

## SUPER FAST RECTIFIERS

REVERSE VOLTAGE - 50 to 600Volts  
FORWARD CURRENT - 16.0 Amperes

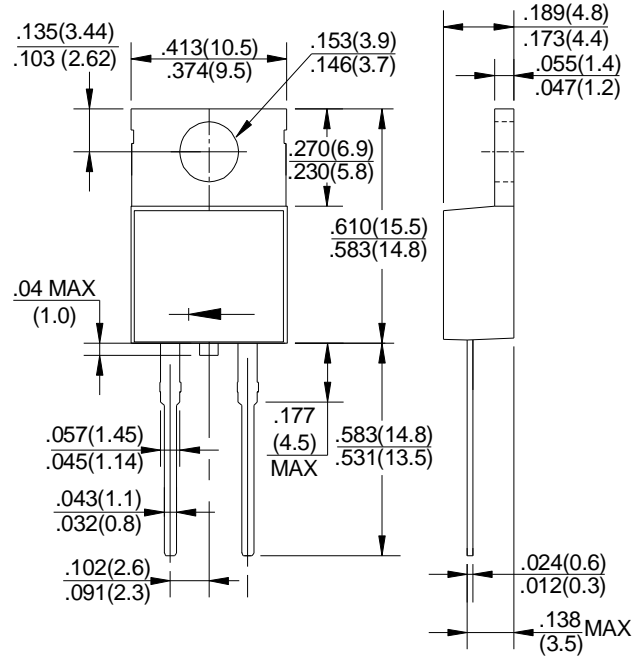
### FEATURES

- Super fast switching time for high efficiency
- Low forward voltage drop  
High current capability
- Low reverse leakage current
- Plastic material has UL flammability classification 94V-0

### MECHANICAL DATA

- Case: TO-220AC molded plastic
- Epoxy: UL94V-0 rate flame retardant
- Mounting position :Any
- Weight: 2.24 grams
- polarity:As marked

### TO-220AC



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave ,60Hz, resistive or inductive load.

For capacitive load, derate current by 20%

CHARACTERISTICS	SYMBOL	SF 1601	SF 1602	SF 1603	SF 1604	SF 1605	SF 1606	SF 1608	UNIT
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	150	200	300	400	600	V
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	150	200	300	400	600	V
Maximum Average Forward Rectified Current @T <sub>A</sub> =75 °C	I <sub>(AV)</sub>	16.0							A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load(JEDEC Method)	I <sub>FSM</sub>	200							A
Peak Forward Voltage at 16.0A DC	V <sub>F</sub>	1.0			1.3		1.7		V
Maximum DC Reverse Current @T <sub>J</sub> =25°C at Rated DC Blocking Voltage @T <sub>J</sub> =100°C	I <sub>R</sub>	10			150				µA
Maximum Reverse Recovery Time(Note1)	T <sub>RR</sub>	35							nS
Typical Junction Capacitance (Note2)	C <sub>J</sub>	80							pF
Typical Thermal Resistance (Note3)	R <sub>θJA</sub>	2.5							°C/W
Operating and Storage Temperature Range	T <sub>J</sub> ,T <sub>STG</sub>	-55 to + 150							°C

NOTES:1.Measured with I<sub>F</sub>=0.5A,I<sub>R</sub>=1A,I<sub>RR</sub>=0.25A

2.Measured at 1.0 MHZ and applied reverse voltage of 4.0VDC.

