

Absolute Maximum Ratings

Symbol	Parameter	Value	Units
I_{PP}	Peak Current ($t_p=8/20\mu s$)	30	A
P_{PK}	Peak Pulse Power ($t_p=8/20\mu s$)	750	W
T_{OP}	Operating Temperature	-40 to 125	°C
T_{STOR}	Storage Temperature	-55 to 150	°C

CAUTION: Stresses above those listed in "Absolute Maximum Ratings" may cause permanent damage to the component. This is a stress only rating and operation of the component at these or any other conditions above those indicated in the operational sections of this specification is not implied.

Electrical Characteristics ($T_{OP}=25^{\circ}C$)

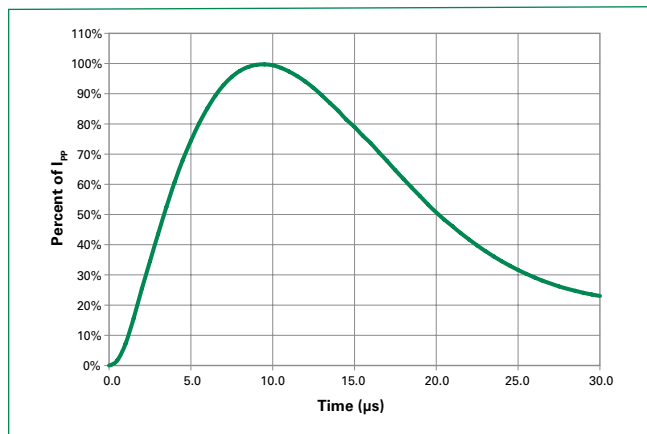
Parameter	Symbol	Test Conditions	Min	Typ	Max	Units
Breakdown Voltage	V_{BD}	$I_R=1mA$	-	9.5	-	V
Reverse Standoff Voltage	V_{RWM}	$I_R \leq 1\mu A$	-	-	8.0	V
Leakage Current	I_{LEAK}	$V_R=8.0V$	-	0.02	0.5	μA
Clamp Voltage ¹	V_C	$I_{PP}=1A, t_p=8/20\mu s, Fwd$	-	11.5	-	V
		$I_{PP}=17A, t_p=8/20\mu s, Fwd$	-	19	-	V
		$I_{PP}=30A, t_p=8/20\mu s, Fwd$	-	25	-	V
Dynamic Resistance ²	R_{DYN}	TLP, $t_P=100ns$, I/O to GND	-	0.37	-	Ω
ESD Withstand Voltage ¹	V_{ESD}	IEC 61000-4-2 (Contact Discharge)	± 30	-	-	kV
		IEC 61000-4-2 (Air Discharge)	± 30	-	-	kV
Diode Capacitance ¹	C_D	Reverse Bias=0V, $f=1MHz$	-	3.0	-	pF

Note:

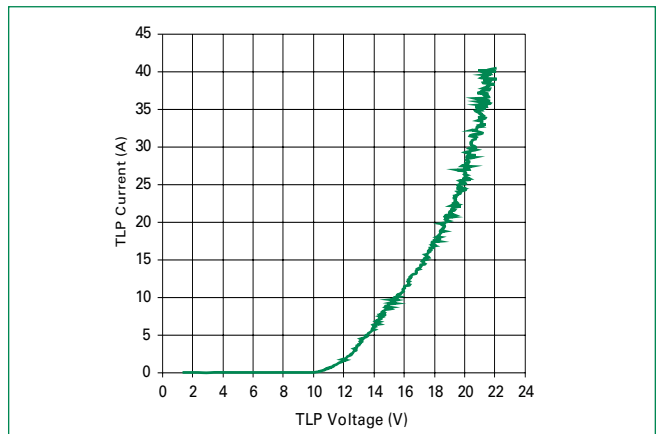
1. Parameter is guaranteed by design and/or component characterization.

