

**SURFACE MOUNT
SUPER FAST RECTIFIERS**

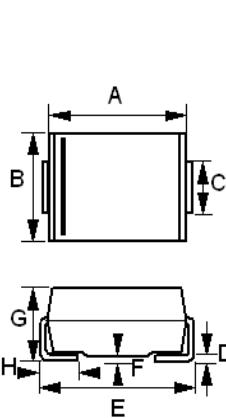
**REVERSE VOLTAGE – 200 Volts
FORWARD CURRENT – 4.0 Amperes**

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: Color band denotes cathode
- Weight: 0.003 ounces, 0.093 grams
- Marking: ES4DB



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

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

CHARACTERISTICS	SYMBOL	ES4DB	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	200	V
Maximum DC Blocking Voltage	V_{DC}	200	V
Maximum Average Forward Rectified Current @ $T_c=105^\circ C$	I_{AV}	4.0	A
Peak Forward Surge 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	150	A
Maximum Forward Voltage at 4.0A DC	V_F	0.95	V
Maximum DC Reverse Current @ $T_j=25^\circ C$ at Rated DC Blocking Voltage @ $T_j=100^\circ C$	I_R	5.0 100	uA
Maximum Reverse Recovery time (IF = 0.5A, IR = 1.0A, IR = 0.25 A)	t_{rr}	40	ns
Typical Junction Capacitance (Note 1)	C_j	80	pF
Typical Thermal Resistance (Note 2, 3)	$R_{\theta JC}$ $R_{\theta JL}$ $R_{\theta JA}$	14 12 45	°C/W
Operating Junction Temperature Range	T_j	-55 to +150	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C

Note: (1) Measured at 1.0MHz and applied reverse voltage of 4.0V DC...

REV.0, Nov-2012, KSGB11

(2) Thermal Resistance Junction to Case, Lead and Ambient.

(3) Unit mounted on 40mm x 40mm x 2mm copper plate.

