

SF301C THRU SF307C

GLASS PASSIVATED SUPER FAST RECTIFIER

VOLTAGE RANGE 50 to 600 Volts CURRENT 30 Ampere

FEATURES

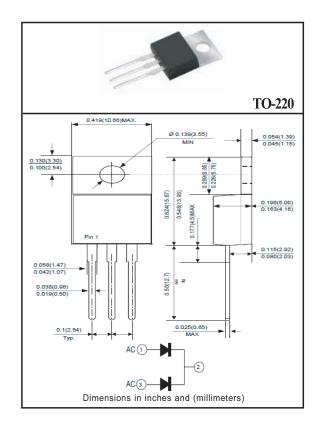
- * Low switching noise
- * Low forward voltage drop
- * Low thermal resistance
- * High current capability
- * Super fast switching speed
- * High-reliability
- * Good for switching mode circuit

MECHANICAL DATA

- * Case: TO-220 molded plastic
- * Epoxy: Device has UL flammability classification 94V-O
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting position: Any

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature.



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

RATINGS	SYMBOL	SF301C	SF302C	SF303C	SF304C	SF305C	SF306C	SF307C	UNITS
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	150	200	300	400	600	Volts
Maximum RMS Voltage	VRMS	35	70	105	140	210	280	420	Volts
Maximum DC Blocking Voltage	VDC	50	100	150	200	300	400	600	Volts
Maximum Average Forward Rectified Current at Tc = 100°C	lo	30.0						Amps	
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	IFSM	300						Amps	
Current Squared Time	I ² t	373.5						A ² /Sec	
Typical Thermal Resistance	R ₀ JC	3						°C/W	
Typical Junction Capacitance (Note 2)	Cı	120 100				pF			
Operating and Storage Temperature Range	ТJ, Tsтg	-55 to + 150					٥C		

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

CHARACTERISTICS		SYMBOL	SF301C	SF302C	SF303C	SF304C	SF305C	SF306C	SF307C	UNITS
Maximum Instantaneous Forward Voltage at 15.0A DC		VF	1.0			1.35		1.70	Volts	
Maximum DC Reverse Current	@Tc = 25°C	-	10							
at Rated DC Blocking Voltage	@Tc = 100°C	lr lr	500							uAmps
Maximum Reverse Recovery Time (Note 1)		trr	35			50			nSec	

- NOTES: 1. Test Conditions: IF = 0.5A, IR = -1.0A, IRR = -0.25A
 - 2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
 - 3. Suffix "A" =Common Anode.
 - 4. "Fully ROHS compliant", "100% Sn plating (Pb-free)".

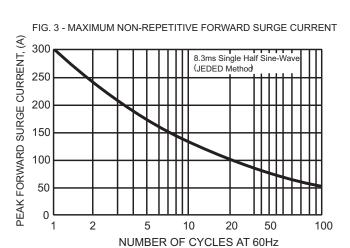
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REV: A

RATING AND CHARACTERISTIC CURVES (SF301C THRU SF307C)

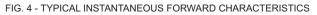
FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

36
30
24
12
Single Phase Half Wave
60Hz Inductive or
Resistive Load
0
50
100
150



1000 INSTANTANEOUS REVERSE CURRENT, (uA) T_C = 100°C 100 10 1.0 0.1 20 40 60 80 100 120 140 PERCENT OF RATED PEAK REVERSE VOLTAGE, (%)

FIG. 2 - TYPICAL REVERSE CHARACTERISTICS



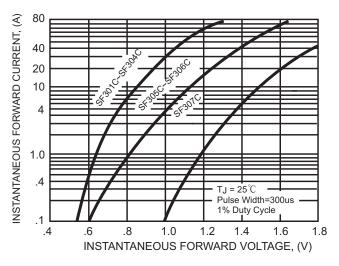
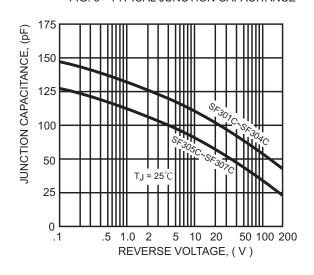
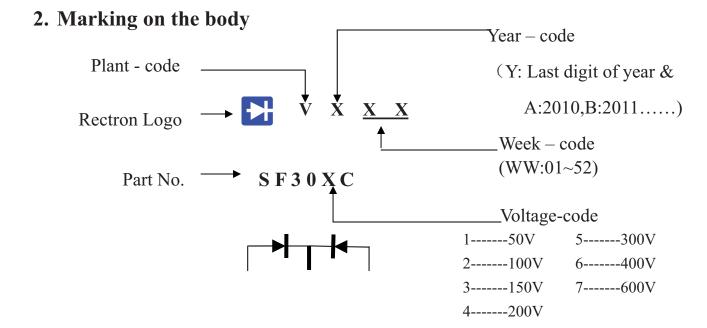


FIG. 5 - TYPICAL JUNCTION CAPACITANCE







PACKAGING OF DIODE AND BRIDGE RECTIFIERS

TUBE PACK

PACKAGE	PACKING CODE	EA PER BOX	INNER BOX SIZE (mm)	CARTON SIZE (mm)	EA PER CARTON	WEIGHT(Kg)
TO-220	-C	1,000	555*150*40	580*230*175	5,000	15.0

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