LITE-ON SEMICONDUCTOR

ES2AA thru ES2JA

SURFACE MOUNT
SUPER FAST RECTIFIERS

REVERSE VOLTAGE – 50 to 600 Volts
FORWARD CURRENT – 2.0 Amperes

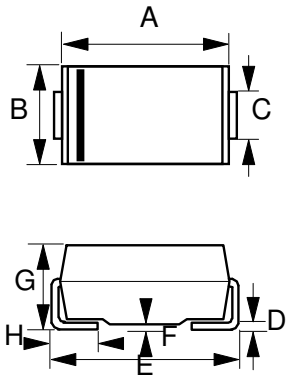
FEATURES

- 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

MECHANICAL DATA

- Case :molded plastic
- Case Material: “Green” molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl.) "Halogen-free"
- Polarity : Indicated by cathode band
- Weight : 0.07grams(Approximate)
- Moisture Sensitivity: Level 1 per J-STD-020C
- Lead free finish, RoHS compliant

SMA



SMA		
DIM	MIN	MAX
A	4.06	4.57
B	2.29	2.92
C	1.27	1.63
D	0.15	0.31
E	4.83	5.59
F	0.05	0.20
G	2.01	2.40
H	0.76	1.52
All dimensions in millimeters		

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

ABSOLUTE RATINGS

MARKING CODE			ES2AA	ES2BA	ES2CA	ES2DA	ES2GA	ES2JA	
PARAMETER		SYMBOL	VALUE						UNIT
Maximum repetitive peak reverse voltage		V_{RRM}	50	100	150	200	400	600	V
Maximum DC blocking voltage		V_{DC}	50	100	150	200	400	600	V
Maximum Average rectified output current	@ T_L= 110°C	$I_{(AV)}$	2.0						A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load.		I_{FSM}	50						A
Operating and Storage temperature range		T_J ,T_{STG}	-55 to +150						°C

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION		SYMBOL	MAX			UNIT
Forward voltage (Note1)	I_F=2A	T_J=25°C	V_F	0.92	1.25	1.30	V
Maximum DC Reverse current at Rated DC Blocking voltage		T_J =25°C T_J =125°C	I_R	5.0 200			uA
Typical junction capacitance (Note 2)			C_j	25			pF

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	TYP		UNIT
Typical thermal resistance (Note3)	$RthJ_L$	20	25	°C/W

DYNAMIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION	SYMBOL	MAX		UNIT
Reverse Recovery Time	I_F=0.5A,I_R=1.0A,I_{rr}=0.25A	T_{rr}	25	35	nS

Note :

(1) 300us pulse width, 2% duty cycle.
(2) Measured at 1.0MHz and applied reverse voltage of 4.0 V_{DC}
(3) Thermal Resistance Junction to Lead

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RATING AND CHARACTERISTIC CURVES
ES2AA thru ES2JA

LITEON

FIG.1- FORWARD CURRENT DERATING CURVE

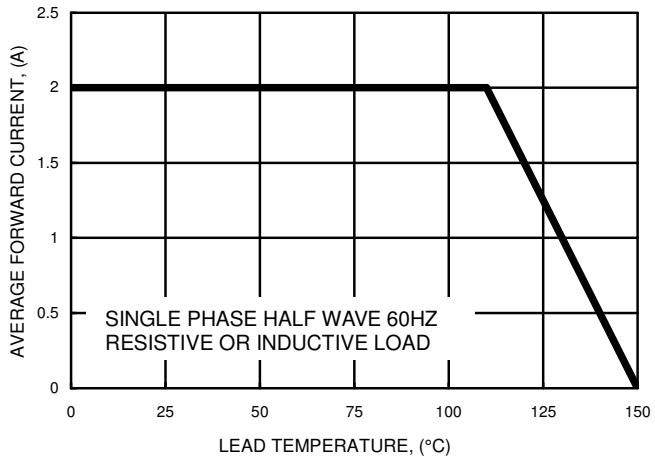


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

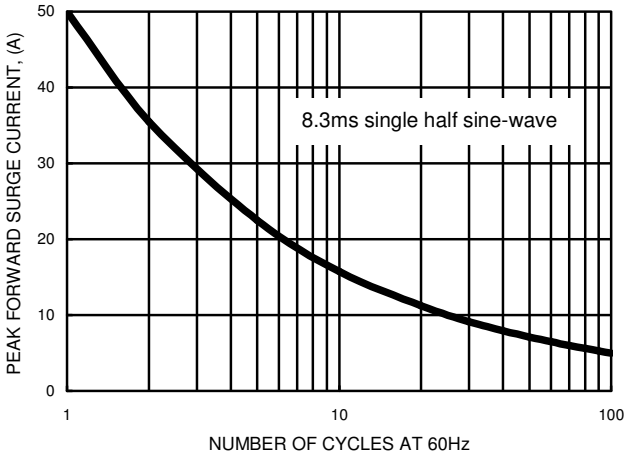


FIG.3- TYPICAL FORWARD CHARACTERISTICS

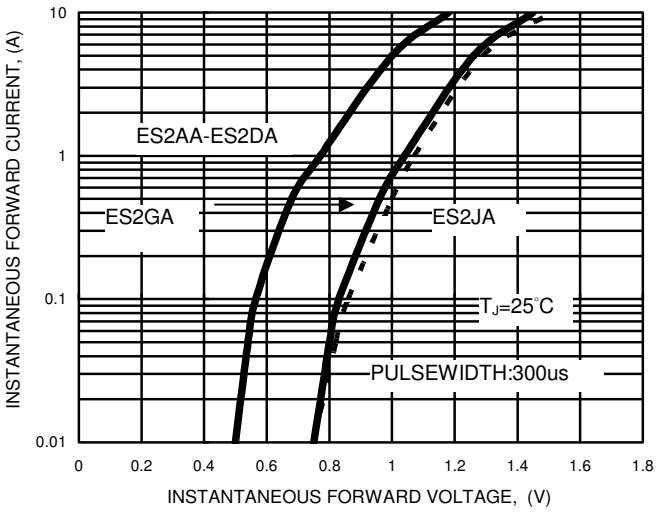
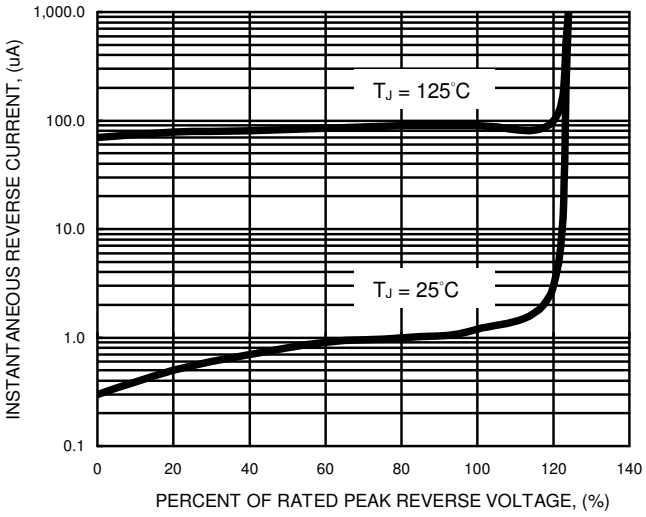


FIG.4- TYPICAL REVERSE CHARACTERISTICS



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