2. Transmission Line Pulse (TLP) with 100ns width, 2ns rise time, and average window $t_1=70ns$ to $t_2=90ns$

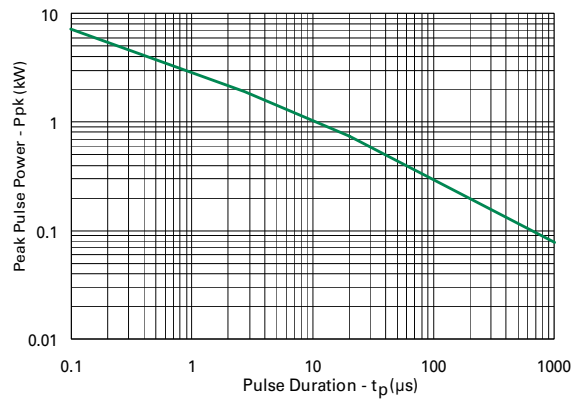
8/20 μs Pulse Waveform



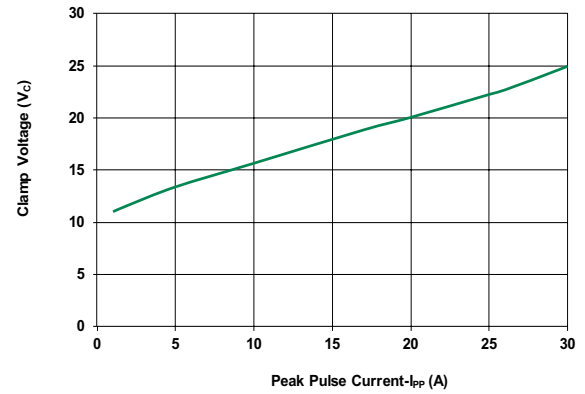
Positive Transmission Line Pulsing (TLP) Plot



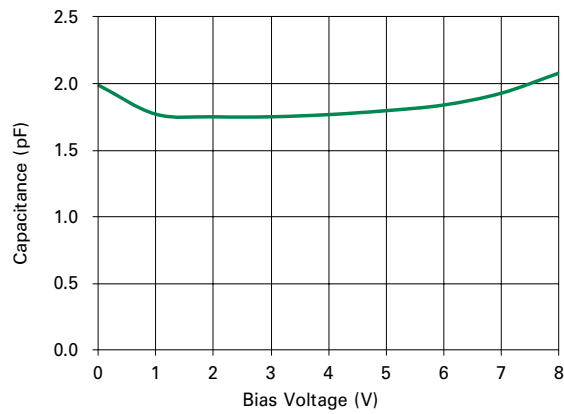
Non-Repetitive Peak Pulse Power vs. Pulse Time



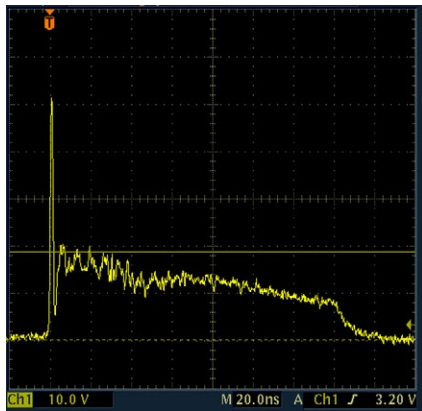
Clamping Voltage vs. I_{pp} 8/20μS waveshape



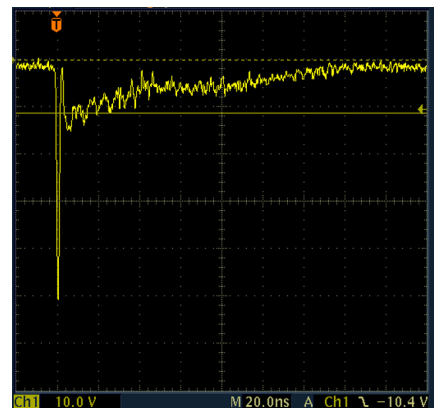
Capacitance vs. Reverse Bias



IEC 61000-4-2 +8 kV Contact ESD Clamping Voltage

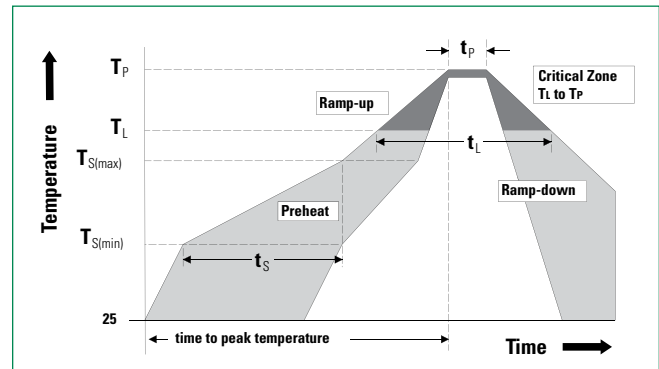


IEC 61000-4-2 -8 kV Contact ESD Clamping Voltage



Soldering Parameters

Reflow Condition		Pb – Free assembly
Pre Heat	- Temperature Min ($T_{s(min)}$)	150°C
	- Temperature Max ($T_{s(max)}$)	200°C
	- Time (min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus) Temp (T_L) to peak		3°C/second max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/second max
Reflow	- Temperature (T_L) (Liquidus)	217°C
	- Temperature (t_l)	60 – 150 seconds
Peak Temperature (T_p)		260 ^{+0/-5} °C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T_p)		8 minutes Max.
Do not exceed		260°C



