

ES3A THUR ES3J

ES3A THUR ES3J Super-Fast Surface Mount Rectifiers

General description

Super-Fast Surface Mount Rectifiers
 Reverse Voltage: 50 to 600V
 Forward Current: 3.0A
 SMC/DO214AB package

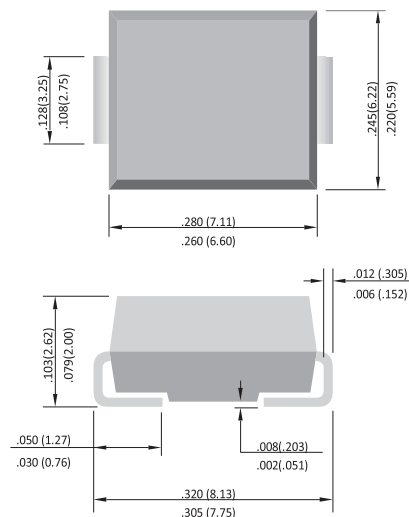
FEATURES

- Low profile package
- Built-in strain relief
- Easy pick and place
- Superfast recovery times for high efficiency.
- Plastic package has Underwriters Laboratory
- Flammability Classification 94V-O

MECHANICAL DATA

- Case: JEDEC DO-214AB molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750 Method 2026
- Polarity: Indicated by cathode band.
- Weight: 0.007 ounce, 0.25 gram

SMC/DO-214AB



Unit: inch (mm)

Maximum Ratings & Thermal Characteristics (Ratings at 25°C ambient temperature unless otherwise specified.)

Characteristic	Symbol	ES3A	ES3B	ES3C	ES3D	ES3E	ES3G	ES3J	Unit	
Marking Code	Mark	ES3A	ES3B	ES3C	ES3D	ES3E	ES3G	ES3J	N/A	
Peak Repetitive Reverse Voltage	V _{RRM}									
Working Peak Reverse Voltage	V _{RWM}	50	100	150	200	300	400	600	V	
DC Blocking Voltage	V _R									
RMS Reverse Voltage	V _{R(RMS)}	35	70	105	140	210	280	420	V	
Average Rectified Output Current @T _L = 75°C	I _o	3.0								A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	100								A
Forward Voltage @I _F = 3.0A	V _{FM}	0.95				1.25		1.7	V	
Peak Reverse Current @T _A = 25°C	I _{RM}	5.0								µA
At Rated DC Blocking Voltage @T _A = 100°C		500								
Reverse Recovery Time (Note 1)	t _{rr}	35								nS
Typical Junction Capacitance (Note 2)	C _j	45								pF
Typical Thermal Resistance (Note 3)	R _{JL}	47								°C/W
Operating and Storage Temperature Range	T _j , T _{STG}	-55 to +150								°C

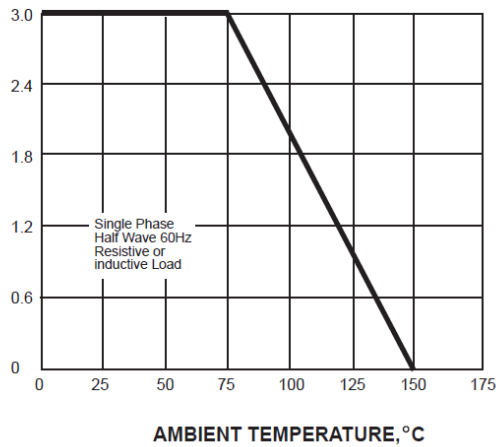
Note:1.Reverse recovery condition I_F=0.5A,I_R=1.0A,I_{rr}=0.25A

2.Measured at 1MHz and applied reverse voltage of 4.0V D.C.

RATING AND CHARACTERISTIC CURVES

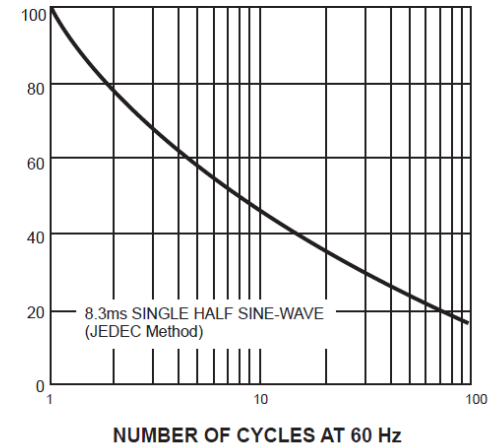
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



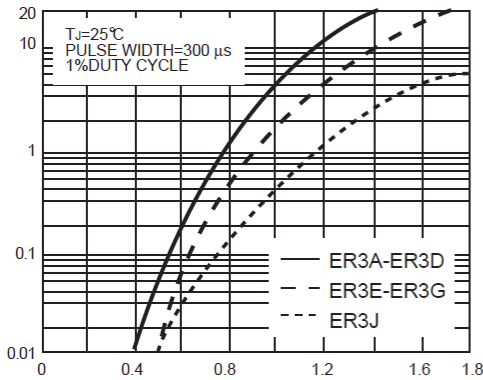
PEAK FORWARD SURGE CURRENT, AMPERES

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



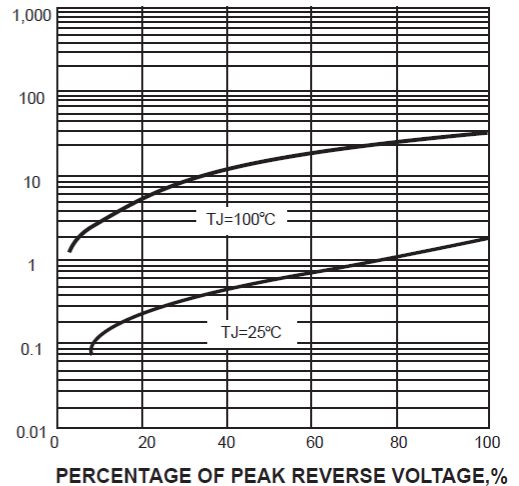
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



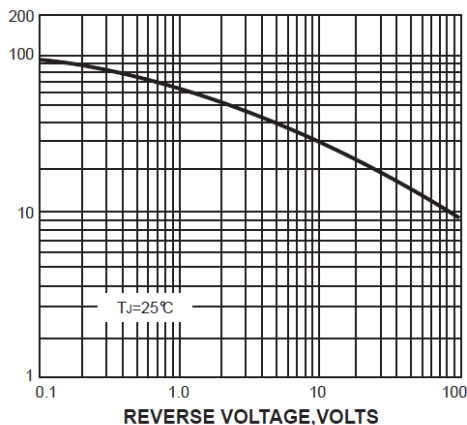
INSTANTANEOUS REVERSE CURRENT, MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



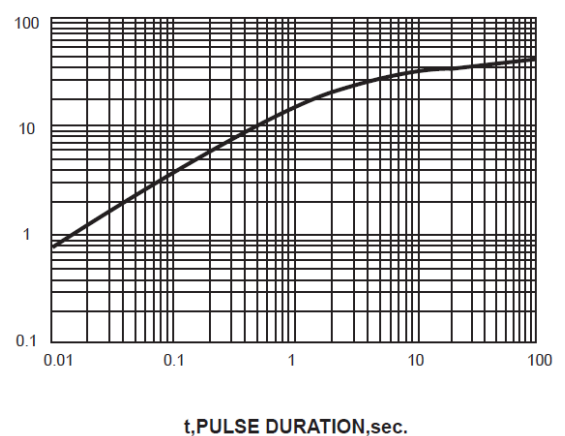
JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



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