

# MSKSEMI

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

Product data sheet

[www.msksemi.com](http://www.msksemi.com)

## VOLTAGE RANGE

50 to 600 Volts

## CURRENT

2.0 Amperes



SMB

## 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

## 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%.

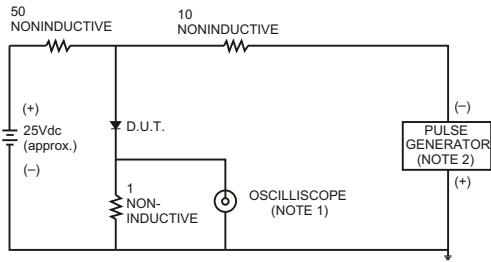
P/N(MARK)	ES2AB	ES2BB	ES2CB	ES2DB	ES2EB	ES2GB	ES2JB	UNITS	
Maximum Recurrent Peak Reverse Voltage	50	100	150	200	300	400	600	V	
Maximum RMS Voltage	35	70	105	140	210	280	420	V	
Maximum DC Blocking Voltage	50	100	150	200	300	400	600	V	
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length at Ta=55°C								2.0	A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)								60	A
Maximum Instantaneous Forward Voltage at 2.0A	0.95				1.25	1.70		V	
Maximum DC Reverse Current Ta=25°C								5.0	μA
at Rated DC Blocking Voltage Ta=100°C								500	μA
Maximum Reverse Recovery Time (Note 1)								35	nS
Typical Junction Capacitance (Note 2)								60	pF
Operating and Storage Temperature Range T <sub>J</sub> , T <sub>STG</sub>								-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 (ES2AB THRU ES2JB)

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.

