

1A, 20 - 150V Surface Mount Schottky Barrier Rectifiers

FEATURES

- Low power loss, high efficiency
- Ideal for automated placement
- Guardring for overvoltage protection
- High surge current capability
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition



Sub SMA



MECHANICAL DATA

Case: Sub SMA

Molding compound, UL flammability classification rating 94V-0

Moisture sensitivity level: level 1, per J-STD-020

Part no. with suffix "H" means AEC-Q101 qualified

Packing code with suffix "G" means green compound (halogen-free)

Terminal: Matte tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 2 whisker test

Polarity: Indicated by cathode band

Weight: 0.019 g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A =25°C unless otherwise noted)											
PARAMETER	SYMBOL	SS 12L	SS 13L	SS 14L	SS 15L	SS 16L	SS 19L	SS 110L	SS 115L	UNIT	
Marking code		12L	13L	14L	15L	16L	19L	10L	A5L		
Maximum repetitive peak reverse voltage	V _{RRM}	20	30	40	50	60	90	100	150	V	
Maximum RMS voltage	V _{RMS}	14	21	28	35	42	63	70	105	V	
Maximum DC blocking voltage	V _{DC}	20	30	40	50	60	90	100	150	V	
Maximum average forward rectified current	I _{F(AV)}	1								A	
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I _{FSM}	30								A	
Maximum instantaneous forward voltage (Note 1) @ 0.5A @ 1.0A	V _F	0.385 0.45	0.43 0.50	0.51 0.55	0.58 0.70		0.70 0.80		0.75 0.90	V	
Maximum reverse current @ rated V _R T _J =25°C T _J =100°C T _J =125°C	I _R	0.4					0.05				mA
		8.0	6.0				-				
		-					0.5				
Voltage rate of change (Rated V _R)	dV/dt	10000								V/μs	
Typical thermal resistance	R _{θJL}	45								°C/W	
	R _{θJA}	100									
Operating junction temperature range	T _J	- 55 to +125				- 55 to +150				°C	
Storage temperature range	T _{STG}	- 55 to +150								°C	

Note 1: Pulse test with PW=300μs, 1% duty cycle

ORDERING INFORMATION					
PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
SS1XL (Note 1)	H	RU	G	Sub SMA	1,800 / 7" Plastic reel (8mm tape)
		RV		Sub SMA	3,000 / 7" Plastic reel (8mm tape)
		RT		Sub SMA	7,500 / 13" Paper reel (8mm tape)
		MT		Sub SMA	7,500 / 13" Plastic reel (8mm tape)
		RQ		Sub SMA	10,000 / 13" Paper reel (8mm tape)
		MQ		Sub SMA	10,000 / 13" Plastic reel (8mm tape)
		R3		Sub SMA	1,800 / 7" Plastic reel (12mm tape)
		RF		Sub SMA	3,000 / 7" Plastic reel (12mm tape)
		R2		Sub SMA	7,500 / 13" Paper reel (12mm tape)
		M2		Sub SMA	7,500 / 13" Plastic reel (12mm tape)
		RH		Sub SMA	10,000 / 13" Paper reel (12mm tape)
		MH		Sub SMA	10,000 / 13" Plastic reel (12mm tape)

Note 1: "x" defines voltage from 20V (SS12L) to 150V (SS115L)

EXAMPLE					
PREFERRED PART NO.	PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
SS16LHRUG	SS16L	H	RU	G	AEC-Q101 qualified Green compound

RATINGS AND CHARACTERISTICS CURVES (T_A=25°C unless otherwise noted)

