

**SURFACE MOUNT  
SUPER FAST RECTIFIERS**

REVERSE VOLTAGE - **50 to 600** Volts  
FORWARD CURRENT - **1.0** Ampere

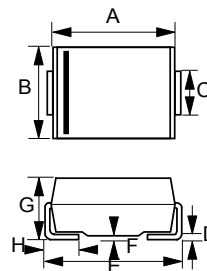
**FEATURES**

- 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	2.50
H	0.76	1.52

All Dimensions in millimeter

Datasheet Directory

**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	ES1AB	ES1BB	ES1CB	ES1DB	ES1GB	ES1JB	UNIT
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	150	200	400	600	V
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	105	140	280	420	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	150	200	400	600	V
Maximum Average Forward Rectified Current @TL =110°C	I <sub>(AV)</sub>	1.0						A
Peak Forward Surge Current 8.3ms single half sine-wave super imposed on rated load (JEDEC METHOD)	I <sub>FSM</sub>	30						A
Maximum forward Voltage at 1.0A DC	V <sub>F</sub>	0.92			1.25		1.30	V
Maximum DC Reverse Current @T <sub>J</sub> =25°C at Rated DC Blocking Voltage @T <sub>J</sub> =125°C	I <sub>R</sub>	5.0 200						uA
Maximum Reverse Recovery Time (Note 1)	T <sub>RR</sub>	25					35	ns
Typical Reverse Recovery Time	T <sub>RR</sub>	20					30	ns
Typical Junction Capacitance (Note 2)	C <sub>J</sub>	20						pF
Typical Thermal Resistance (Note 3)	R <sub>θ J-L</sub>	25						°C/W
Operating Temperature Range	T <sub>J</sub>	-55 to + 150						°C
Storage Temperature Range	T <sub>STG</sub>	-55 to + 150						°C

NOTES : 1.Reverse Recovery Test Conditions :I<sub>F</sub>=0.5A,I<sub>R</sub>=1.0A,I<sub>RR</sub>=0.25A.  
2.Measured at 1.0MHz and applied reverse voltage of 4.0V DC.  
3.Thermal Resistance junction to Lead.

REV. 2, Apr-2010, KSGB09