**RATING AND CHARACTERISTIC CURVES
ES4DB**

LITEON

FIG.1- FORWARD CURRENT DERATING CURVE

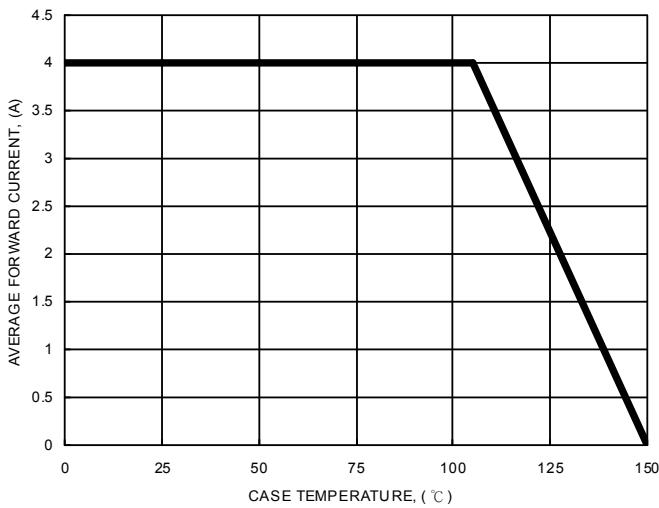


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

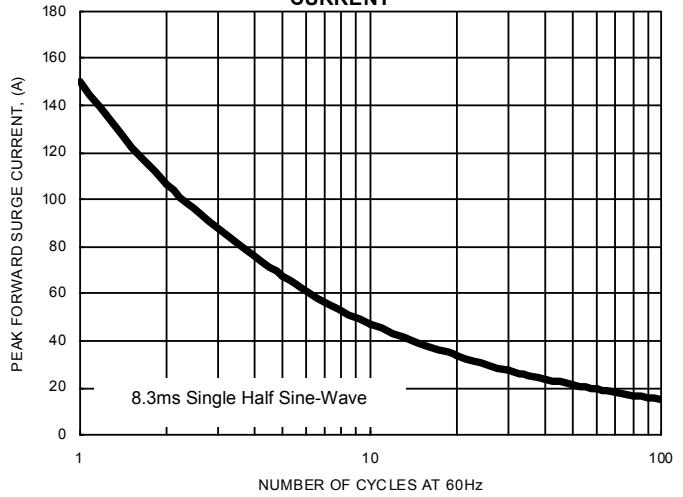


FIG.3- TYPICAL JUNCTION CAPACITANCE

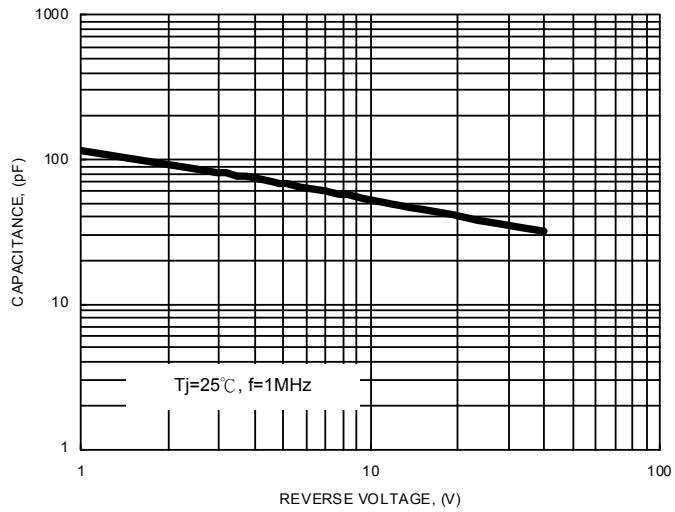


FIG.4- TYPICAL FORWARD CHARACTERISTICS

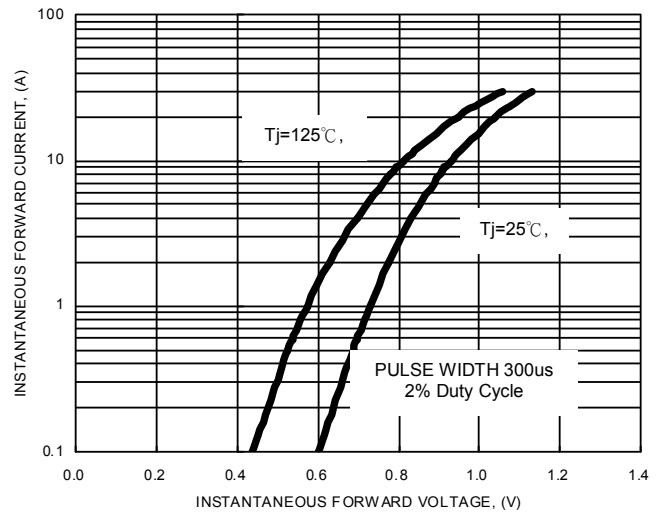
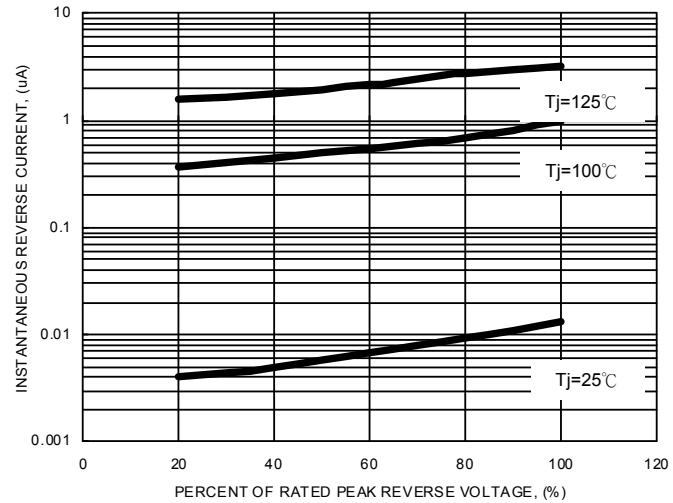


FIG.5- TYPICAL REVERSE CHARACTERISTICS



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