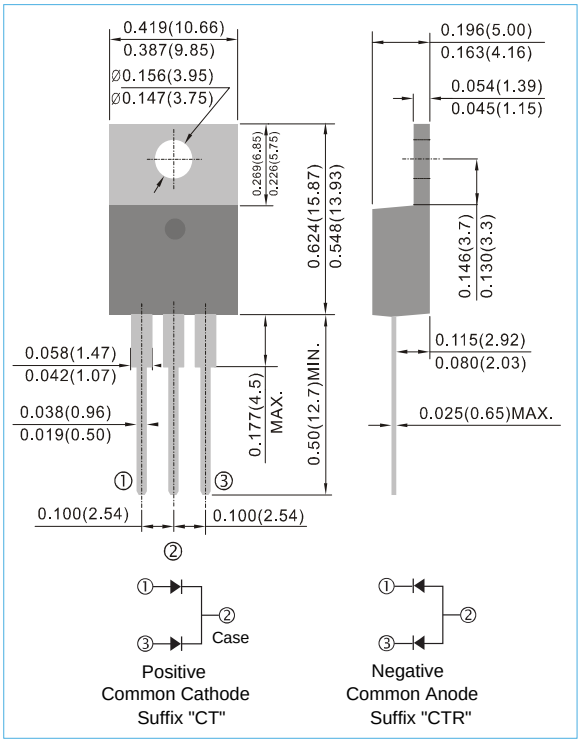
CURRENT 30 Ampere
VOLTAGE RANG 200 to 1000 Volts

SF3002 THRU SF3010

TO-220AB Unit : inch(mm)



FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O. Flame Retardant Epoxy Molding Compound.
- Low power loss, high efficiency.
- Low forward voltage, high current capability
- High surge capacity.
- Super fast recovery times, high voltage.
- Epitaxial chip construction.
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

MECHANICAL DATA

- Case: TO-220AB Molded plastic
- Terminals: Lead solderable per MIL-STD-750, Method 2026
- Polarity: As marked.
- Standard packaging: Any
- Weight: 0.067 ounces, 1.89 grams.

MAXIMUM RATING AND ELECTRICAL CHARACTERISTICSS

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%

PARAMETER	SYMBOL	SF3002	SF3004	SF3006	SF3008	SF3010	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	200	400	600	800	1000	V
Maximum Average Forward Current at T_C=90°C	$I_{F(AV)}$	30					A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	300					A
Maximum Forward Voltage at 15A	V_F	0.95	1.3	1.5	1.7	1.9	V
Maximum DC Reverse Current at Rated DC Blocking Voltage T_J=25°C T_J=100°C	I_R	10 500					μA
Maximum Reverse Recovery Time (Note 2)	t_{rr}	35			50		ns
Typical Junction Capacitance (Note 1)	C_J	85					pF
Typical thermal Resistance (Note 3)	$R_{\theta Jc}$	3					°C / W
Operating Junction and Storage Temperature Range	T_J,T_{STG}	-50 to +150					°C

NOTES :

1. Measured at 1 MHz and applied reverse voltage of 4 VDC.
2. Reverse Recovery Test Conditions: I_F=0.5A, I_R=1A, Irr=0.25A.
3. Both Bonding and Chip structure are available.

CURRENT 30 Ampere
VOLTAGE RANG 200 to 1000 Volts

SF3002 THRU SF3010

RATING AND CHRACTERISTIC CURVES

FIG.1 - FORWARD CURRENT DERATING CURVE

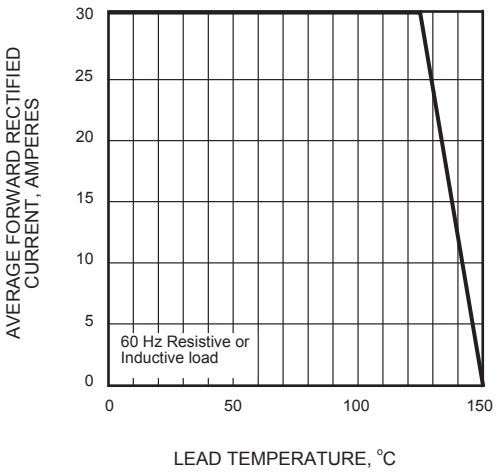


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

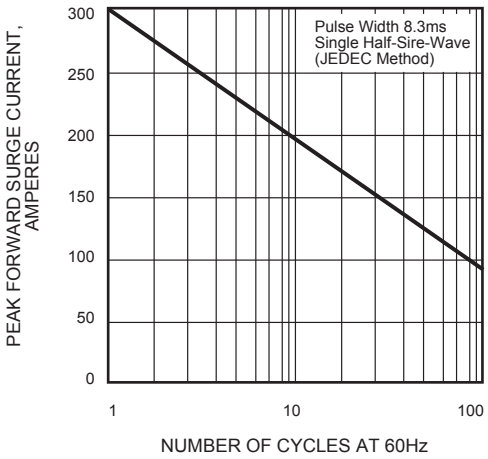


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

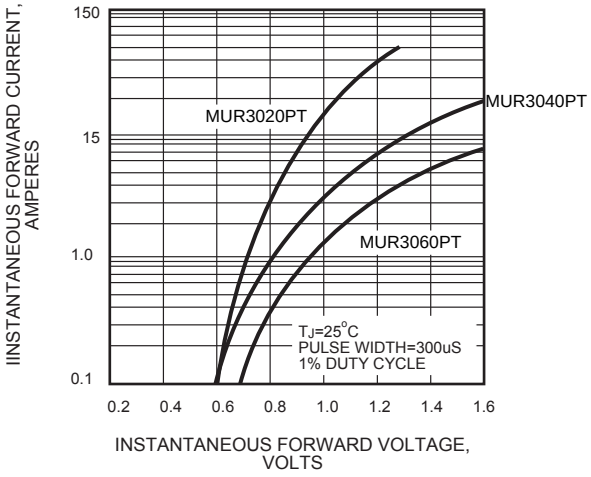


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

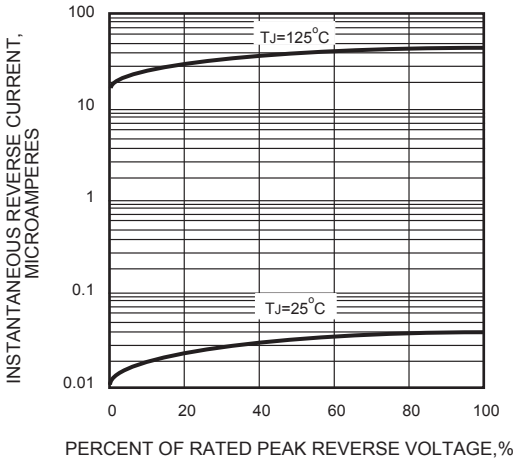


FIG.5 - TYPICAL JUNCTION CAPACITANCE