Absolute Maximum Ratings

Symbol	Parameter	Value	Units
I_{PP}	Peak Current (t_p=8/20µs)	7	A
P_{Pk}	Peak Pulse Power (t_p=8/20µs)	350	W
T_{OP}	Operating Temperature	-40 to 150	°C
T_{STOR}	Storage Temperature	-55 to 150	°C

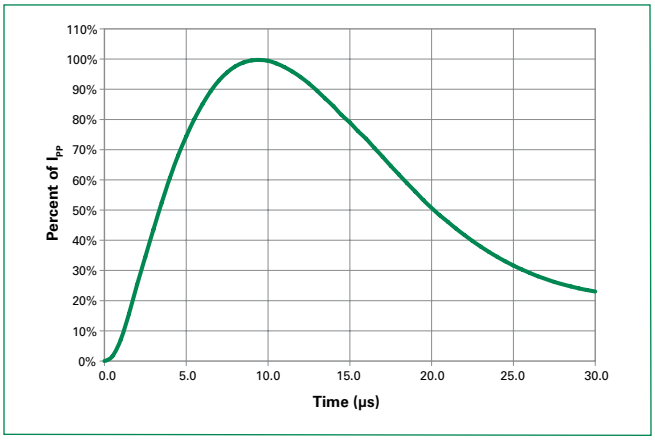
CAUTION: Stresses above those listed in "Absolute Maximum Ratings" may cause permanent damage to the component. This is a stress only rating and operation of the component at these or any other conditions above those indicated in the operational sections of this specification is not implied.

Electrical Characteristics (T_{OP}=25°C)

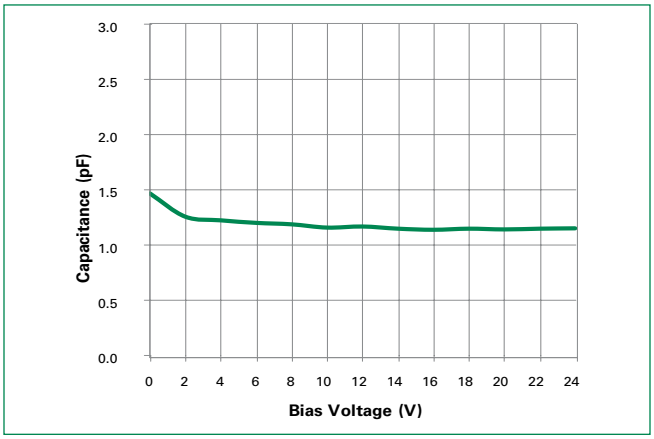
Parameter	Symbol	Test Conditions	Min	Typ	Max	Units
Reverse Standoff Voltage	V_{RWM}	I_R=1µA			24	V
Breakdown Voltage	V_{BD}	I_R=1mA	26			V
Reverse Leakage Current	I_{LEAK}	V_R=24V			0.5	µA
Clamp Voltage[1]	V_C	I_{PP}=1A, t_p=8/20µs, Fwd		34		V
		I_{PP}=2A, t_p=8/20µs, Fwd		36		V
		I_{PP}=5A, t_p=8/20µs, Fwd		43		V
		I_{PP}=7A, t_p=8/20µs, Fwd		48	50	V
Dynamic Resistance[2]	R_{DYN}	TLP t_p=100ns,		0.7		Ω
ESD Withstand Voltage[1]	V_{ESD}	IEC61000-4-2 (Contact Discharge)	±30			kV
		IEC61000-4-2 (Air Discharge)	±30			kV
Diode Capacitance[1]	C_D	Reverse Bias=0V, f=1MHz,		1.3	2	pF

Note:
1. Parameter is guaranteed by design and/or component characterization.
2. Transmission Line Pulse (TLP) with 100ns width and 200ps rise time.

