



**ES3A THRU ES3M**

**SURFACE MOUNT RECTIFIER**

50V-1000V 3.0A

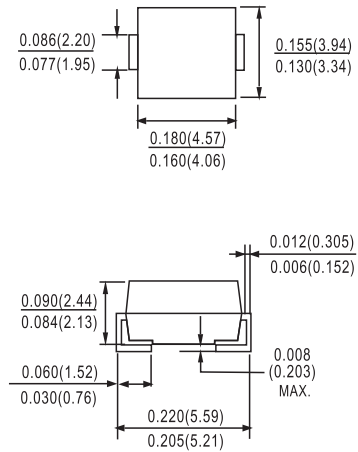
**FEATURES**

- Low cost
- Low leakage
- Low forward voltage drop
- High current capability
- Easily cleaned with Alcohol, Isopropanol and similar solvents
- The plastic material carries U/L recognition 94V-0

**MECHANICAL DATA**

Case: JEDEC DO-214AA, molded plastic  
 Terminals: Solderable per MIL- STD-202, Method 208  
 Polarity: Color band denotes cathode  
 Weight: 0.007 ounces, 0.21 grams  
 Mounting position: Any

DO-214AA(SMB)



Dimensions in inches and (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%

CHARACTERISTICS	SYMBOL	ES3A	ES3B	ES3D	ES3G	ES3J	ES3K	ES3M	UNIT
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
Maximum Average Forward Rectified Current @T <sub>A</sub> =55 °C	I <sub>(AV)</sub>	3.0							A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load(JEDEC Method)	I <sub>FSM</sub>	125							A
Peak Forward Voltage at 3.0A DC	V <sub>F</sub>	0.95		1.25		1.70			V
Maximum DC Reverse Current at Rated DC Blocking Voltage @T <sub>J</sub> =25°C @T <sub>J</sub> =100°C	I <sub>R</sub>	5.0 100							μA
Maximum Reverse Recovery Time(Note 1)	T <sub>RR</sub>	35							nS
Typical Junction Capacitance (Note2)	C <sub>J</sub>	70				45			pF
Typical Thermal Resistance (Note3)	R <sub>JA</sub>	20							°C/W
Operating Temperature Range	T <sub>J</sub>	-55 to +150							°C
Storage Temperature Range	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

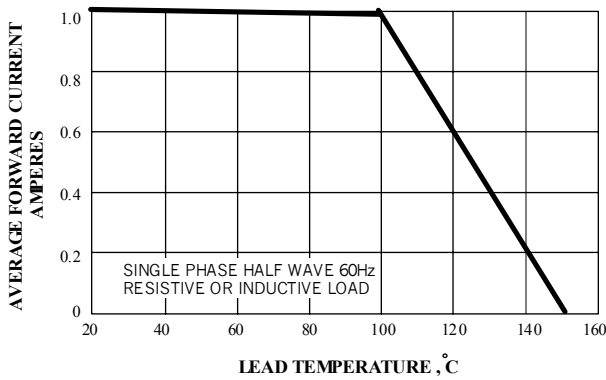
2.Measured at 1.0 MHz and applied reverse voltage of 4.0V DC

3.Thermal resistance junction to ambient.

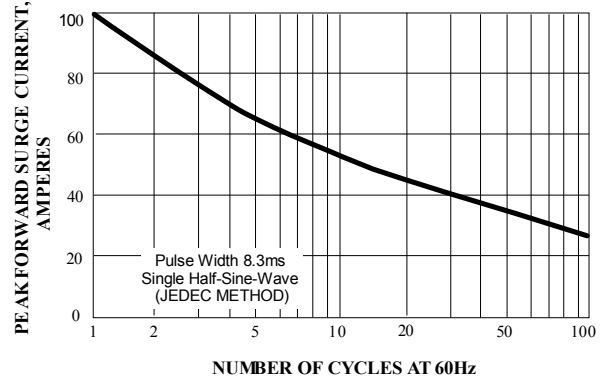


**RATINGS AND CHARACTERISTIC CURVES ES3A THRU ES3M**

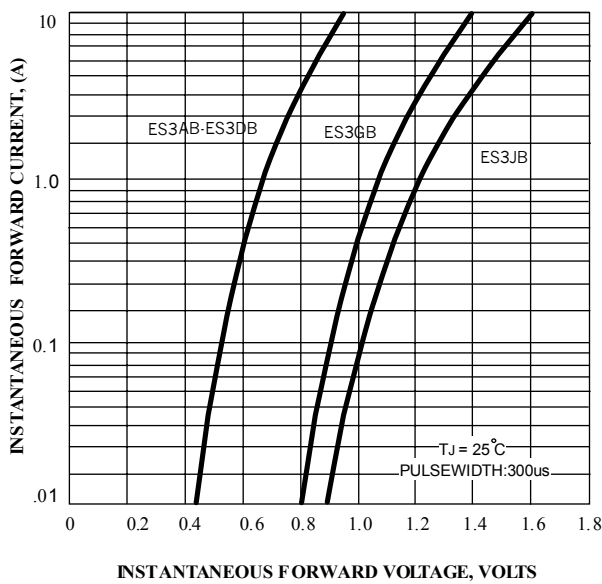
**FIG.1 - FORWARD CURRENT DERATING CURVE**



**FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT**



**FIG.3 - TYPICAL FORWARD CHARACTERISTICS**



**FIG.4 - TYPICAL REVERSE CHARACTERISTICS**