3.Thermal resistance junction to ambient

FIG.1- TYPICAL FORWARD CURRENT DERATING CURVE

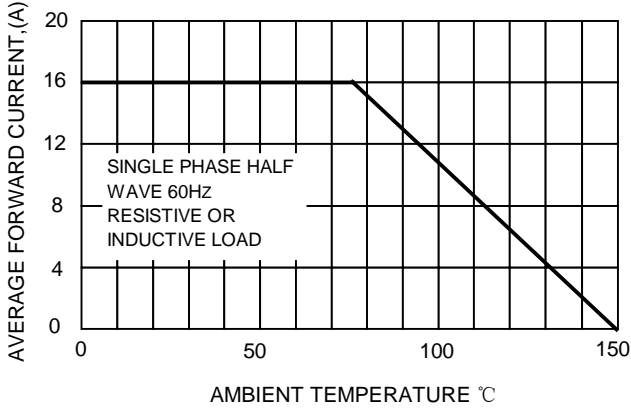


FIG.2-TYPICAL REVERSE CHARACTERISTICS

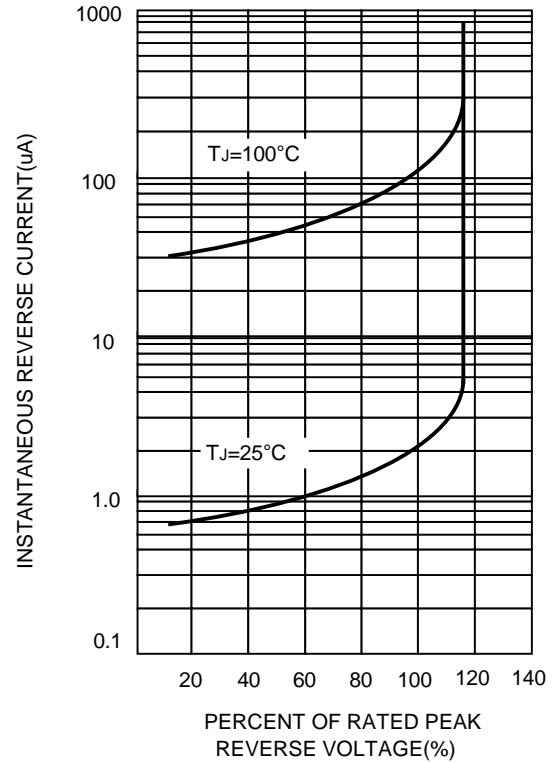


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

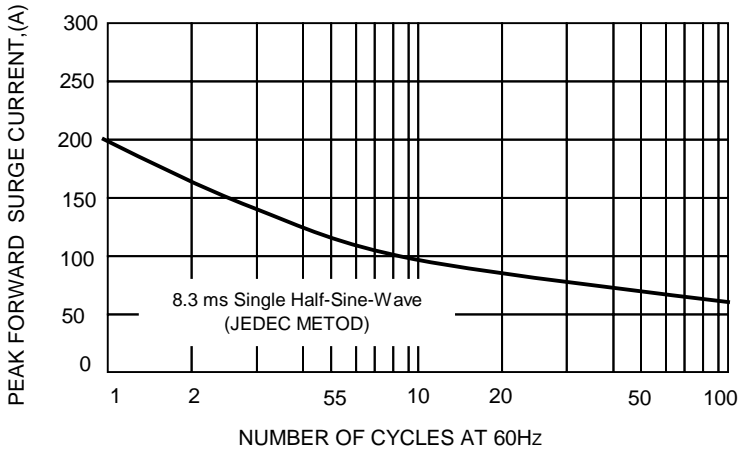


FIG.4-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

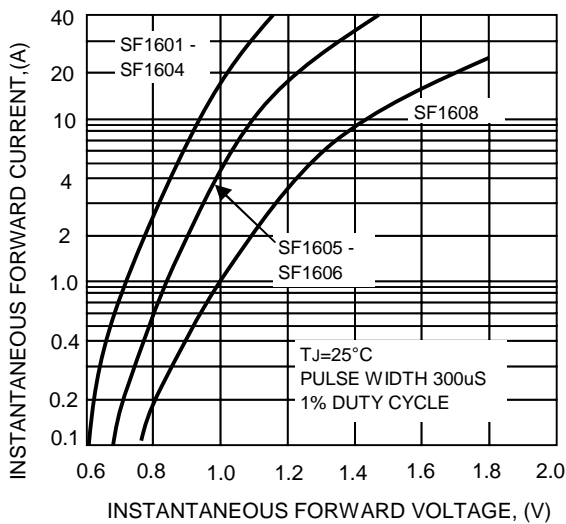


FIG.5-TYPICAL JUNCTION CAPACITANCE

