

1A, 30V - 60V Surface Mount Schottky Barrier Rectifiers

FEATURES

- Very low profile - typical height of 0.68mm
- Low power loss, high efficiency
- Ideal for automated placement
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition



Micro SMA



MECHANICAL DATA

Case: Micro 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: 6 mg (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A =25°C unless otherwise noted)						
PARAMETER	SYMBOL	SS13M	SS14M	SS16M		UNIT
Marking code		A	B	C		
Maximum repetitive peak reverse voltage	V _{RRM}	30	40	60		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}	25				A
Maximum instantaneous forward voltage (Note 1) @ 0.5A / T _J =25 °C @ 0.5A / T _J =125 °C @ 1.0A / T _J =25 °C @ 1.0A / T _J =125 °C	V _F	TYP	MAX	TYP	MAX	V
		0.45	-	0.51	-	
		0.35	-	0.46	-	
		0.52	0.55	0.64	0.68	
		0.46	0.50	0.57	0.60	
Maximum reverse current @ rated V _R @ T _J =25 °C @ T _J =125 °C @ T _J =150 °C	I _R	TYP	MAX	TYP	MAX	
		5	50	5	50	μA
		3	10	3	10	mA
		5.3	-	6.7	-	mA
Typical junction capacitance (Note 2)	C _J	50		40		pF
Typical thermal resistance	R _{θJL}	30				°C/W
	R _{θJC}	40				
	R _{θJA}	125				
Operating junction temperature range	T _J	-55 to +150				°C
Storage temperature range	T _{STG}	-55 to +150				°C

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

Note 2: Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.

ORDERING INFORMATION

PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
SS1xM (Note 1, 2)	H	RS	G	Micro SMA	3,000 / 7" Plastic reel

Note 1: "x" defines voltage from 30V (SS13M) to 60V (SS16M)

Note 2: Whole series with green compound

EXAMPLE

PREFERRED P/N	PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
SS16MHRSG	SS16M	H	RS	G	Automotive grade Green compound

