2A, 20V - 150V Schottky Barrier Surface Mount Rectifier

FEATURES

- AEC-Q101 qualified
- Low power loss, high efficiency
- Ideal for automated placement
- Guard ring for overvoltage protection
- High surge current capability
- Moisture sensitivity level: level 1, per J-STD-020
- RoHS Compliant
- Halogen-free according to IEC 61249-2-21

KEY PARAMETERS		
PARAMETER	**VALUE**	**UNIT**
I_F	2	A
V_{RRM}	20 - 150	V
I_{FSM}	50	A
$T_{J\ MAX}$	125, 150	°C
Package	Sub SMA	
Configuration	Single die	

Pb-Free RoHS COMPLIANT HALOGEN FREE

Sub SMA

APPLICATIONS

- Low voltage, high freq. inverter
- DC/DC converter
- Freewheeling diodes
- Reverse battery protection
- Car lighting

MECHANICAL DATA

- Case: Sub SMA
- Molding compound meets UL 94V-0 flammability rating
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 2 whisker test
- Polarity: Indicated by cathode band
- Weight: 0.019g (approximately)

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)

PARAMETER	SYMBOL	SS 22LH	SS 23LH	SS 24LH	SS 25LH	SS 26LH	SS 29LH	SS 210LH	SS 215LH	UNIT
Marking code on the device		22L	23L	24L	25L	26L	29L	20L	2AL	
Repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	90	100	150	V
Reverse voltage, total rms value	$V_{R(RMS)}$	14	21	28	35	42	63	70	105	V
Forward current	I_F	2								A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	50								A
Critical rate of rise of off-state voltage	dV/dt	10,000								V/μs
Junction temperature	T_J	- 55 to +125			- 55 to +150					°C
Storage temperature	T_{STG}	- 55 to +150								°C

THERMAL PERFORMANCE

PARAMETER	SYMBOL	TYP	UNIT
Junction-to-lead thermal resistance	$R_{\Theta JL}$	17	°C/W
Junction-to-ambient thermal resistance	$R_{\Theta JA}$	75	°C/W

ELECTRICAL SPECIFICATIONS (T_A = 25°C unless otherwise noted)

PARAMETER		CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage[1]	SS22LH SS23LH SS24LH	I_F = 2A, T_J = 25°C	V_F	-	0.50	V
	SS25LH SS26LH			-	0.70	V
	SS29LH SS210LH			-	0.85	V
	SS215LH			-	0.95	V
Reverse current @ rated V_R[2]	SS22LH SS23LH SS24LH SS25LH SS26LH	T_J = 25°C	I_R	-	400	μA
	SS29LH SS210LH SS215LH			-	100	μA
	SS22LH SS23LH SS24LH	T_J = 100°C		-	15	mA
	SS25LH SS26LH			-	10	mA
	SS29LH SS210LH SS215LH			-	-	mA
	SS22LH SS23LH SS24LH	T_J = 125°C		-	-	mA
	SS25LH SS26LH			-	-	mA
	SS29LH SS210LH SS215LH			-	5	mA

Notes:

1. Pulse test with PW = 0.3ms
2. Pulse test with PW = 30ms

ORDERING INFORMATION

ORDERING CODE[1]	PACKAGE	PACKING
SS2xLH	Sub SMA	10,000 / Tape & Reel

Notes:

1. "x" defines voltage from 20V(SS22LH) to 150V(SS215LH)

CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

Fig.1 Forward Current Derating Curve

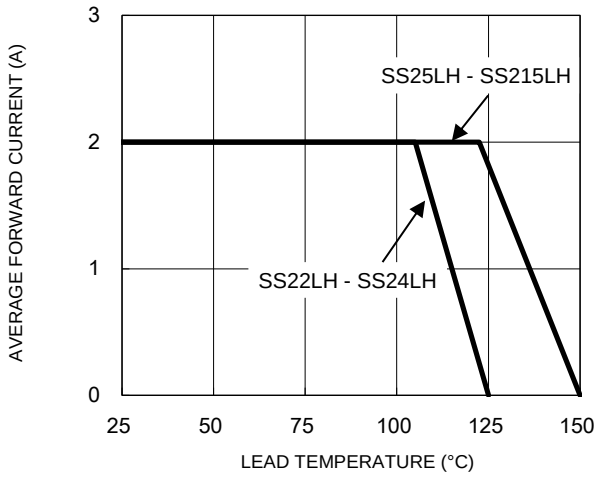


Fig.2 Typical Junction Capacitance

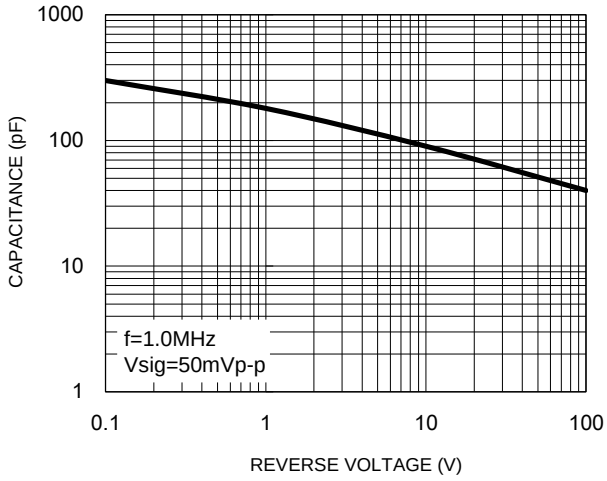


Fig.3 Typical Reverse Characteristics

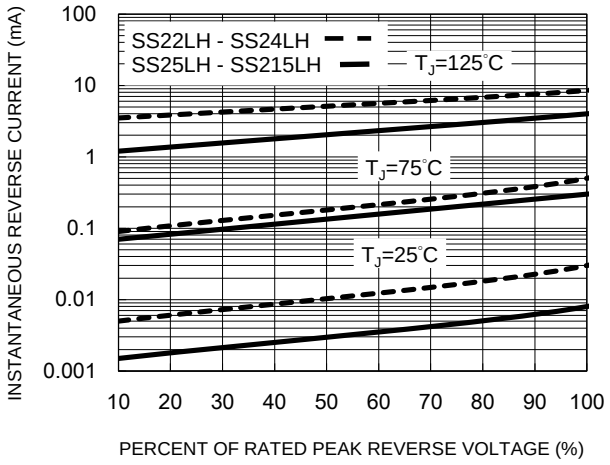


Fig.4 Typical Forward Characteristics

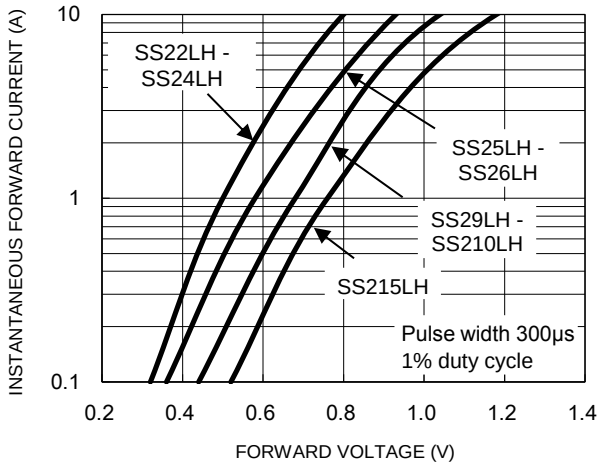
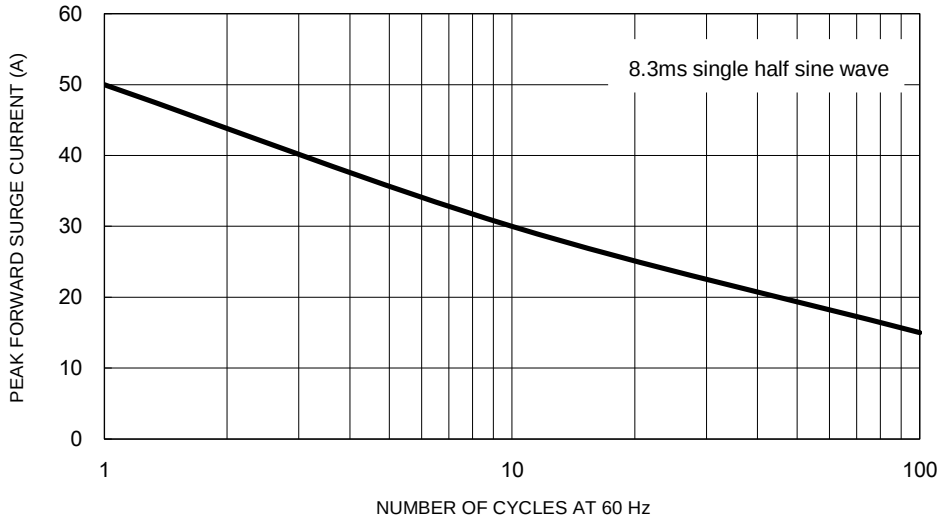


