



# ES3A THRU ES3J

## 3.0 AMP SURFACE MOUNT SUPER FAST RECTIFIERS

### FEATURES

- \* Ideal for surface mount applications
- \* Easy pick and place
- \* Built-in strain relief
- \* Low forward voltage drop

### MECHANICAL DATA

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Metallurgically bonded construction
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any
- \* Weight: 0.093 grams

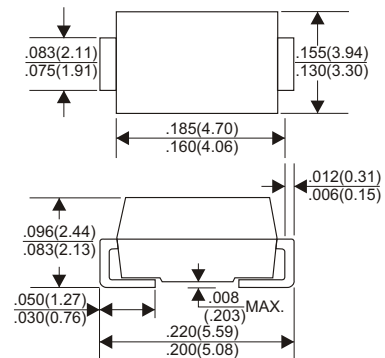
### VOLTAGE RANGE

50 to 600 Volts

### CURRENT

3.0 Amperes

#### DO-214AA(SMB)



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature unless otherwise specified.  
 Single phase half wave, 60Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%.

TYPE NUMBER	ES3A	ES3B	ES3C	ES3D	ES3E	ES3G	ES3J	UNITS	
Maximum Recurrent Peak Reverse Voltage	50	100	150	200	300	400	600	V	
Maximum RMS Voltage	35	70	105	140	210	280	420	V	
Maximum DC Blocking Voltage	50	100	150	200	300	400	600	V	
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length at Ta=55°C								3.0	A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)								80	A
Maximum Instantaneous Forward Voltage at 2.0A	1.0					1.4	1.7	V	
Maximum DC Reverse Current Ta=25°C								5.0	uA
at Rated DC Blocking Voltage Ta=100°C								50	uA
Maximum Reverse Recovery Time (Note 1)								35	nS
Typical Junction Capacitance (Note 2)								60	pF
Operating and Storage Temperature Range Tj, Tstg								-65 — +150	°C

#### NOTES:

1. Reverse Recovery Time test condition: IF=0.5A, IR=1.0A, IRR=0.25A
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

## RATING AND CHARACTERISTIC CURVES (ES3A THRU ES3J)

FIG.1- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm, 22pF.  
2. Rise Time= 10ns max., Source Impedance= 50 ohms.



FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

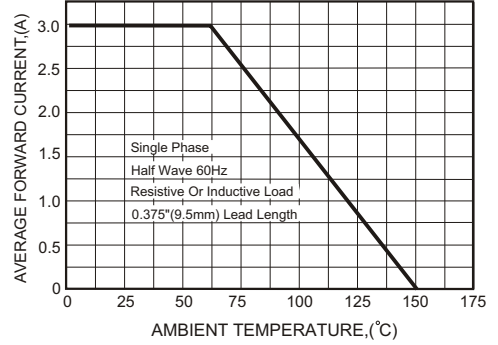


FIG.3-TYPICAL FORWARD CHARACTERISTICS

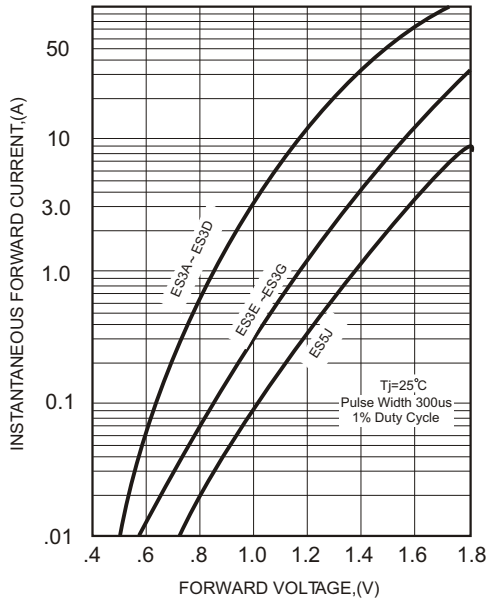


FIG.4-TYPICAL REVERSE CHARACTERISTICS

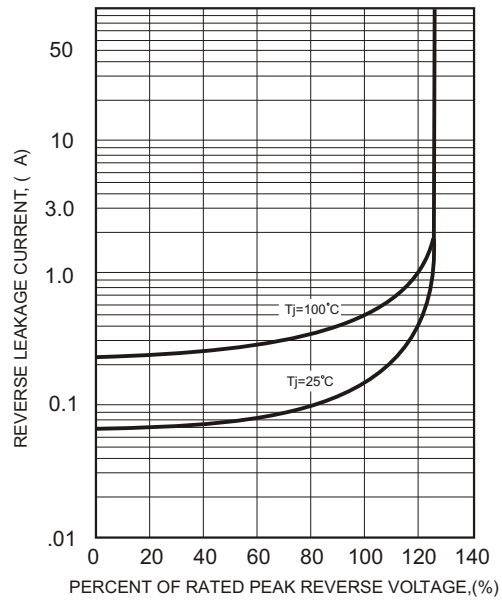


FIG.5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

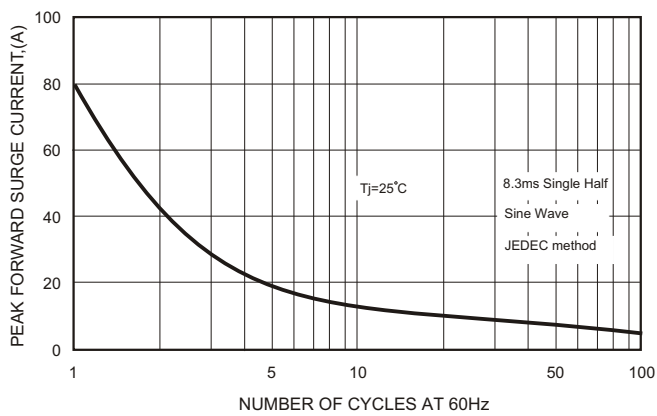
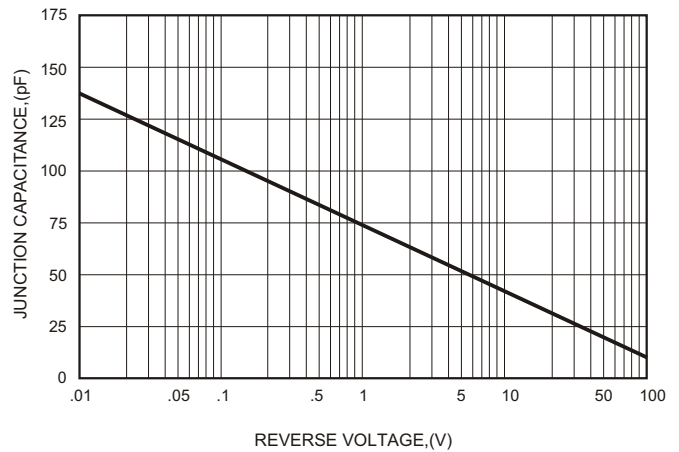


FIG.6-TYPICAL JUNCTION CAPACITANCE



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