RATINGS AND CHARACTERISTICS CURVES

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

FIG.1 MAXIMUM FORWARD CURRENT
DERATING CURVE

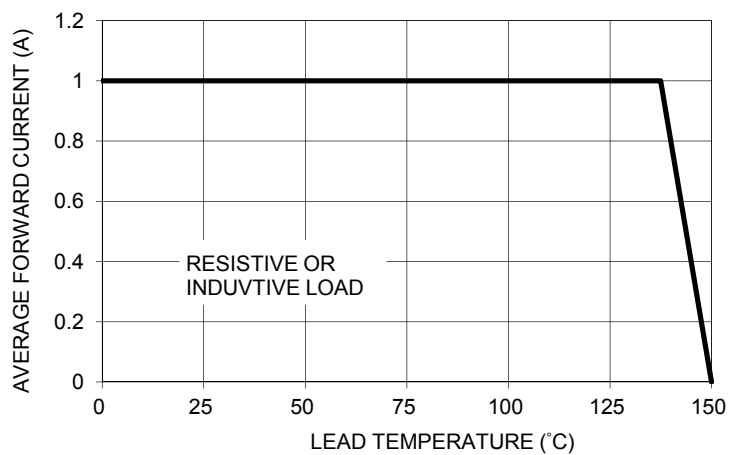


FIG. 2 MAXIMUM FORWARD SURGE CURRENT

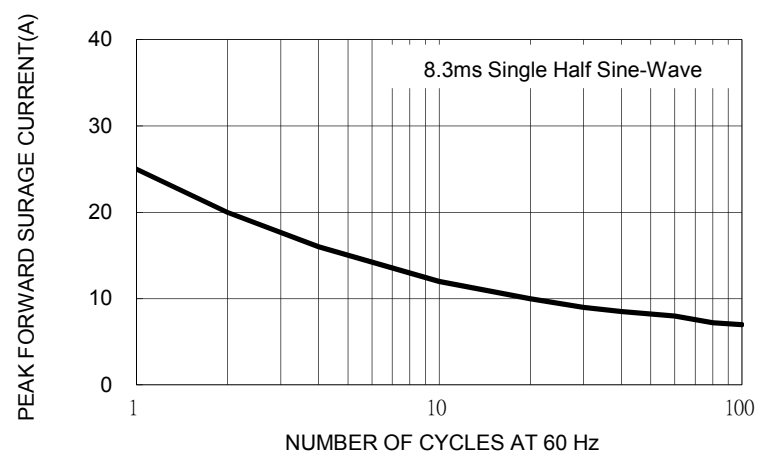


FIG. 3 TYPICAL FORWARD CHARACTERISTICS
- SS13M/14M

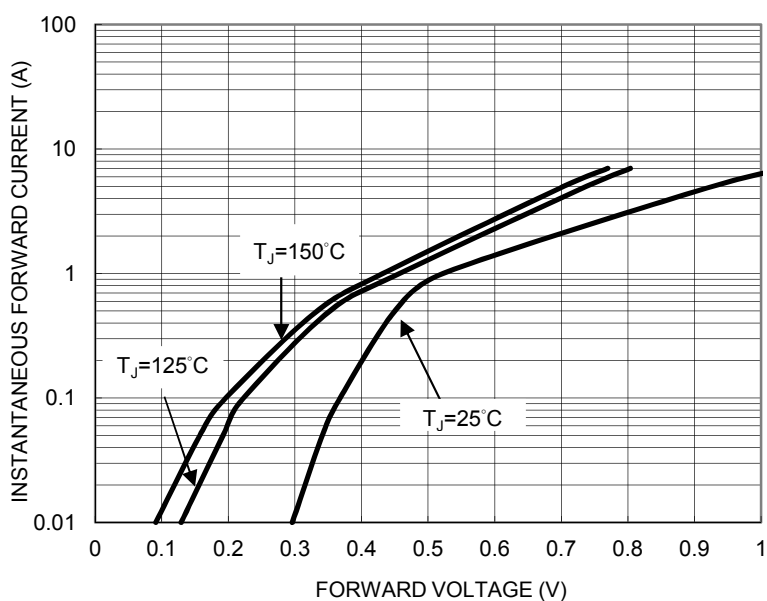


FIG. 4 TYPICAL FORWARD CHARACTERISTICS
- SS16M

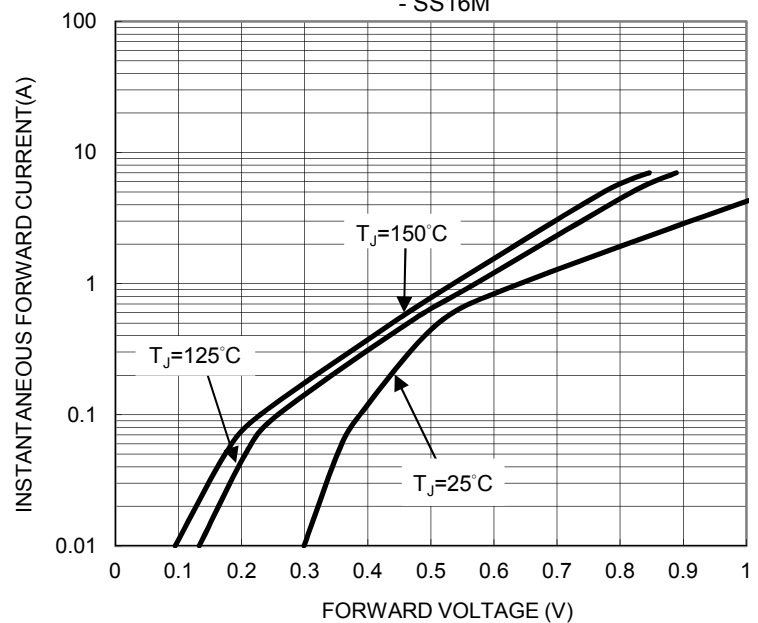


FIG. 5 TYPICAL REVERSE CHARACTERISTICS
- SS13M/14M