FIG.1 FORWARD CURRENT DERATING CURVE

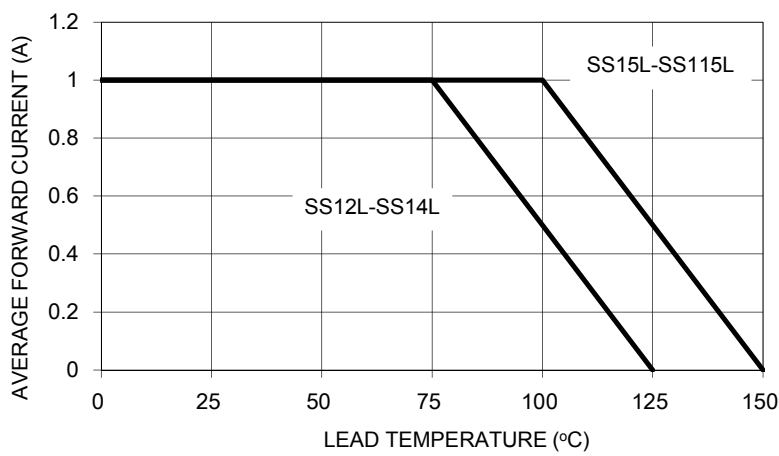


FIG. 2 MAXIMUM FORWARD SURGE CURRENT

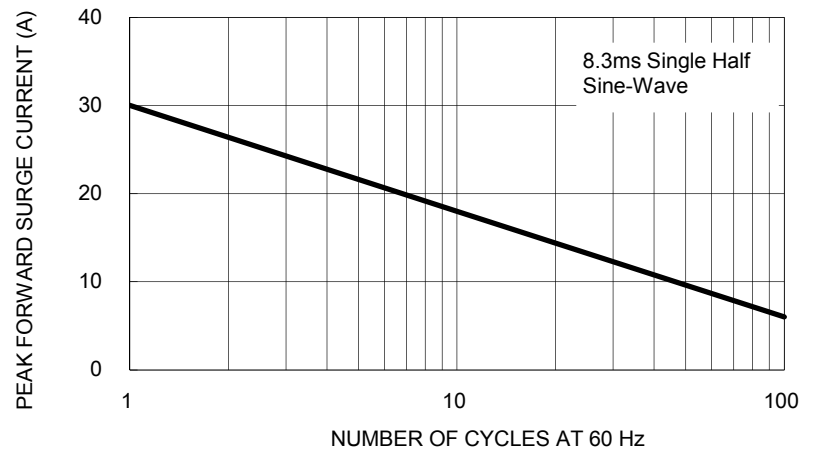


FIG. 3 TYPICAL FORWARD CHARACTERISTICS

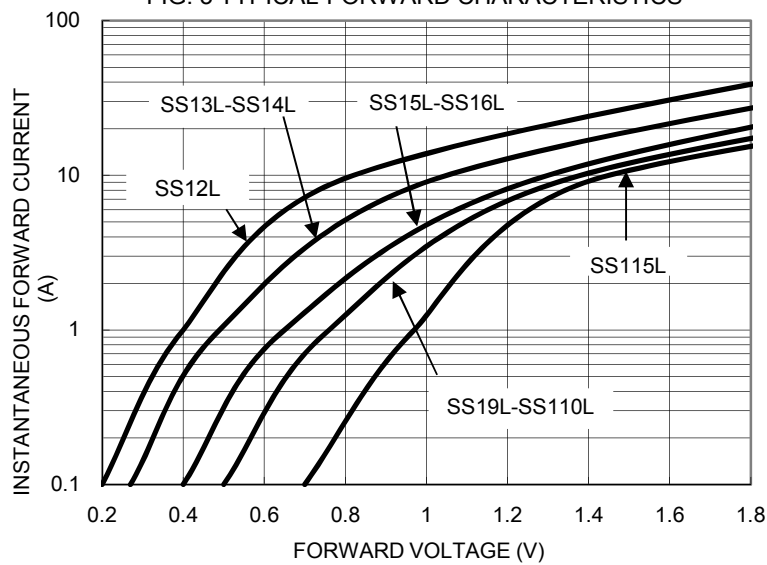


