

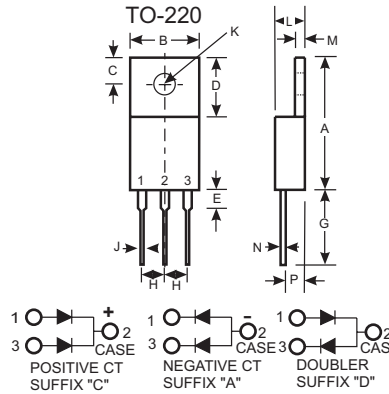
### Features

- Low Leakage
- Low Forward Voltage Drop
- High Current Capability
- Super-fast Switching Speed < 35ns
- Plastic Material - UL Flammability Rating 94V-0
- Good for 200KHz Power Supplier

NOT RECOMMENDED FOR NEW DESIGN

### Mechanical Data

- Case: Molded Plastic
- Terminals: Finish - Sn96.5Ag3.5. Solderable per MIL-STD-202, Method 208
- Polarity: Color Band Denotes Cathode
- Approx. Weight: 2.24 grams
- Mounting Position: Any



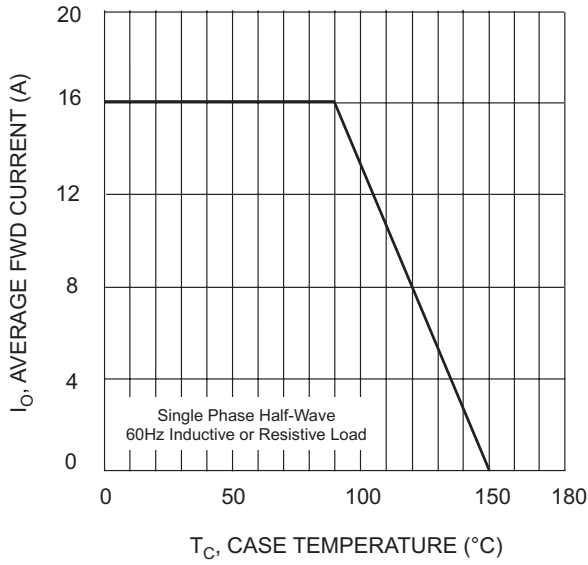
TO-220AB		
Dim	Min	Max
A	14.22	15.88
B	9.65	10.67
C	2.54	3.43
D	5.84	6.86
E	—	6.35
G	12.70	14.73
H	2.29	2.79
J	0.51	1.14
K	3.53Ø	4.09Ø
L	3.56	4.83
M	1.14	1.40
N	0.30	0.64
P	2.03	2.92
Q	4.83	5.33
All Dimensions in mm		

### Maximum Ratings and Electrical Characteristics

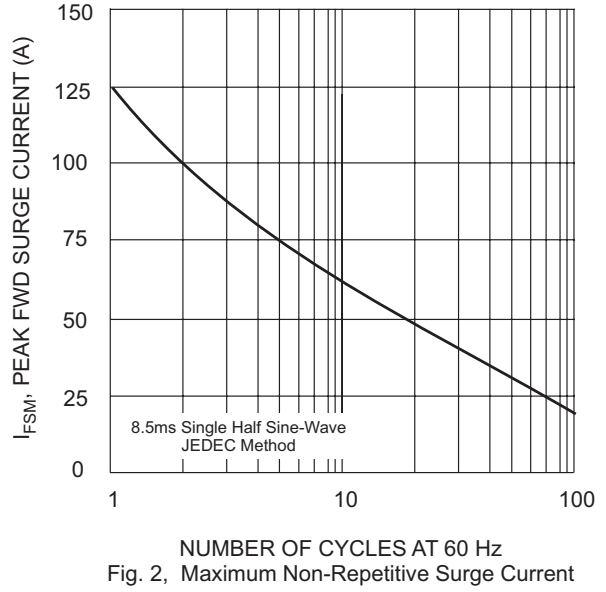
Ratings at 25° C ambient temperature unless otherwise specified.  
Single phase, half wave, 60Hz, resistive or inductive load.