Product Characteristics

Lead Plating	Matte Tin
Lead Material	Iron Alloy
Lead Coplanarity	0.004 inches(0.102mm)
Substrate material	Silicon
Body Material	Molded Compound
Flammability	UL Recognized compound meeting flammability rating V-0

Notes :

1. All dimensions are in millimeters
2. Dimensions include solder plating.
3. Dimensions are exclusive of mold flash & metal burr.

Part Marking System

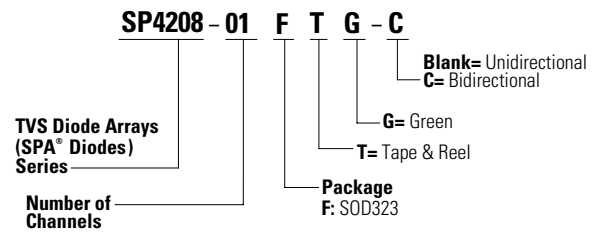


A= Part Code
X= Assembly Site
Y= Date Code



B= Part Code
X= Assembly Site
Y= Date Code

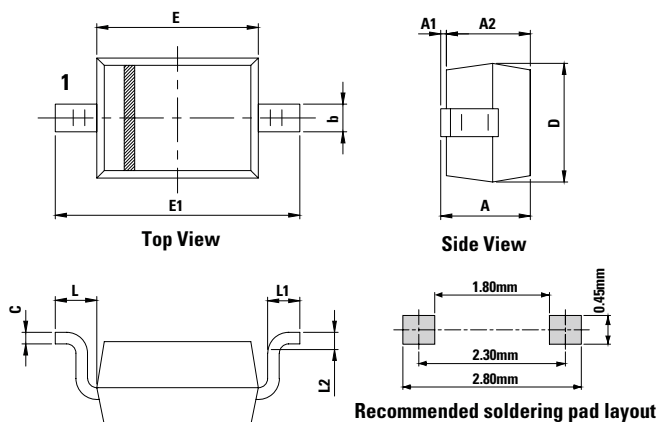
Part Numbering System



Ordering Information

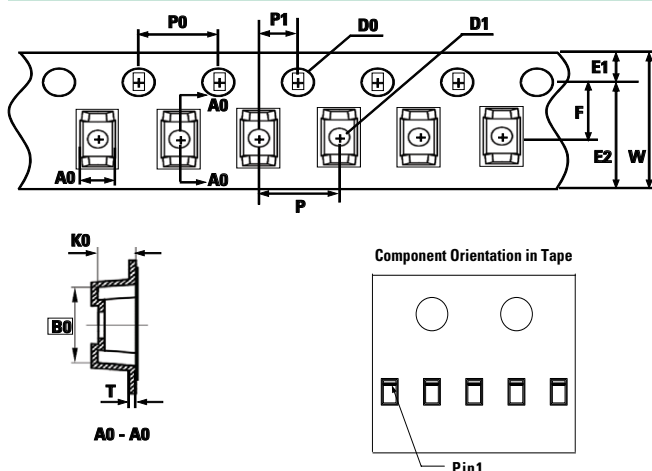
Part Number	Package	Marking	Min. Order Qty.
SP4208-01FTG	SOD323	Axx	3000
SP4208-01FTG-C	SOD323	Bxx	3000

Package Dimensions -SOD323



Symbol	Millimeters		
	Min	Nor	Max
A	0.80	1.00	1.14
A1	0	-	0.10
A2	0.80	0.95	1.04
b	0.25	0.30	0.35
c	0.08	-	0.15
D	1.15	1.30	1.45
E	1.60	1.75	1.90
E1	2.44	2.55	2.75
L	0.475 REF		
L1	0.22	0.35	0.45
L2	0.20 BSC		

Embossed Carrier Tape & Reel Specification – SOD323



Symbol	Millimeters
A0	1.46+/-0.10
B0	2.90+/-0.10
W	8.0+0.3/-0.10
D0	1.50+0.10
D1	0.45min/1.15max
E1	1.75+/-0.10
E2	-
F	3.50+/-0.10
P0	4.00+/-0.10
P	4.00+/-0.10
P1	2.00+/-0.05
K0	1.25+/-0.10
T	0.254+/-0.02

8mm TAPE AND REEL