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

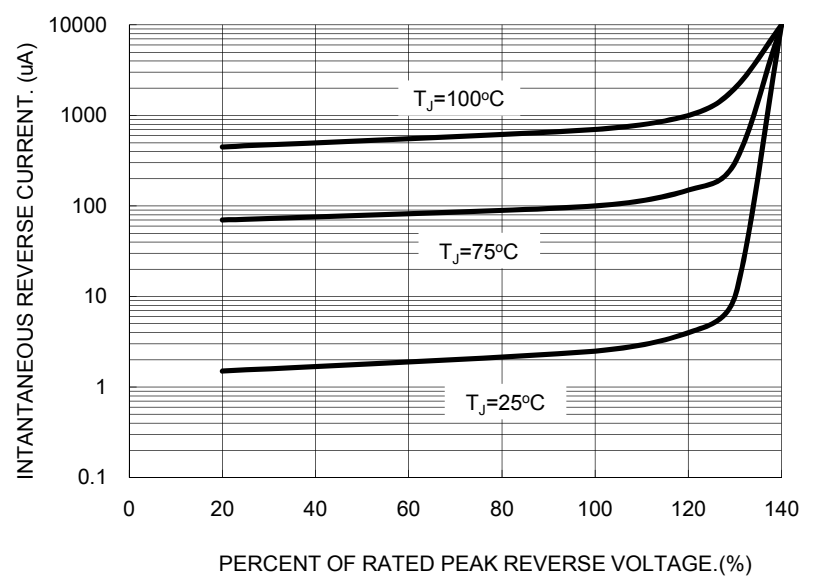


FIG. 5 TYPICAL JUNCTION CAPACITANCE

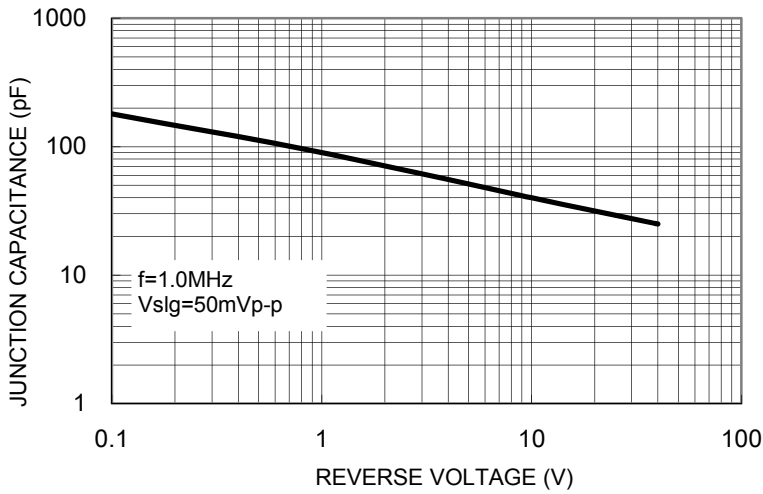
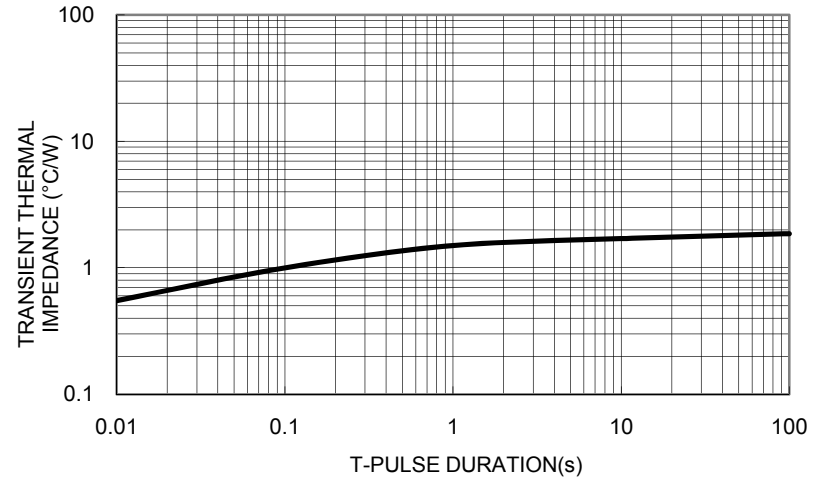
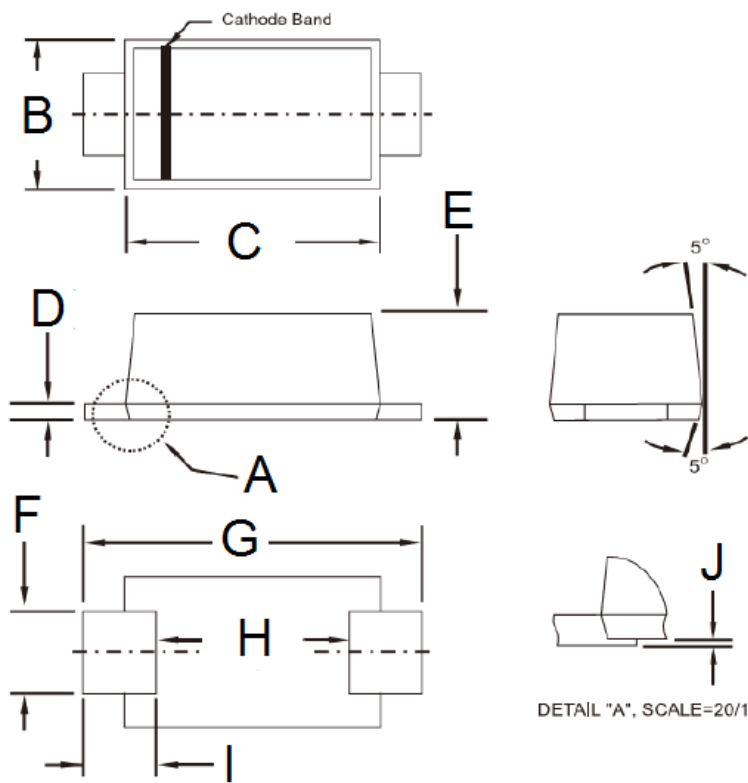


