

SURFACE MOUNT SUPER FAST RECTIFIERS

REVERSE VOLTAGE - **50** to **400** Volts
FORWARD CURRENT - **1.0** Ampere

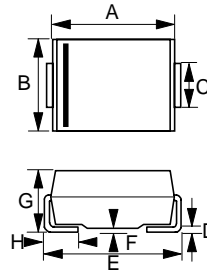
FEATURES

- Glass passivated chip
- Super fast switching for high efficiency
- For surface mounted applications
- Low forward voltage drop and high current capability
- Low reverse leakage current
- Plastic material has UL flammability classification 94V-0

MECHANICAL DATA

- Case : Molded plastic
- Polarity : Indicated by cathode band
- Weight : 0.003 ounces, 0.093 grams

SMB



SMB		
DIM.	MIN.	MAX.
A	4.06	4.57
B	3.30	3.94
C	1.96	2.21
D	0.15	0.31
E	5.21	5.59
F	0.05	0.20
G	2.01	2.62
H	0.76	1.52

All Dimensions in millimeter

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings 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	ES1A	ES1B	ES1C	ES1D	ES1G	ES1J	UNIT
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	150	200	400	600	V
Maximum RMS Voltage	V _{RMS}	35	70	105	140	280	420	V
Maximum DC Blocking Voltage	V _{DC}	50	100	150	200	400	600	V
Maximum Average Forward Rectified Current @TL =110°C	I _(AV)	1.0						A
Peak Forward Surge Current 8.3ms single half sine-wave super imposed on rated load (JEDEC METHOD)	I _{FSM}	30						A
Maximum forward Voltage at 1.0A DC	V _F	0.92				1.25	1.30	V
Maximum DC Reverse Current @T _J =25°C at Rated DC Blocking Voltage @T _J =125°C	I _R	5.0 200						uA
Maximum Reverse Recovery Time (Note 1)	T _{RR}	25					35	ns
Typical Reverse Recovery Time	T _{RR}	20					30	ns
Typical Junction Capacitance (Note 2)	C _J	10						pF
Typical Thermal Resistance (Note 3)	R _{θ JL}	25						°C/W
Operating Temperature Range	T _J	-55 to + 150						°C
Storage Temperature Range	T _{STG}	-55 to + 150						°C

NOTES : 1.Reverse Recovery Test Conditions :IF=0.5A,IR=1.0A,IRR=0.25A.
2.Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
3.Thermal Resistance junction to Lead.

RATING AND CHARACTERISTIC CURVES ES1A thru ES1J

FIG. 1 - FORWARD CURRENT DERATING CURVE

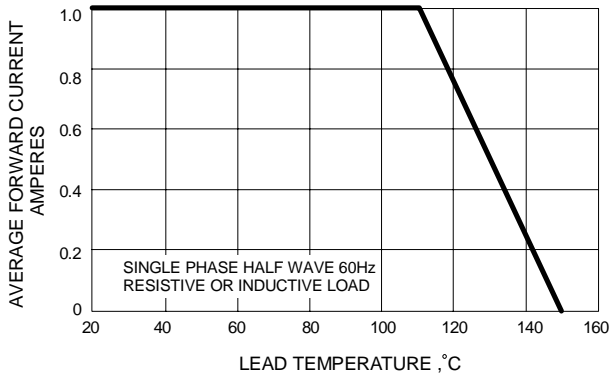


FIG. 2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

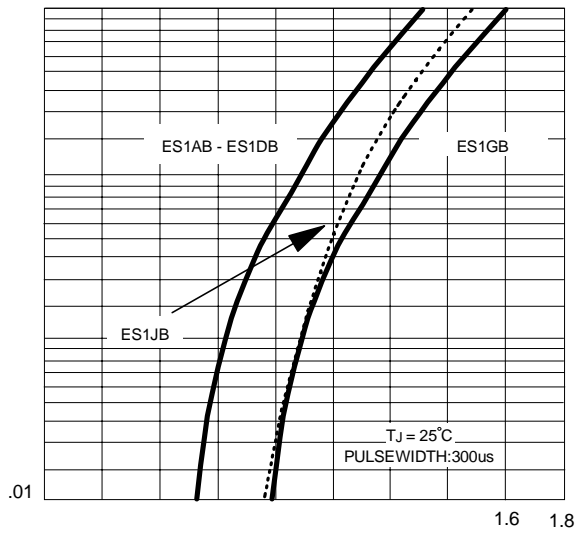
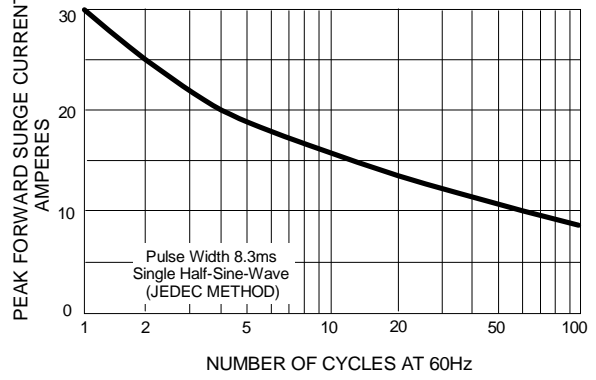


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