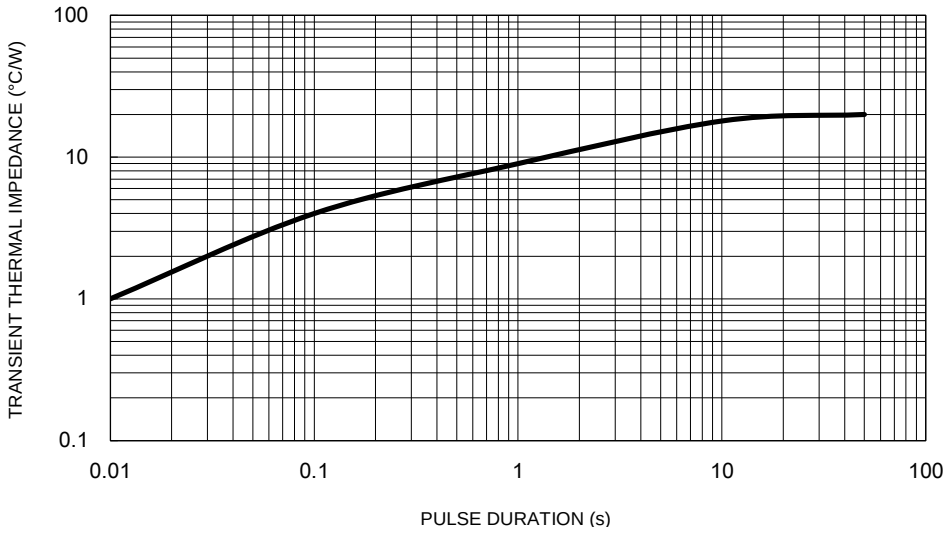
Fig.5 Maximum Non-Repetitive Forward Surge Current



CHARACTERISTICS CURVES

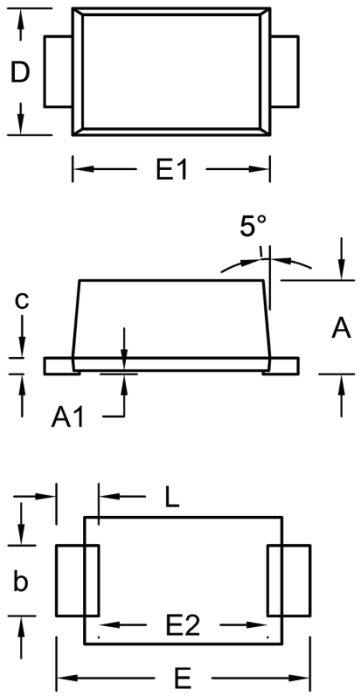
(T_A = 25°C unless otherwise noted)

Fig.6 Typical Transient Thermal Impedance



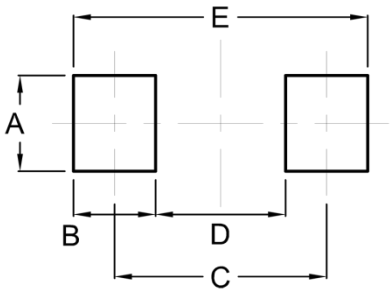
PACKAGE OUTLINE DIMENSIONS

Sub SMA



DIM.	Unit (mm)		Unit (inch)	
	Min.	Max.	Min.	Max.
A	1.23	1.43	0.048	0.056
A1	0.00	0.10	0.000	0.004
b	0.80	1.20	0.031	0.047
c	0.16	0.30	0.006	0.012
D	1.70	1.90	0.067	0.075
E	3.40	3.80	0.134	0.150
E1	2.70	2.90	0.106	0.114
E2	2.45	2.60	0.096	0.102
L	0.35	0.85	0.014	0.033

SUGGESTED PAD LAYOUT



Symbol	Unit (mm)	Unit (inch)
A	1.40	0.055
B	1.20	0.047
C	3.10	0.122
D	1.90	0.075
E	4.30	0.169

MARKING DIAGRAM

P/N = Marking Code
G = Green Compound
YW = Date Code
F = Factory Code

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