

**2.0Amp. Glass Passivated Diodes**

# CSMA20XSA Series

**Features**

- For surface mounted applications.
- Plastic material used carries Underwriters Laboratory Flammability Classification 94V-0
- Low leakage current
- High surge capability
- High temperature soldering: 250°C/10 seconds at terminals
- Exceeds environmental standards of MIL-S-19500/228

**Mechanical Data**

- Case: Molded plastic, SMA/JEDEC DO-214AC
- Terminals: Solder plated, solderable per MIL-STD-750 method 2026
- Polarity: Indicated by cathode band.
- Packaging: 12mm tape per EIA STD RS-481.
- Weight: 0.064 gram, 0.002 ounce

**Maximum Ratings and Electrical Characteristics**

(Rating at 25°C ambient temperature unless otherwise specified. )

Parameter	Symbol	Spec							Units
Type		CSMA 201	CSMA 202	CSMA 203	CSMA 204	CSMA 205	CSMA 206	CSMA 207	
Repetitive peak reverse voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V <sub>R</sub>	50	100	200	400	600	800	1000	V
Maximum instantaneous forward voltage, I <sub>F</sub> =2A (Note 1)	V <sub>F</sub>	1.1	1.1	1.1	1.1	1.1	1.1	1.1	V
Average forward rectified current	I <sub>O</sub>	2							A
Peak forward surge current @8.3ms single half sine wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	50							A
Maximum DC reverse current V <sub>R</sub> =V <sub>RRM</sub> , T <sub>A</sub> =25°C (Note 1) V <sub>R</sub> =V <sub>RRM</sub> , T <sub>A</sub> =125°C (Note 1)	I <sub>R</sub>	5 125							μA μA
Maximum thermal resistance, Junction to ambient	R <sub>th,JA</sub>	53 (typ)							°C/W
Diode junction capacitance (Note 2)	C <sub>J</sub>	30(typ)							pF
Storage temperature	T <sub>stg</sub>	-55 ~ +150							°C
Operating temperature	T <sub>J</sub>	-55 ~ +150							°C

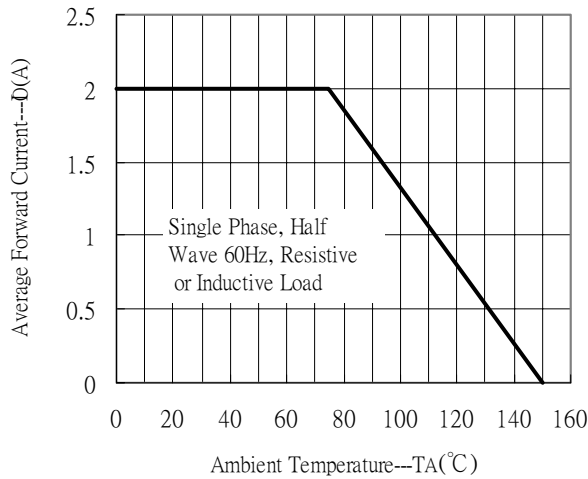
Notes : 1. Pulse test, pulse width=300 μ sec, 2% duty cycle

2. f=1MHz and applied 4.0VDC reverse voltage.

