



# 1.0Amp. Surface Mount Schottky Barrier Diodes

## CSMASS1XAS Series

### Features

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability
- Glass passivated structure

### Mechanical Data

- Case: Molded plastic SMA.
- Solderability : MIL-STD-202 method 208 guaranteed
- Epoxy: UL94V-0 rate flame retardant
- Polarity: Color band denotes cathode end.
- Mounting position: Any.
- Weight: 0.064 gram

### Maximum Ratings and Electrical Characteristics

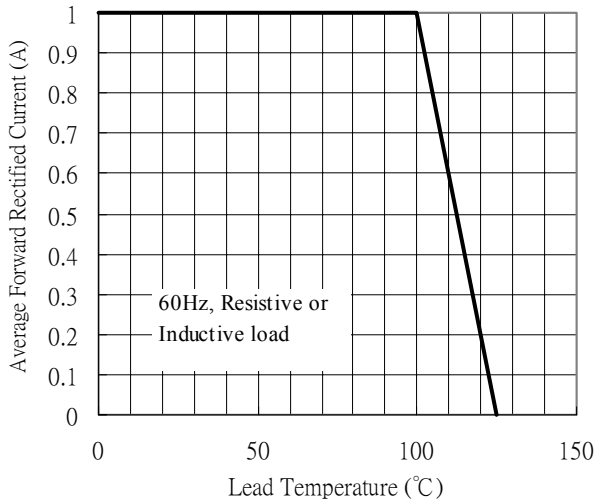
(Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%. )

Parameter	Symbol	Type							Units
		CSMA SS12	CSMA SS13	CSMA SS14	CSMA SS15	CSMA SS16	CSMA SS18	CSMA SS1B	
Repetitive peak reverse voltage	V <sub>RRM</sub>	20	30	40	50	60	80	100	V
Maximum RMS voltage	V <sub>RMS</sub>	14	21	28	35	42	56	70	V
Maximum DC blocking voltage	V <sub>R</sub>	20	30	40	50	60	80	100	V
Maximum instantaneous forward voltage @ I <sub>F</sub> =1A (Note 1)	V <sub>F</sub>	0.55		0.75		0.82			V
Maximum average forward rectified current @ T <sub>L</sub> =100°C	I <sub>O</sub>	1							A
Peak forward surge current @8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	30							A
Maximum DC reverse current at rated DC blocking Voltage T <sub>J</sub> =25°C T <sub>J</sub> =100°C	I <sub>R</sub>	0.5 10							mA
Typical thermal resistance, Junction to lead	R <sub>th, JL</sub>	20							°C/W
Typical diode junction capacitance @ f=1MHz and applied 4V reverse voltage	C <sub>J</sub>	110							pF
Storage temperature	T <sub>stg</sub>	-55 ~ +150							°C
Operating temperature	T <sub>J</sub>	-55 ~ +125							°C