Characteristic	Symbol	SF161	SF162	SF163	SF164	Unit
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	150	200	V
Maximum RMS Voltage	$V_{RMS}$	35	70	105	140	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	150	200	V
Maximum Average Forward Rectified Current Total Package @ $T_C = 125^\circ C$	$I_{(AV)}$	16				A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	125				A
Maximum Instantaneous Forward Voltage at 8.0A DC per leg	$V_F$	0.975				V
Maximum DC Reverse Current at Rated DC Blocking Voltage @ $T_A = 25^\circ C$ @ $T_A = 100^\circ C$	$I_R$	10 150				$\mu A$
Typical Thermal Resistance Junction to Case	$R_{\theta JC}$	2				K/W
Maximum Reverse Recovery Time (Note 1)	$T_{rr}$	35				ns
Typical Junction Capacitance (Note 2)	$C_J$	75				pF
Operating and Storage Temperature Range	$T_J, T_{STG}$	-65 to +175				$^\circ C$

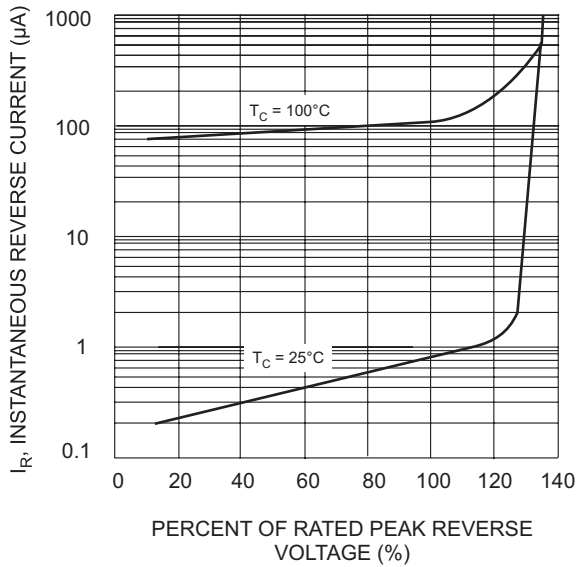
- Notes:
1. Reverse Recovery Test Conditions:  $I_F = 0.5 A$ ,  $I_R = 1.0 A$ ,  $IRR = 0.25A$ .
  2. Measured at 1.0MHz and applied reverse voltage of 4.0V.
  3. EC Directive 2002/95/EC (RoHS) revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied where applicable, see EU Directive Annex Notes 5 and 7.



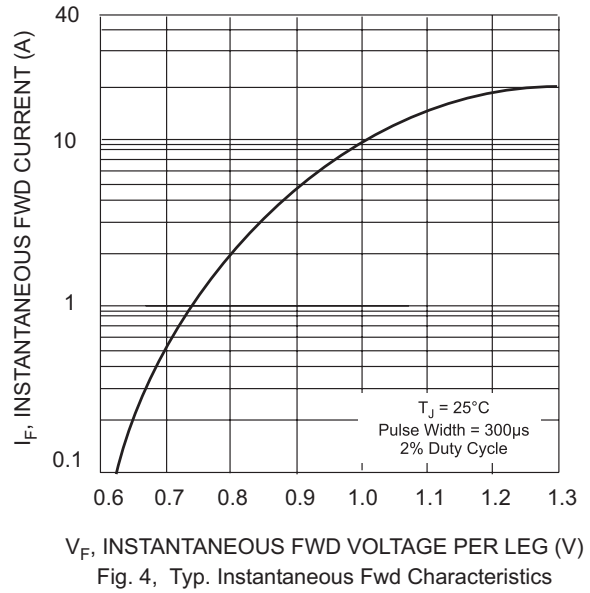
$T_C$ , CASE TEMPERATURE (°C)  
Fig. 1, Forward Current Derating Curve



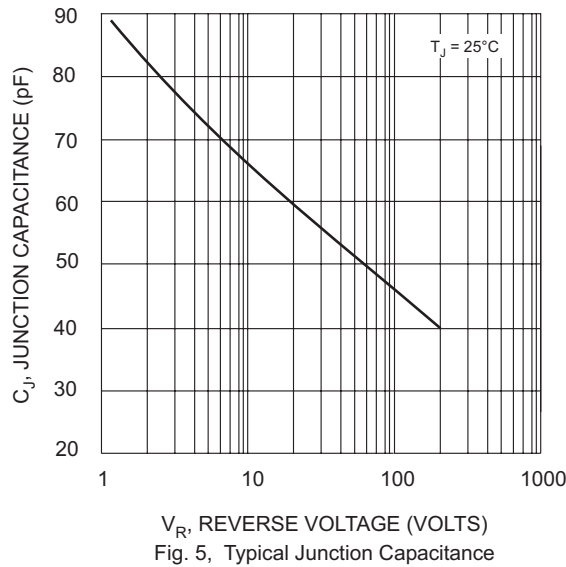
NUMBER OF CYCLES AT 60 Hz  
Fig. 2, Maximum Non-Repetitive Surge Current



PERCENT OF RATED PEAK REVERSE VOLTAGE (%)  
Fig. 3, Typical Reverse Characteristics



$V_F$ , INSTANTANEOUS FWD VOLTAGE PER LEG (V)  
Fig. 4, Typ. Instantaneous Fwd Characteristics



$V_R$ , REVERSE VOLTAGE (VOLTS)  
Fig. 5, Typical Junction Capacitance

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