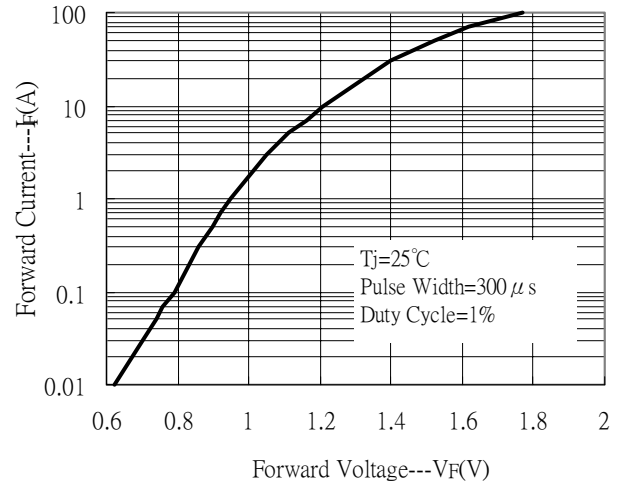


## Characteristic Curves

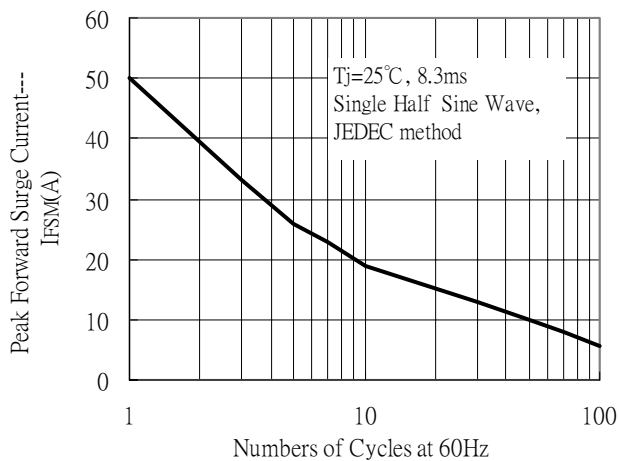
Forward Current Derating Curve



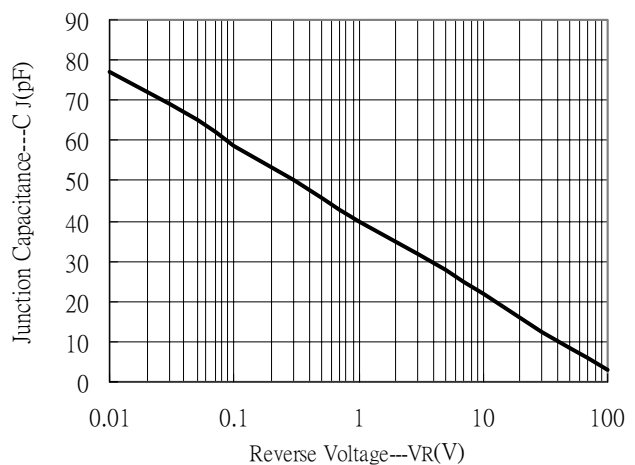
Forward Current vs Forward Voltage



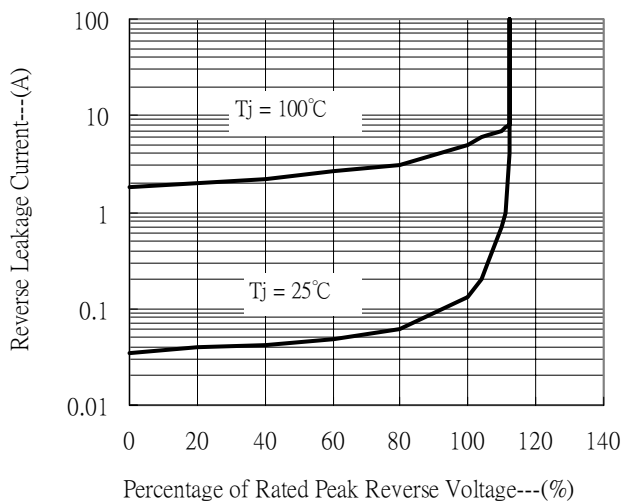
Maximum Non-Repetitive Forward Surge Current



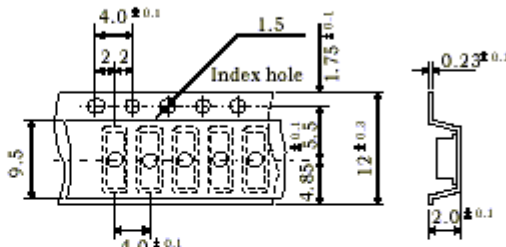
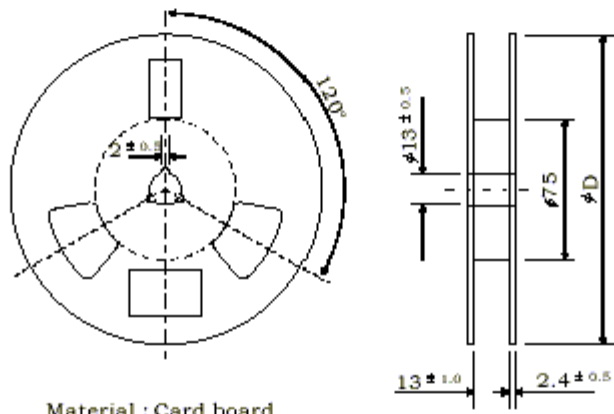
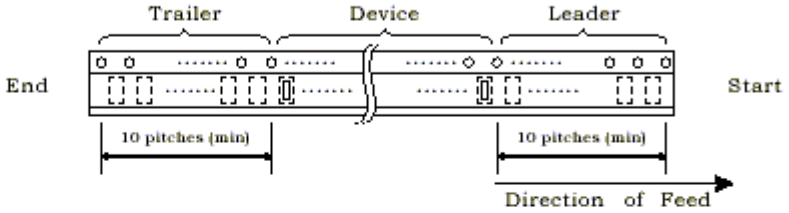
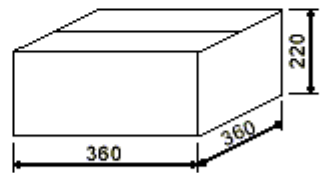
Junction Capacitance vs Reverse Voltage



