

## General Purpose Surface Mount Rectifiers

**Reverse Voltage: 50 to 1000V**  
**Forward Current: 5.0 Amp**

### Features

- Low profile package
- For surface mounted applications
- Glass passivated chip junction
- High forward surge capability
- High temperature soldering guaranteed  
260°C/10 seconds at terminals

### Mechanical Data

- **Package:** DO-214AB (SMC)  
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals:** Tin plated leads, solderable per MIL-STD-750, Method 2026
- **Polarity:** Cathode line denotes the cathode end

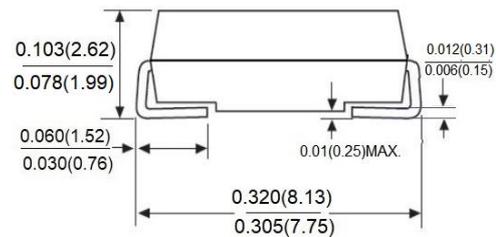
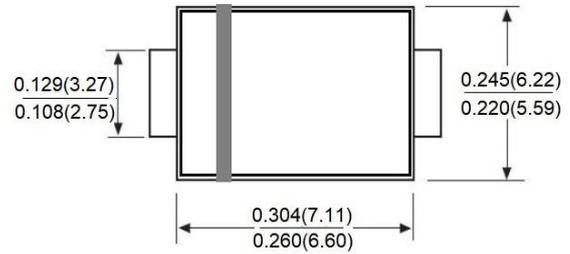
### Typical Applications

For use in general purpose rectification of power supplies, inverters, converters, and freewheeling diodes for consumer and telecommunication.

### DO-214AB (SMC)

RoHS  
COMPLIANT

HALOGEN  
FREE



Package Outline Dimensions in Inches (Millimeters)

### 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%.

Parameter&Test Conditions	SYM.	S5A	S5B	S5D	S5G	S5J	S5K	S5M	Unit	
Device marking code		S5A	S5B	S5D	S5G	S5J	S5K	S5M		
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V	
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V	
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V	
Average rectified output current @60Hz sine wave, Resistance load, TL (FIG.1)	I <sub>O(AV)</sub>	5.0								A
Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed On Rated Load	I <sub>FSM</sub>	150								A
Maximum Thermal Resistance, Junction To Ambient (Note1)	R <sub>θJA</sub>	48								°C/W
Operating junction and storage temperature range	T <sub>j</sub> , T <sub>STG</sub>	-55 to +150								°C

### Electrical Characteristics (Ta=25°C Unless otherwise specified)

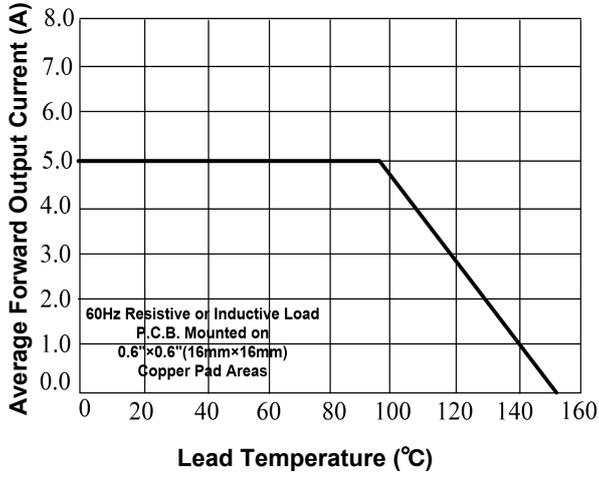
Parameter&Test Conditions	SYM.	S5A	S5B	S5D	S5G	S5J	S5K	S5M	Unit	
Maximum Instantaneous Forward Voltage IFM =5A	V <sub>FM</sub>	1.1								V
Maximum DC reverse current at rated DC blocking voltage	TA = 25°C	5								μA
	TA = 125°C	200								
Typical junction capacitance(Note2)	C <sub>J</sub>	45								pF

#### Notes:

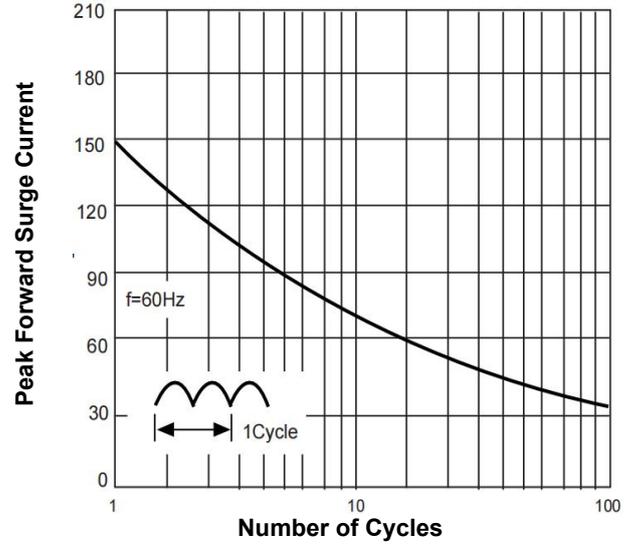
1. Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.6" x 0.6" (16 mm x 16 mm) copper pad area.
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
3. The typical data above is for reference only.