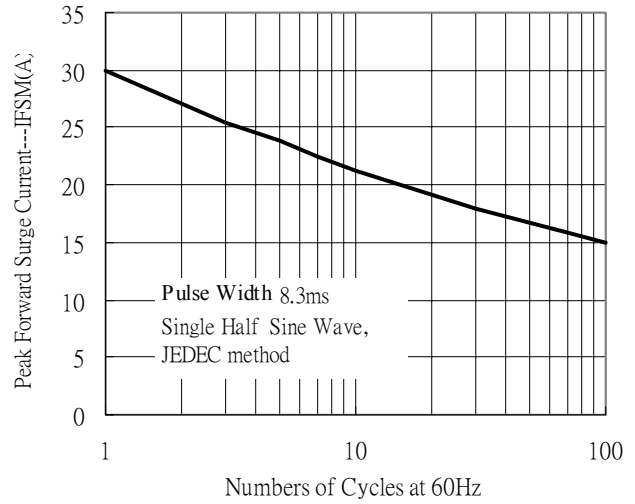


## Characteristic Curves

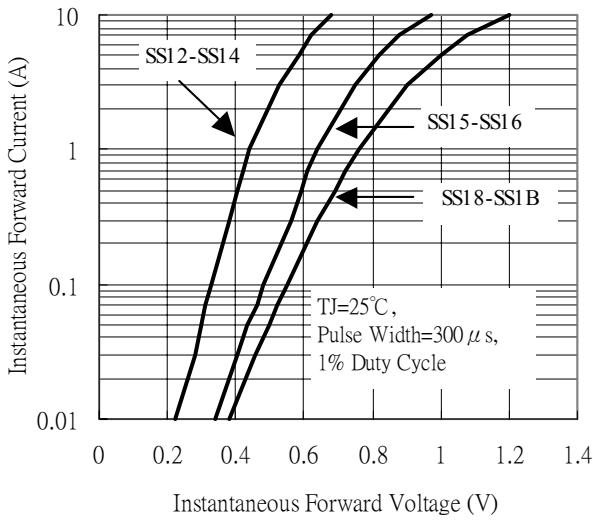
### Forward Current Derating Curve



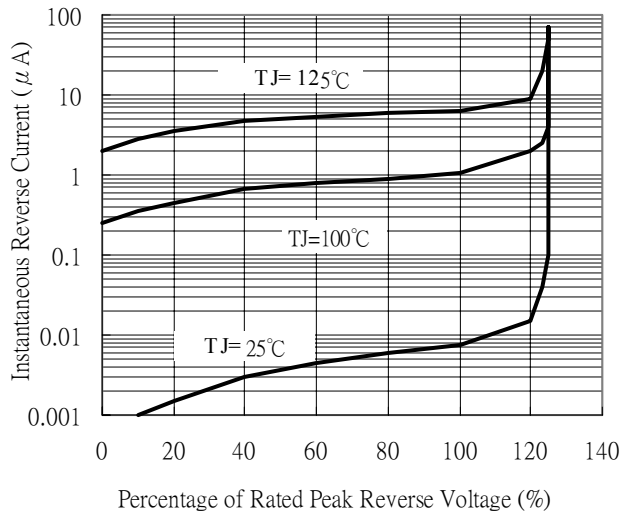
### Maximum Non-Repetitive Peak Forward Surge Current



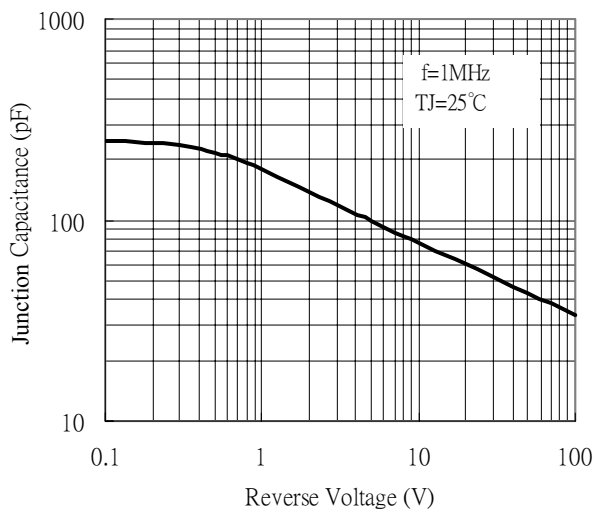
### Typical Instantaneous Forward Characteristics



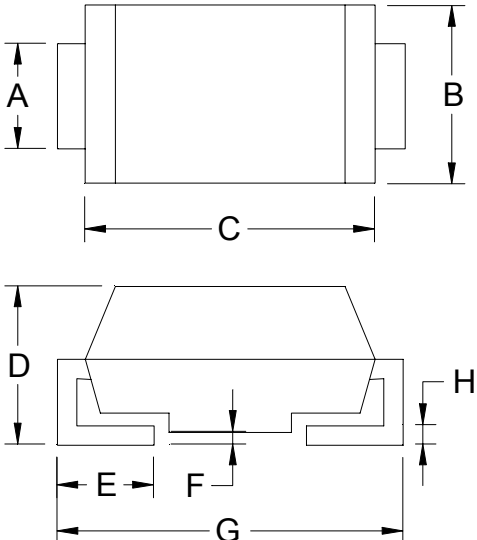
### Typical Reverse Characteristics



### Typical Junction Capacitance



**SMA-1 Dimension**



The diagram shows two views of the SMA-1 package. The top view is a side profile with dimensions A (lead height), B (package height), and C (package length). The bottom view is a top-down perspective showing dimensions D (package width), E (lead width), F (lead pitch), G (package width including leads), and H (lead thickness).

Marking :

Device	CSMA SS12	CSMA SS13	CSMA SS14	CSMA SS15
Code	SS12	SS13	SS14	SS15

Device	CSMA SS16	CSMA SS18	CSMA SS1B	
Code	SS16	SS18	SS1B	

2-Lead SMA-1 Plastic  
 Surface Mounted Package  
 CYStek Package Code: AS

\*:Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.055	0.062	1.40	1.60	E	0.030	0.060	0.76	1.52
B	0.098	0.114	2.50	2.90	F	0.002	0.008	0.051	0.203
C	0.157	0.181	4.00	4.60	G	0.188	0.208	4.80	5.28
D	0.078	0.096	2.00	2.44	H	0.006	0.012	0.152	0.305

**Notes :** 1.Controlling dimension : millimeters.  
 2.Maximum lead thickness includes lead finish thickness, and minimum lead thickness is the minimum thickness of base material.  
 3.If there is any question with packing specification or packing method, please contact your local CYStek sales office.

**Material :**

- Lead : 42 Alloy ; solder plating
- Mold Compound : Epoxy resin family, flammability solid burning class:UL94V-0

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