

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

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)

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	



Sub SMA



ABSOLUTE MAXIMUM RATINGS (T _A = 25°C unless otherwise noted)										
PARAMETER	SYMBOL	SS 22L H	SS 23L H	SS 24L H	SS 25L H	SS 26L H	SS 29L H	SS 210L H	SS 215L H	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 ($T_A = 25^\circ\text{C}$ unless otherwise noted)

PARAMETER	CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage ⁽¹⁾	SS22LH SS23LH SS24LH	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	I_R	-	400	μA
	SS29LH SS210LH SS215LH		-	100	μA
	SS22LH SS23LH SS24LH		-	15	mA
	SS25LH SS26LH		-	10	mA
	SS29LH SS210LH SS215LH		-	-	mA
	SS22LH SS23LH SS24LH		-	-	mA
	SS25LH SS26LH		-	-	mA
	SS29LH SS210LH SS215LH		-	5	mA
			-	-	mA

Notes:

1. Pulse test with $PW = 0.3\text{ms}$
2. Pulse test with $PW = 30\text{ms}$

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

($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig.1 Forward Current Derating Curve

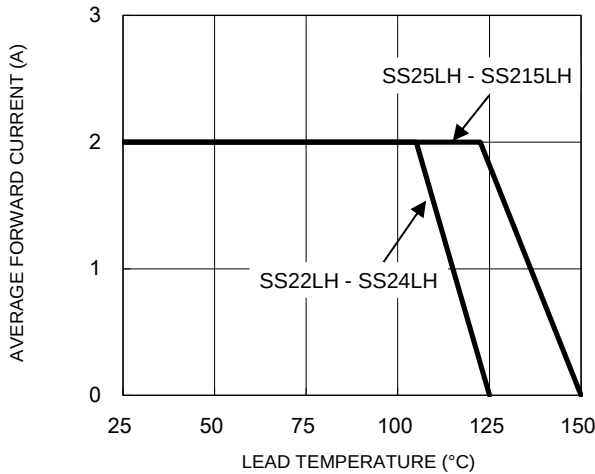


Fig.2 Typical Junction Capacitance

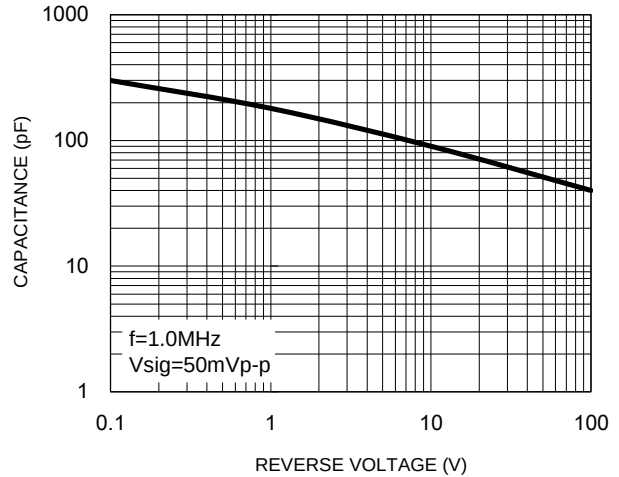


Fig.3 Typical Reverse Characteristics

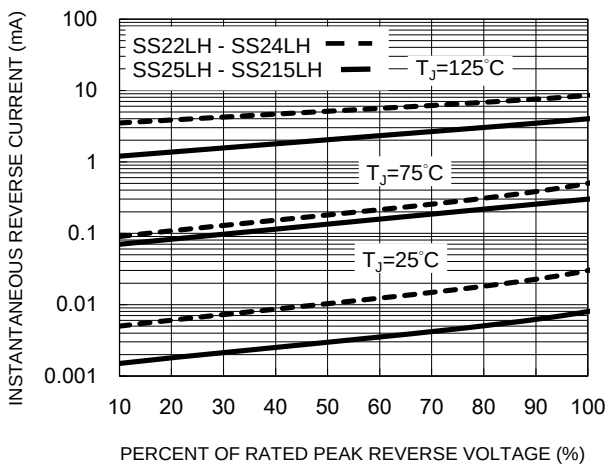


Fig.4 Typical Forward Characteristics

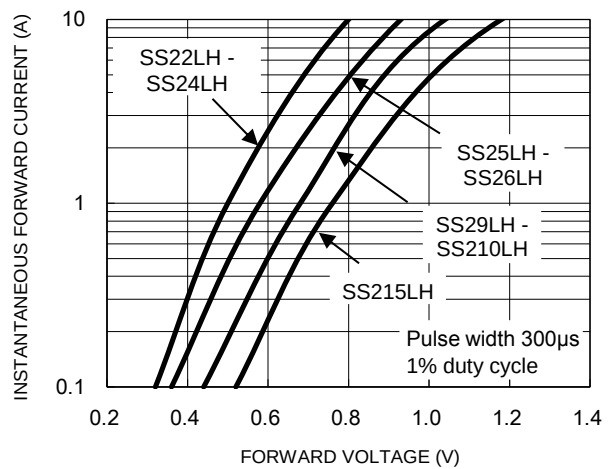


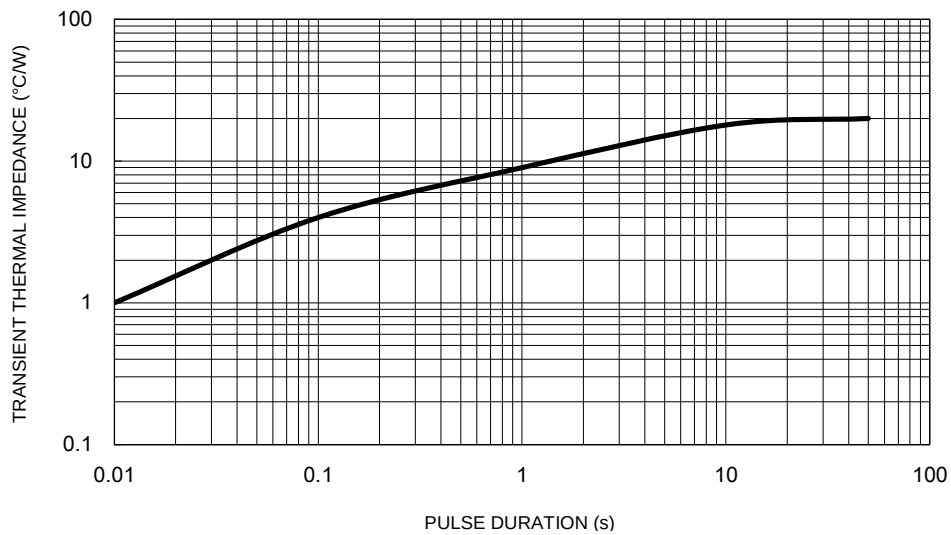
Fig.5 Maximum Non-Repetitive Forward Surge Current



CHARACTERISTICS CURVES

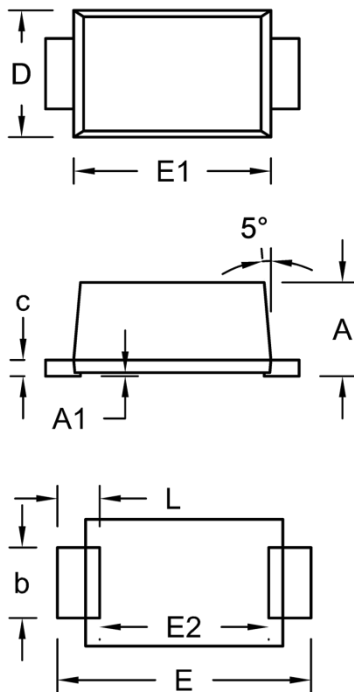
($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig.6 Typical Transient Thermal Impedance



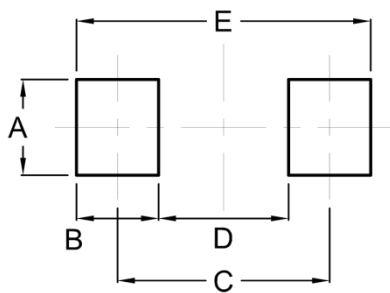
PACKAGE OUTLINE DIMENSIONS

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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