**Rating and Characteristic Curves**

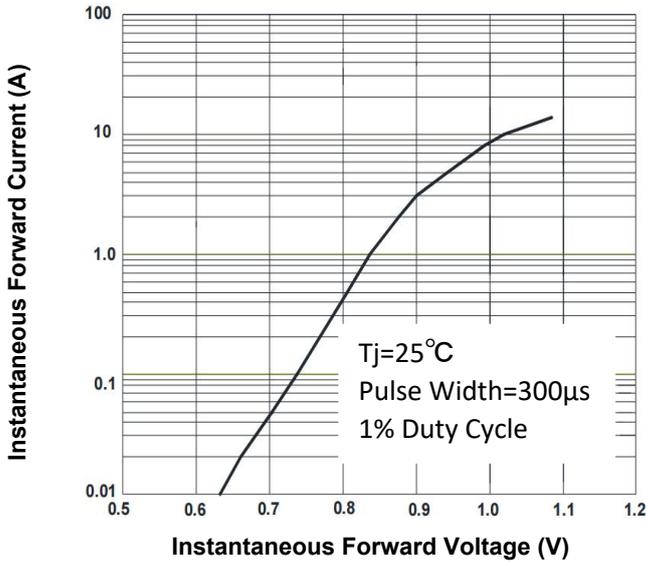
**FIG. 1- DERATING CURVE OUTPUT RECTIFIED**



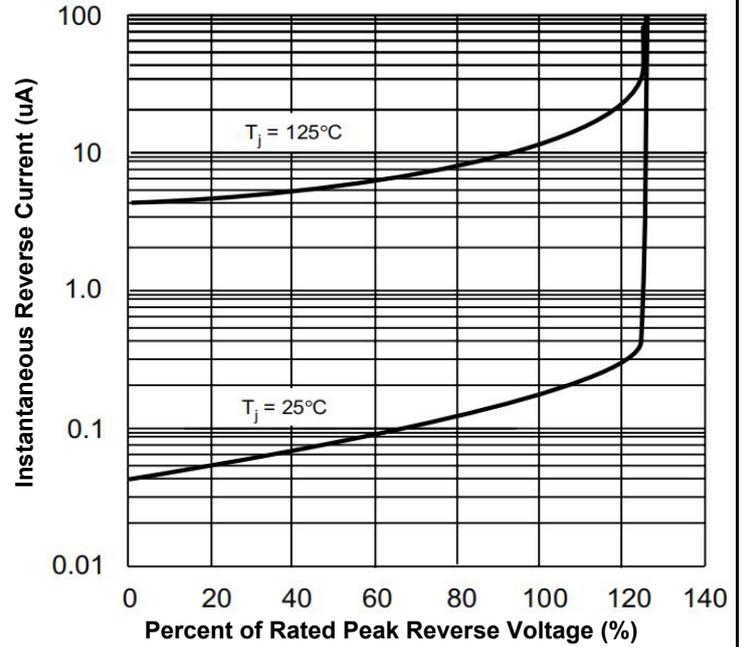
**FIG. 2- -MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG**



**FIG. 3- TYPICAL FORWARD VOLTAGE**

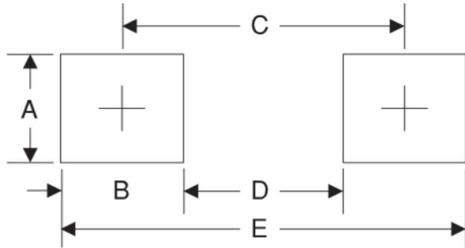


**FIG. 4- TYPICAL REVERSE LEAKAGE**



The curve above is for reference only.

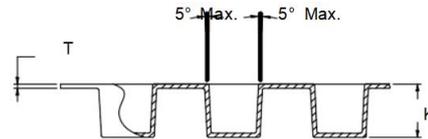
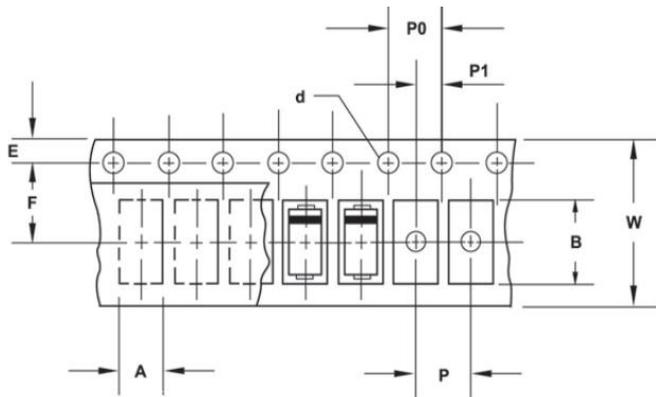
**Recommended Pad Layout**



SYMBOL	Millimeters
A	3.80
B	3.00
C	6.90
D	3.80
E	9.90

**Package Information**

**Carrier Dimension(mm)**



W	F	d	E
16.0	7.5	∅ 1.55	1.75
A	B	K	T
6.15	8.45	2.54	0.25
P0	P1	P	Tolerance
4.0	2.0	8.0	0.10

**Package Specifications**

Package	Reel Size	Reel DIA. (mm)	Q'TY/Reel (Kpcs)	Box Size (mm)	QTY/Box (Kpcs)	Carton Size (mm)	Q'TY/Carton (Kpcs)
SMC	13'	330	3	340	6	365*355*370	42
	13'	330	3	340	6	360*360*360	48

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