8/20 µs Pulse Waveform

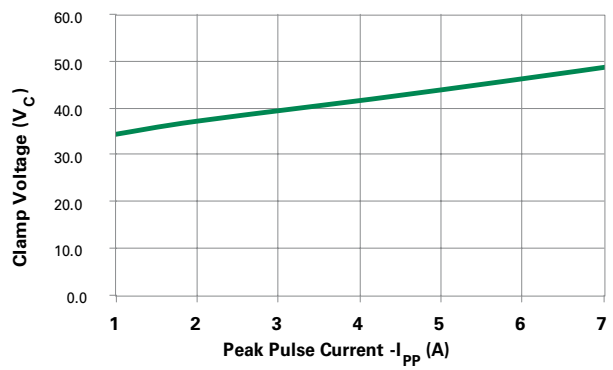


Capacitance vs. Reverse Bias

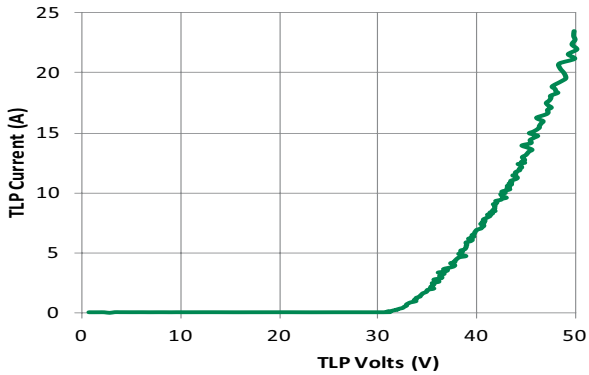


Revised: 09/19/19

Clamping Voltage vs. Peak Pulse Current



Transmission Line Pulsing (TLP) Plot

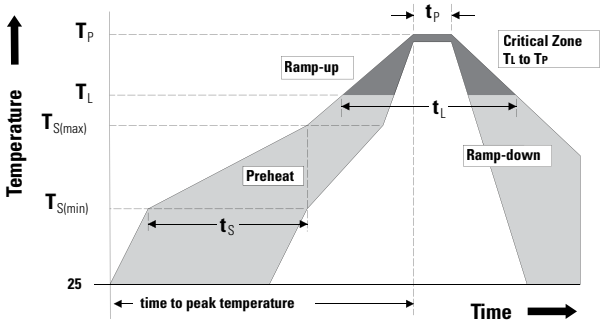


Soldering Parameters

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	Alloy 42
Lead Coplanarity	0.0004 inches (0.102mm)
Substrate Material	Silicon
Body Material	Molded Compound
Flammability	UL Recognized compound meeting flammability rating V-0



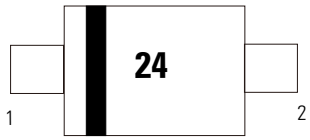
Revised: 09/19/19

TVS Diode Array (SPA® Diodes)

Lightning Surge Protection- SP4024 Series

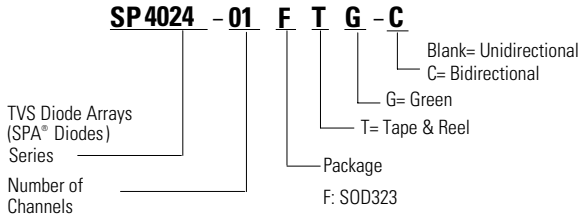
Part Marking System

SP4024-01FTG



SP4024-01FTG-C

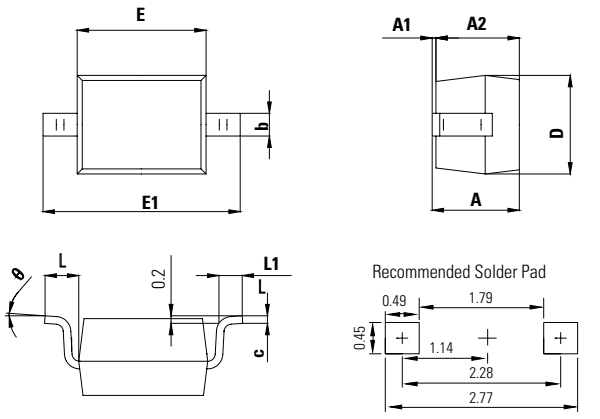
Part Numbering System



Ordering Information

Part Number	Package	Min. Order Qty.
SP4024-01FTG	SOD323	3000
SP4024-01FTG-C	SOD323	3000

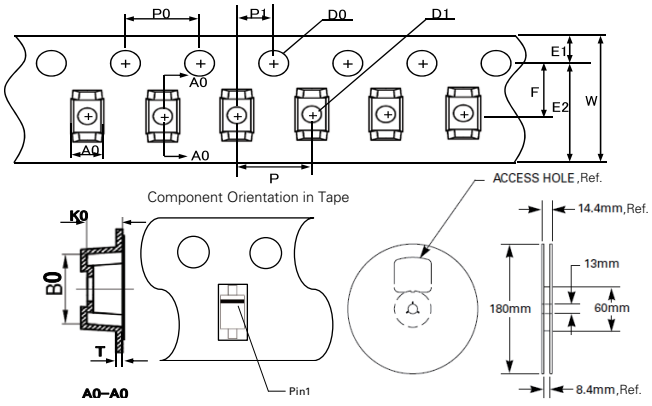
Package Dimensions -SOD323



Unit: mm

Symbol	SOD323			
	Millimeters		Inches	
	Min	Max	Min	Max
A	0.8	1.00	0.031	0.039
A1	0.00	0.10	0.000	0.004
A2	0.80	0.90	0.031	0.035
b	0.25	0.35	0.010	0.014
c	0.08	0.15	0.003	0.006
D	1.20	1.40	0.047	0.055
E	1.60	1.80	0.063	0.071
E1	2.50	2.70	0.098	0.106
L1	0.25	0.40	0.010	0.016

Embossed Carrier Tape & Reel Specification — SOD323



8mm TAPE AND REEL

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

Revised: 09/19/19

Mouser Electronics

Authorized Distributor

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

Littelfuse:

SP4024-01FTG SP4024-01FTG-C