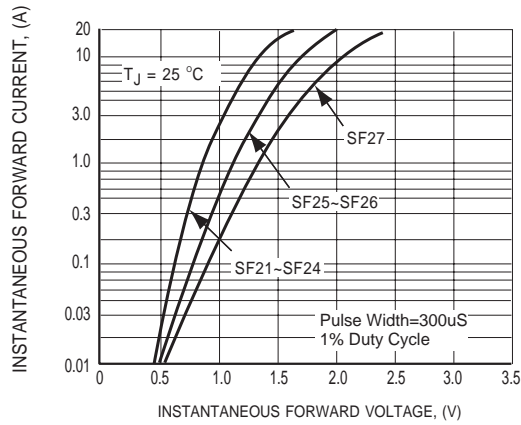


FIG.4 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

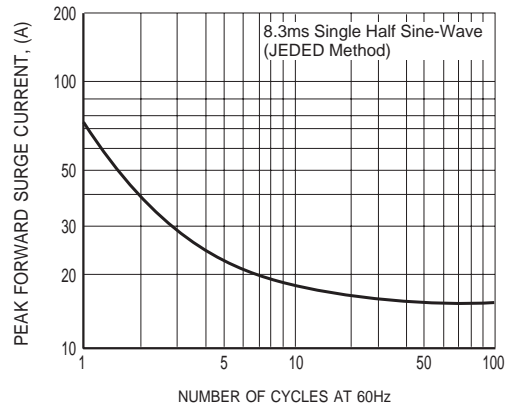


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

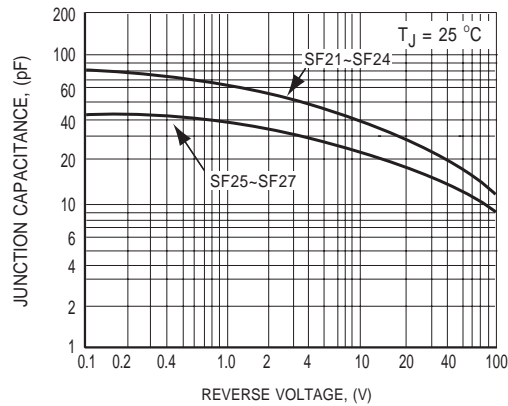


FIG.6 TYPICAL JUNCTION CAPACITANCE

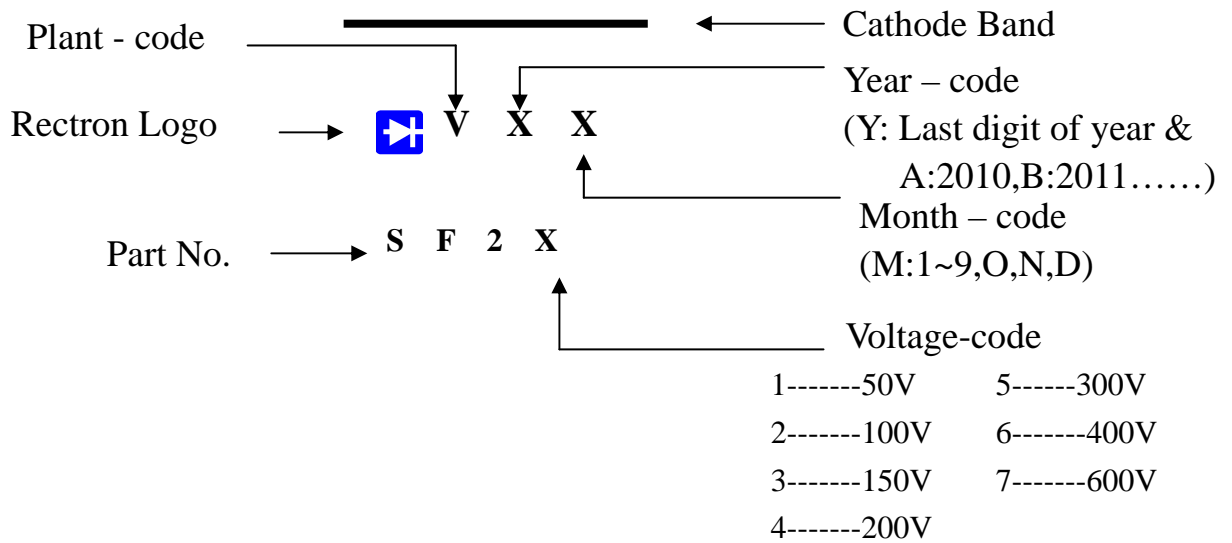


Attachment information about SF2X

1. Internal Circuit



2. Marking on the body





Attachment information about SF2X

4. Items marked on the reel box and carton

4.1 On the reel (for -T)

CUSTOMER

TYPE

QUANTITY

LOT NO.

Q.A.

REMARK

4.2 On the box (for -E & -F)

TYPE

QUANTITY

LOT NO.

Q.A.

4.3 On the carton

CUSTOMER

TYPE

QUANTITY

LOT NO.

REMARK

PACKAGING OF DIODE AND BRIDGE RECTIFIERS

BULK PACK

PACKAGE	PACKING CODE	EA PER BOX	INNER BOX SIZE (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
DO-15	-B	500	194*84*21	415*220*255	25,000	12.74

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)
DO-15	-T	4,000	4,000	5.0	52	330	355*350*335	16,000	10.05

AMMO PACK

PACKAGE	PACKING CODE	REEL (EA)	COMPONENT SPACE(mm)	TAPE SPACE (mm)	BOX SIZE (mm)	CARTON SIZE(mm)	CARTON (EA)	GROSS WEIGHT (Kg)
DO-15	-F	1,500	5.0	52	255*73*100	400*268*225	15,000	8.8

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