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE



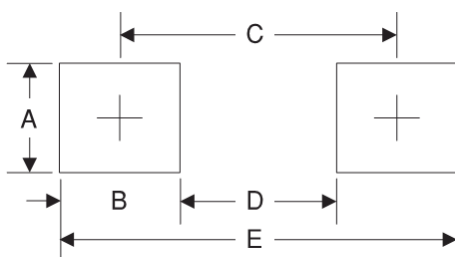
PACKAGE OUTLINE DIMENSIONS

Sub SMA



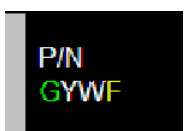
DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
B	1.70	1.90	0.067	0.075
C	2.70	2.90	0.106	0.114
D	0.16	0.30	0.006	0.012
E	1.23	1.43	0.048	0.056
F	0.80	1.20	0.031	0.047
G	3.40	3.80	0.134	0.150
H	2.45	2.60	0.096	0.102
I	0.35	0.85	0.014	0.033
J	0.00	0.10	0.000	0.004

SUGGESTED PAD LAYOUT



Symbol	Unit (mm)	Unit (inch)
A	1.4	0.055
B	1.2	0.047
C	3.1	0.122
D	1.9	0.075
E	4.3	0.169

MARKING DIAGRAM



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

Notice

Specifications of the products displayed herein are subject to change without notice. TSC or anyone on its behalf, assumes no responsibility or liability for any errors or inaccuracies.

Information contained herein is intended to provide a product description only. No license, express or implied, to any intellectual property rights is granted by this document. Except as provided in TSC's terms and conditions of sale for such products, TSC assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of TSC products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify TSC for any damages resulting from such improper use or sale.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Taiwan Semiconductor:

[SS110L](#) [SS12L](#) [SS13L](#) [SS14L](#) [SS15L](#) [SS16L](#) [SS19L](#) [SS115L R2](#) [SS115L R3](#) [SS115L RQ](#) [SS115L RT](#) [SS15L R2](#) [SS15L R3](#) [SS15L RQ](#) [SS15L RT](#) [SS16LHR2G](#) [SS12L RTG](#) [SS16LHRQ](#) [SS110LHR3](#) [SS14L R2G](#) [SS15LHR2](#) [SS115LHR2](#) [SS12LHR3G](#) [SS14L R3G](#) [SS12LHRT](#) [SS14LHRTG](#) [SS19L R2G](#) [SS13L RQG](#) [SS16L R2](#) [SS15L R3G](#) [SS12LHRQ](#) [SS115LHR3G](#) [SS15LHR3](#) [SS12LHRQG](#) [SS12LHR2G](#) [SS14LHR2G](#) [SS110L RT](#) [SS13L R3G](#) [SS13L R2G](#) [SS19L RQG](#) [SS110L R3G](#) [SS15L RQG](#) [SS12LHR2](#) [SS14L R2](#) [SS14L RQG](#) [SS19LHR3](#) [SS110L R2G](#) [SS16LHR3](#) [SS110L RQG](#) [SS19L R2](#) [SS115L R3G](#) [SS115LHR2G](#) [SS115LHRT](#) [SS19LHR2](#) [SS19L RTG](#) [SS15LHRT](#) [SS13LHRTG](#) [SS19L R3G](#) [SS16LHRT](#) [SS15LHR3G](#) [SS14LHR3G](#) [SS16L RT](#) [SS14LHRQG](#) [SS110LHR2G](#) [SS110LHRTG](#) [SS19LHRT](#) [SS110LHRQ](#) [SS16L R3G](#) [SS13LHR3G](#) [SS13LHR3](#) [SS16LHR3G](#) [SS13L RT](#) [SS15LHRTG](#) [SS115L RTG](#) [SS14LHR3](#) [SS15LHR2G](#) [SS110L RTG](#) [SS19LHR2G](#) [SS13LHRQ](#) [SS13L RQ](#) [SS14L RTG](#) [SS115LHRQG](#) [SS12L R3G](#) [SS14LHR2](#) [SS16LHRQG](#) [SS110LHRQG](#) [SS16L RQG](#) [SS115L RQG](#) [SS19LHRQ](#) [SS115LHRQ](#) [SS13LHR2](#) [SS13L RTG](#) [SS12LHRTG](#) [SS19L RQ](#) [SS15L RTG](#) [SS13LHRQG](#) [SS115LHR3](#) [SS19LHRQG](#) [SS13LHRT](#) [SS14L RT](#)