

ES3A THUR ES3J

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General description

Super Fast Surface Mount Rectifiers

Reverse Voltage : 50 to 600V

Forward Current:3.0A

SMC/DO214AB package

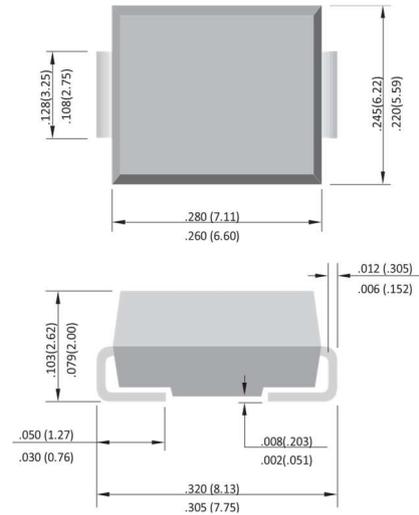
FEATURES

- 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
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 IF=0.5A,IR=1.0A,Irr=0.25A

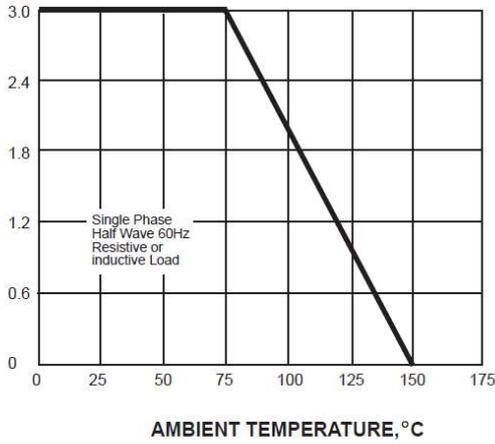
2.Measured at 1MHz and applied reverse voltage of 4.0V D.C.

3.P.C.B. mounted with 0.2x0.2"(5.0x5.0mm) copper pad areas

RATING AND CHARACTERISTIC CURVES

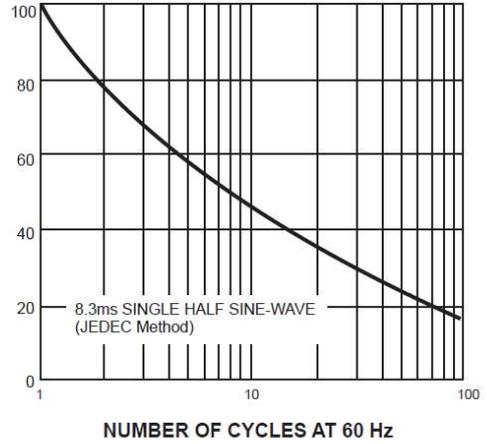
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



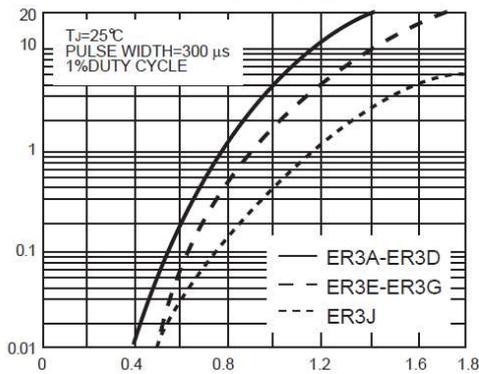
PEAK FORWARD SURGE CURRENT, AMPERES

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



INSTANTANEOUS FORWARD CURRENT, AMPERES

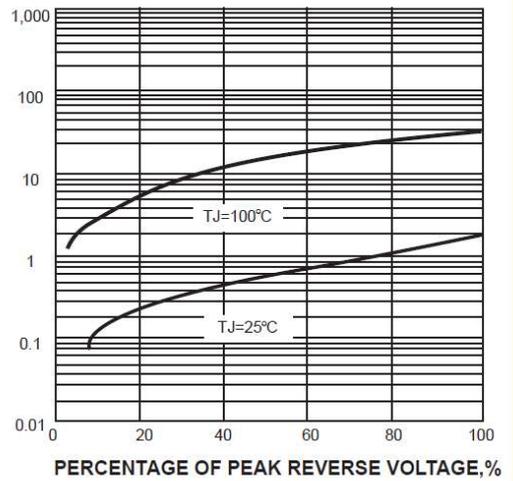
FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS FORWARD VOLTAGE, VOLTS

INSTANTANEOUS REVERSE CURRENT, MICROAMPERES

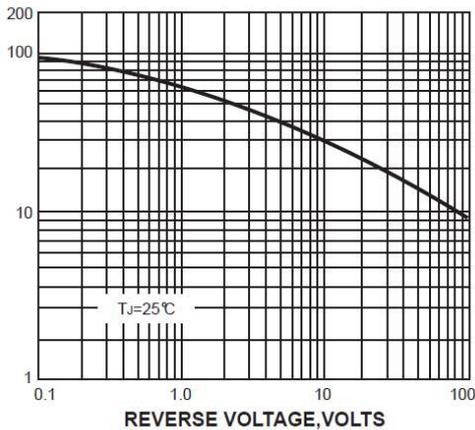
FIG. 4-TYPICAL REVERSE CHARACTERISTICS



INSTANTANEOUS FORWARD CURRENT

JUNCTION CAPACITANCE, pF

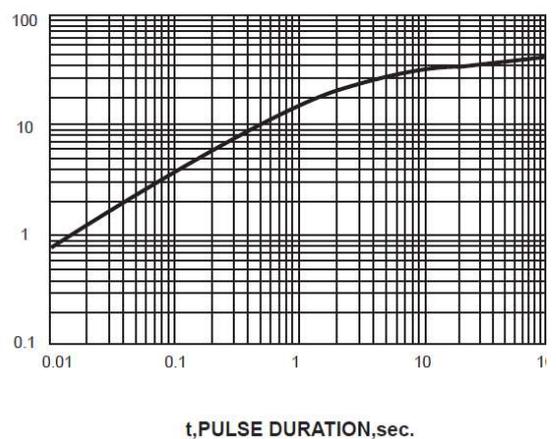
FIG. 5-TYPICAL JUNCTION CAPACITANCE



REVERSE VOLTAGE, VOLTS

TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



t,PULSE DURATION,sec.

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