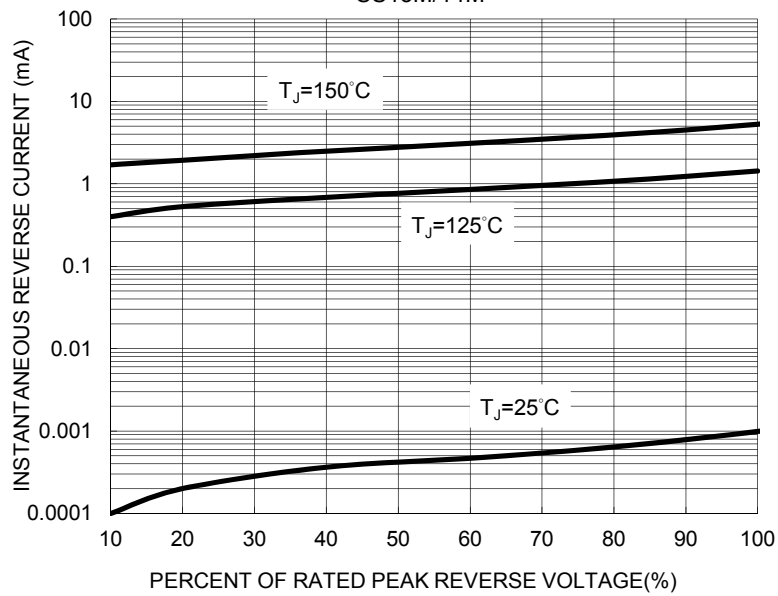


FIG. 6 TYPICAL REVERSE CHARACTERISTICS
- SS16M

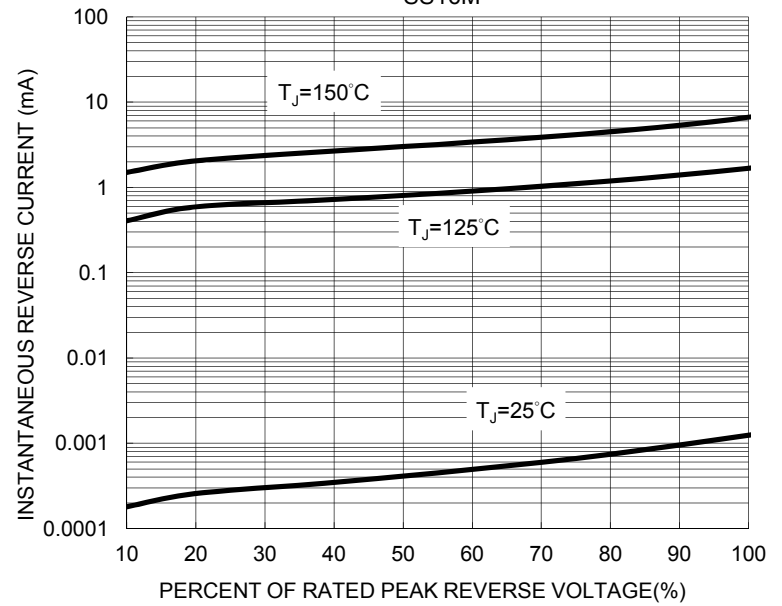


FIG. 7 TYPICAL JUNCTION CAPACITANCE

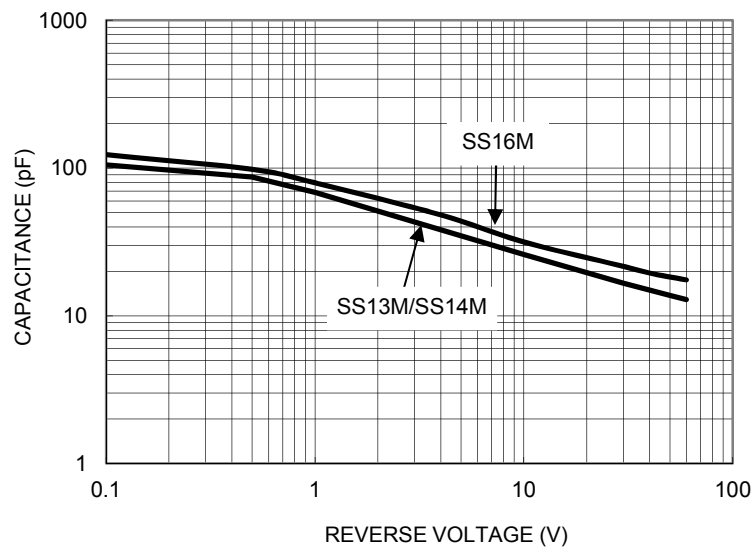
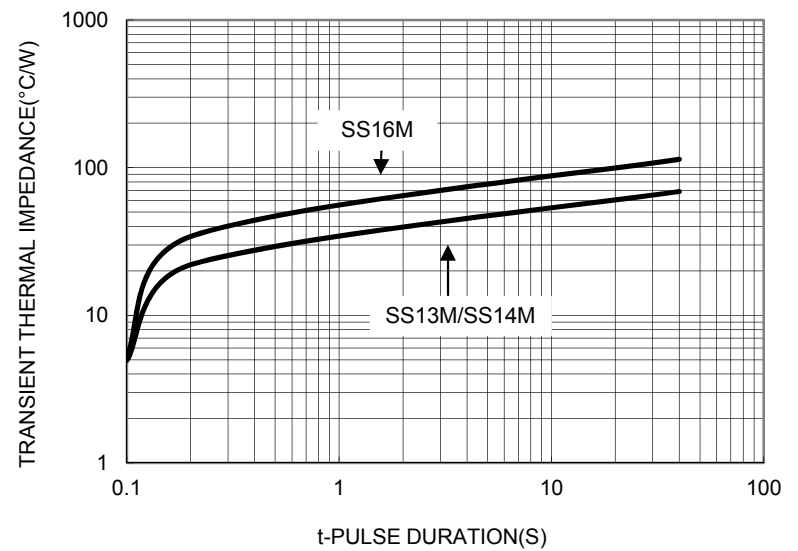
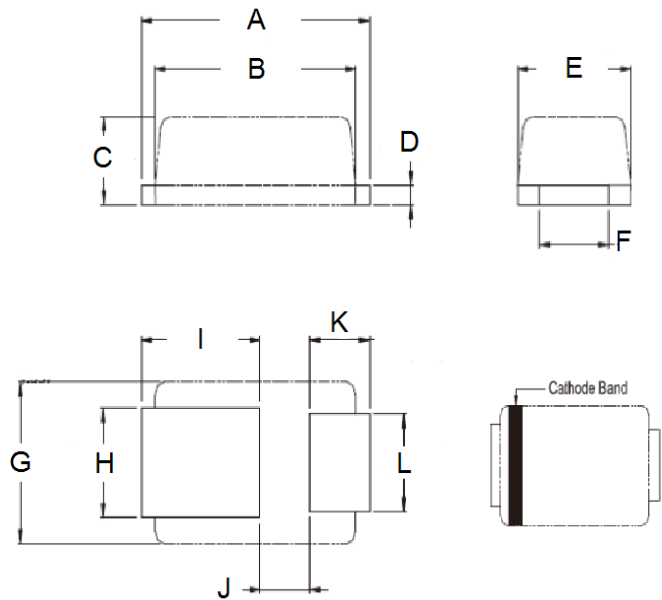


FIG. 8 TYPICAL TRANSIENT THERMAL IMPEDANCE



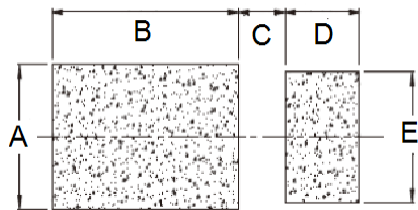
PACKAGE OUTLINE DIMENSIONS

Micro SMA



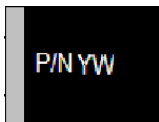
DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	2.30	2.70	0.091	0.106
B	2.10	2.30	0.083	0.091
C	0.63	0.73	0.025	0.029
D	0.10	0.20	0.004	0.008
E	1.15	1.35	0.045	0.053
F	0.65	0.85	0.026	0.034
G	1.15	1.35	0.045	0.053
H	0.75	0.95	0.030	0.037
I	1.10	1.50	0.043	0.059
J	0.55	0.75	0.022	0.030
K	0.55	0.75	0.022	0.030
L	0.65	0.85	0.026	0.034

SUGGESTED PAD LAYOUT



Symbol	Unit (mm)	Unit (inch)
A	1.1	0.043
B	2.0	0.079
C	0.5	0.020
D	0.8	0.031
E	1.0	0.039

MARKING DIAGRAM



P/N = Marking code
YW = Date Code

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