

**VOLTAGE RANGE: 50V-1000 V**  
**CURRENT: 5.0 A**

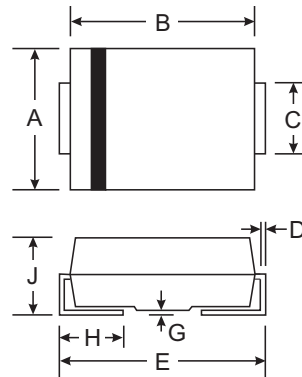
### Features

- Glass Passivated Die Construction
- Fast Recovery Time for High Efficiency  
Low Forward Voltage Drop and High Current Capability
- Ideally Suited for Automatic Assembly
- Plastic Material: UL Flammability
- Classification Rating 94V-0



### Mechanical Data

- Case: SMC(DO-214AB), Molded Plastic
- Terminals: Solder Plated Terminal -
- Solderable per MIL-STD-202, Method 208  
Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Weight: 0.21 grams (approx.)



SMC/DO-214AB		
Dim	Min	Max
A	5.59	6.22
B	6.60	7.11
C	2.75	3.18
D	0.15	0.31
E	7.75	8.13
G	0.10	0.20
H	0.76	1.52
J	2.00	2.62
All Dimensions in mm		

### Maximum Ratings and Electrical Characteristics @ T<sub>A</sub> = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

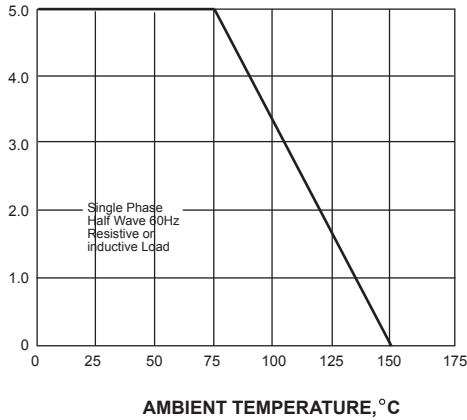
Characteristic	Symbol	FR5A	FR5B	FR5D	FR5G	FR5J	FR5K	FR5M	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	35	70	140	280	420	560	700	V
Average Rectified Output Current @ T <sub>T</sub> = 75°C	I <sub>O</sub>	5.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave Superimposed on Rated Load (JEDEC Method)	I <sub>FSM</sub>	150							A
Forward Voltage @ I <sub>F</sub> = 5.0A	V <sub>FM</sub>	1.3							V
Peak Reverse Current @ T <sub>A</sub> = 25°C at Rated DC Blocking Voltage @ T <sub>A</sub> = 125°C	I <sub>RM</sub>	5.0 100							μA
Maximum Recovery Time (Note 3)	t <sub>rr</sub>	150			250		500		ns
Typical Junction Capacitance (Note 2)	C <sub>j</sub>	78							pF
Typical Thermal Resistance Junction to Terminal (Note 1)	R <sub>θJT</sub>	50							K/W
Operating and Storage Temperature Range	T <sub>j</sub> , T <sub>STG</sub>	-65 to +150							°C

- Notes:
1. Thermal resistance: junction to terminal, unit mounted on PC board with 5.0 mm<sup>2</sup> (0.013 mm thick) copper pad as heat sink.
  2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
  3. Reverse recovery test conditions: I<sub>F</sub> = 0.5A, I<sub>R</sub> = 1.0A, I<sub>rr</sub> = 0.25A. See figure 5.

## RATINGS AND CHARACTERISTIC CURVES FR5A THRU FR5M

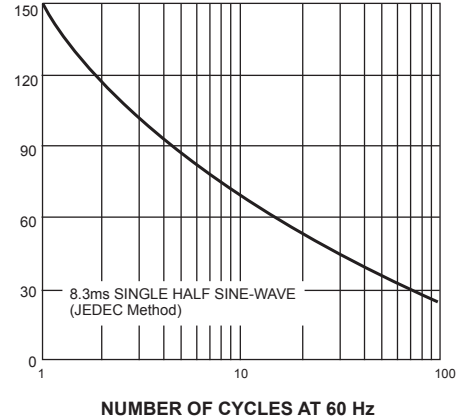
AVERAGE FORWARD RECTIFIED CURRENT,  
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



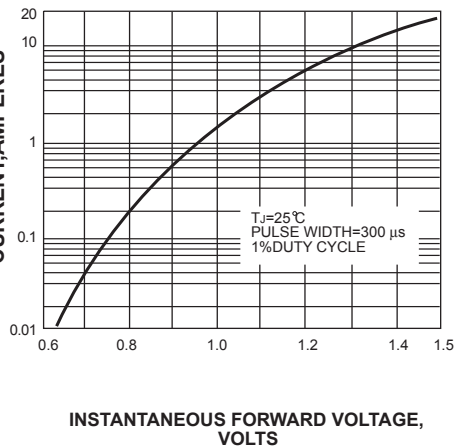
PEAK FORWARD SURGE CURRENT,  
AMPERES

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



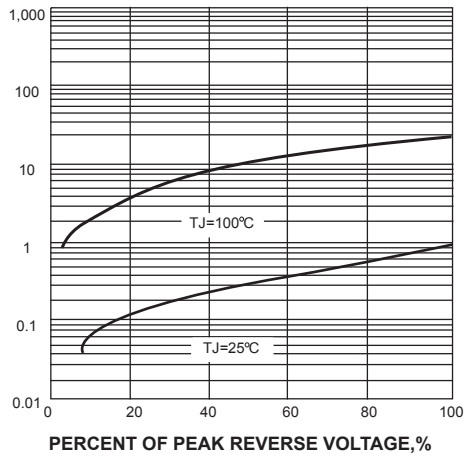
INSTANTANEOUS FORWARD CURRENT,AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



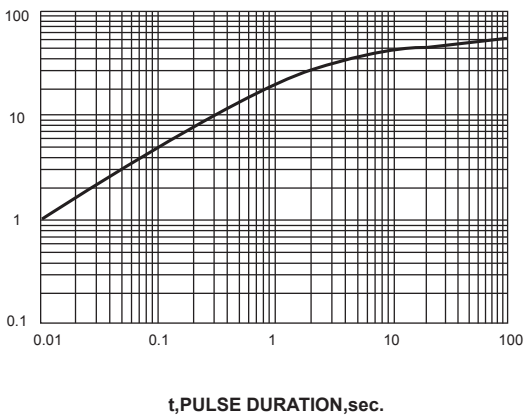
INSTANTANEOUS REVERSE CURRENT,  
MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



TRANSIENT THERMAL IMPEDANCE,  
°C/W

FIG. 5-TYPICAL TRANSIENT THERMAL IMPEDANCE



TRANSIENT THERMAL IMPEDANCE,  
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