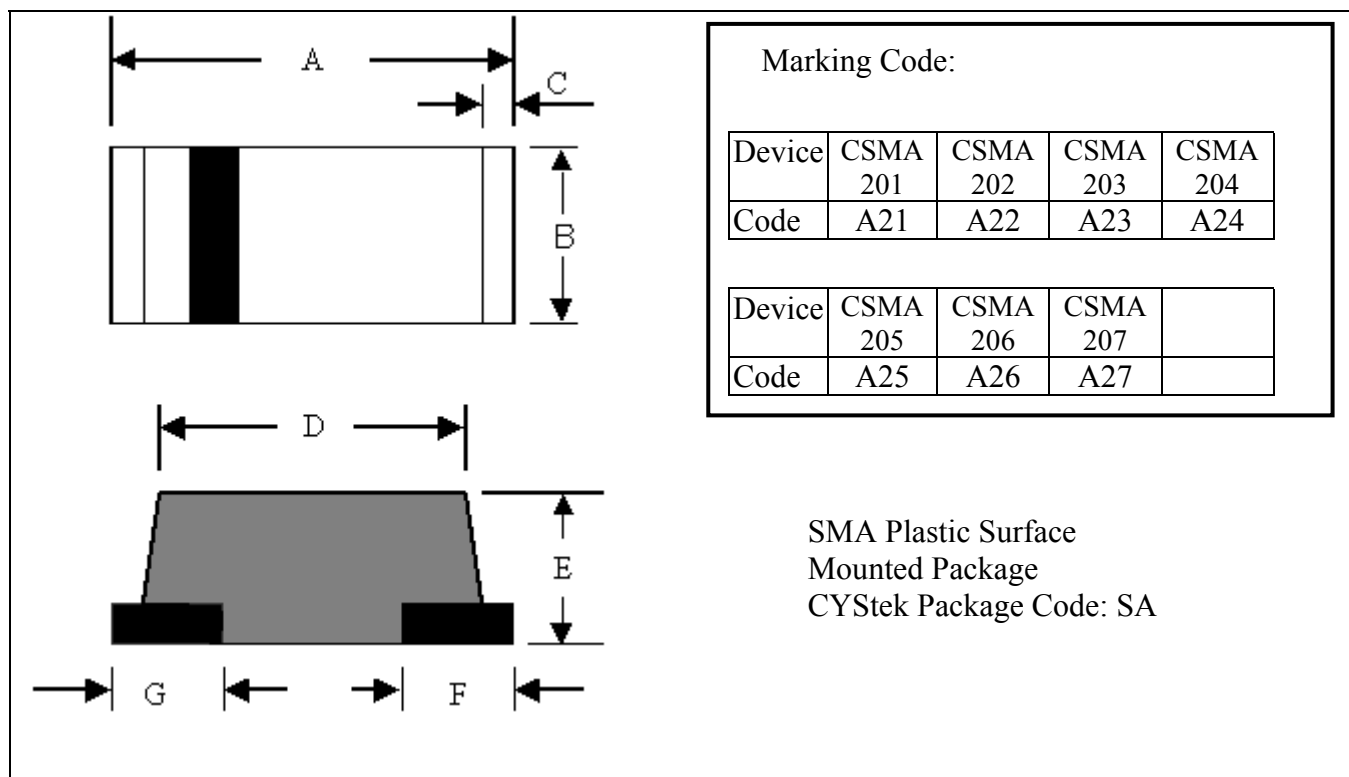
Reverse Leakage Current vs Reverse Voltage



## Packing Information

Case No.		SMA							
Taping	Dimensions	<div></div> <p>Material : Plastics</p>							
	Quantity	Standard capacity : 7,500pcs / reel							
Reel	Dimensions	<div></div> <table border="1" data-bbox="1131 1135 1415 1274"><thead><tr><th>Order code</th><th>W</th><th>T</th></tr></thead><tbody><tr><td>φD</td><td>330 ± 2</td><td>178 ± 2</td></tr></tbody></table> <p>Material : Card board</p>		Order code	W	T	φD	330 ± 2	178 ± 2
	Order code	W	T						
φD	330 ± 2	178 ± 2							
Leader and Trailer	<div></div>								
Standard Package	Dimensions	<div></div> <p>Material : Corrugated card board</p>							
	Quantity	Standard capacity : 75,000pcs / carton (10 reels / carton)							

## SMA/DO-214AC Dimension



\*:Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.177	0.185	4.4	4.8	E	0.060	0.067	1.5	1.7
B	0.094	0.110	2.4	2.8	F	0.04(typ)		1.0(typ)	
C	0.012(typ)		0.3(typ)		G	0.04(typ)		1.0(typ)	
D	0.150	0.165	3.8	4.2	-	-	-	-	-

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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