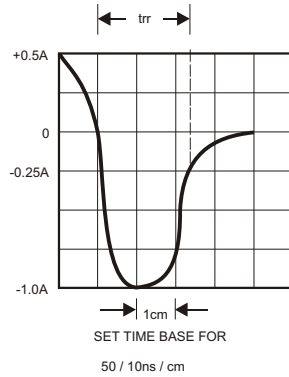


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

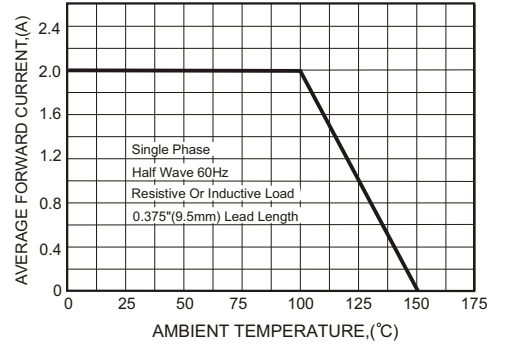


FIG.3-TYPICAL FORWARD CHARACTERISTICS

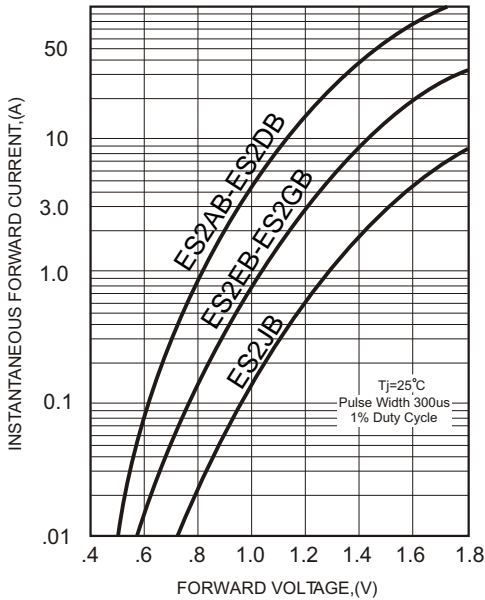


FIG.4-TYPICAL REVERSE CHARACTERISTICS

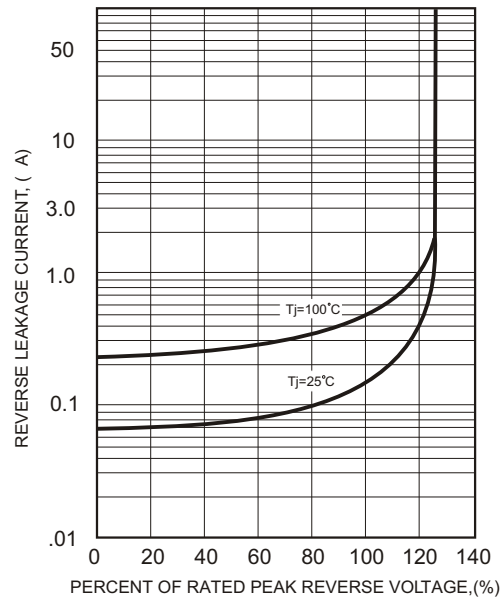


FIG.5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

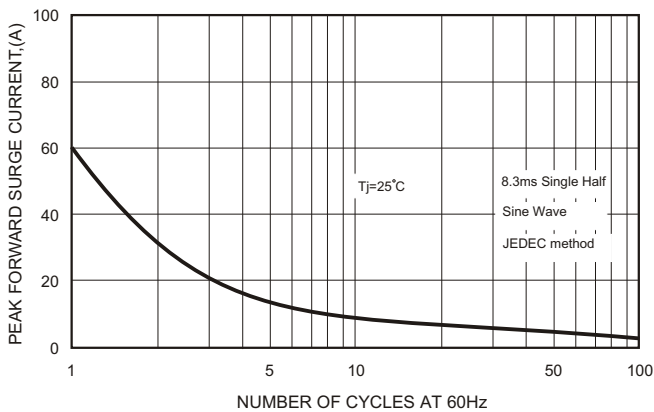
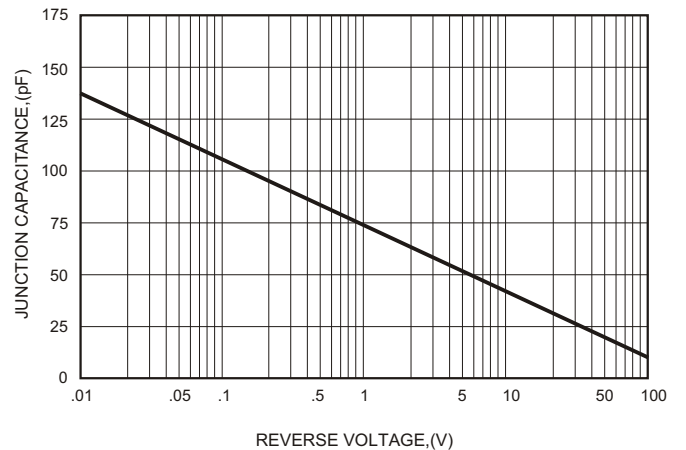
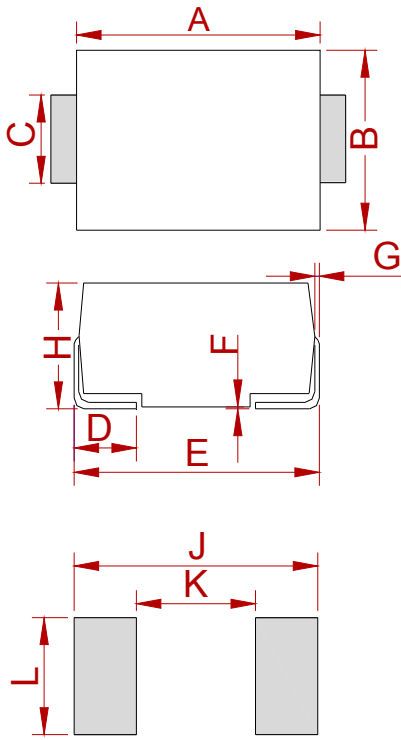


FIG.6-TYPICAL JUNCTION CAPACITANCE



**PACKAGE MECHANICAL DATA**



DO-214AA (SMB)

Ref.	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	4.25	4.75	0.167	0.187
B	3.30	3.94	0.130	0.155
C	1.85	2.21	0.073	0.087
D	0.76	1.52	0.030	0.060
E	5.08	5.59	0.200	0.220
F	0.051	0.203	0.002	0.008
G	0.15	0.31	0.006	0.012
H	2.11	2.44	0.083	0.096
J	6.80		0.270	
K		2.60		0.100
L	2.40		0.090	

**REEL SPECIFICATION**

P/N	PKG	QTY
ES2AB THRU ES2JB	SMB	3000

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