

Absolute Maximum Ratings

Symbol	Parameter	Value	Units
I_{PP}	Peak Current ($t_p=8/20\mu s$)	2.0	A
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.

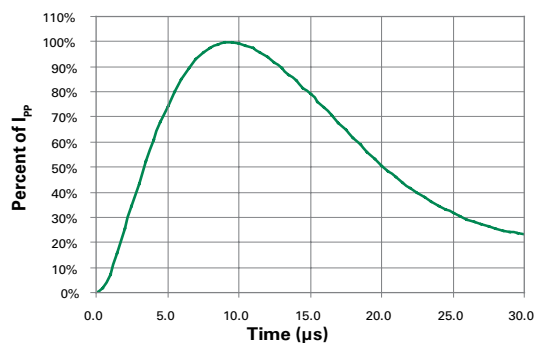
Electrical Characteristics ($T_{OP}=25^{\circ}C$)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Units
Reverse Standoff Voltage	V_{RWM}				18	V
Reverse Leakage Current	I_{LEAK}	$V_R=18V$		10	50	nA
Clamp Voltage ¹	V_C	$I_{PP}=1A, t_p=8/20\mu s, Fwd$		31	35	V
		$I_{PP}=2A, t_p=8/20\mu s, Fwd$		34	38	V
ESD Withstand Voltage ¹	V_{ESD}	IEC 61000-4-2 (Contact)	±10			kV
		IEC 61000-4-2 (Air)	±15			kV
Dynamic Resistance ²	R_{DYN}	TLP, $t_p=100ns$, I/O to GND		0.75		Ω
Diode Capacitance ¹	$C_{I/O-I/O}$	Reverse Bias=0V, f=1 MHz		0.3	0.45	pF

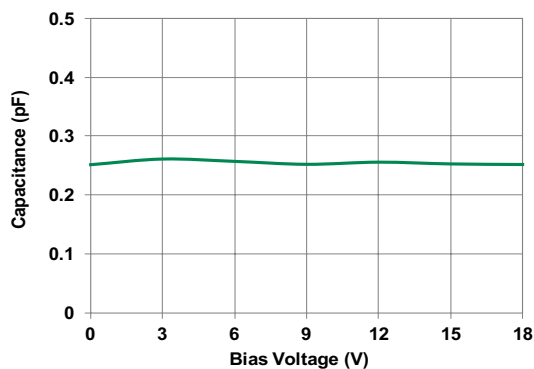
Note: 1. Parameter is guaranteed by design and/or component characterization.

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

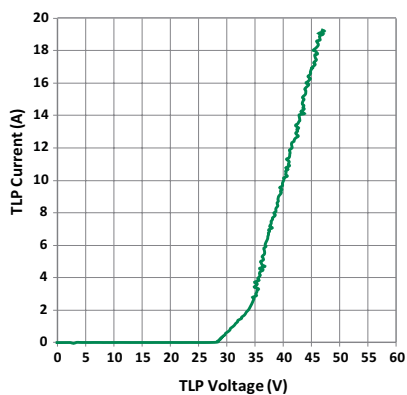
8/20μS Pulse Waveform



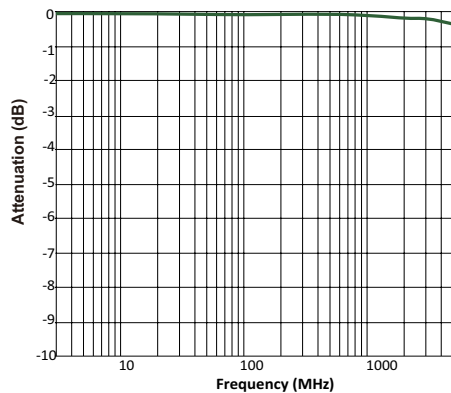
Capacitance vs. Reverse Bias



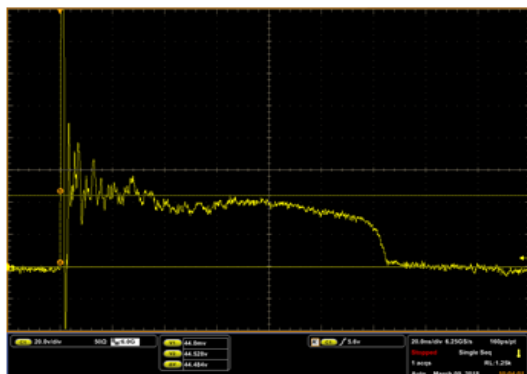
Transmission Line Pulsing (TLP) Plot



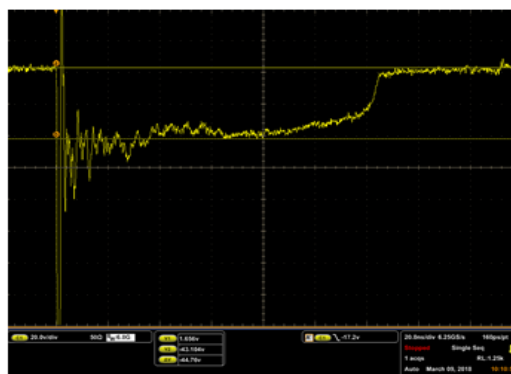
Insertion Loss (S21)



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

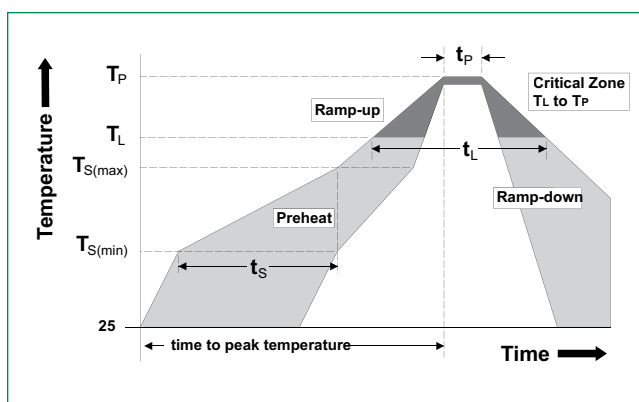


IEC 61000-4-2 -8kV Contact ESD Clamping Voltage

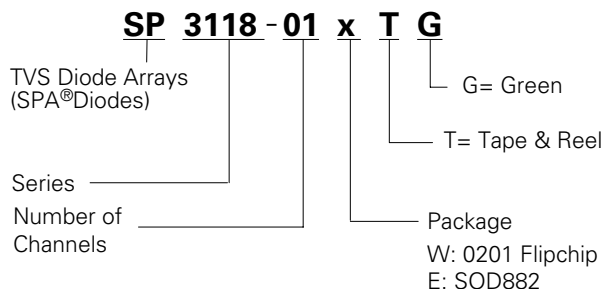


Soldering Parameters

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



Part Numbering System



Part Marking System

SP3118-01WTG



SP3118-01ETG



Product Characteristics of 0201 Flipchip

Lead Plating	Sn
Lead Material	Copper
Lead Coplanarity	6µm(max)
Substrate material	Silicon
Body Material	Silicon

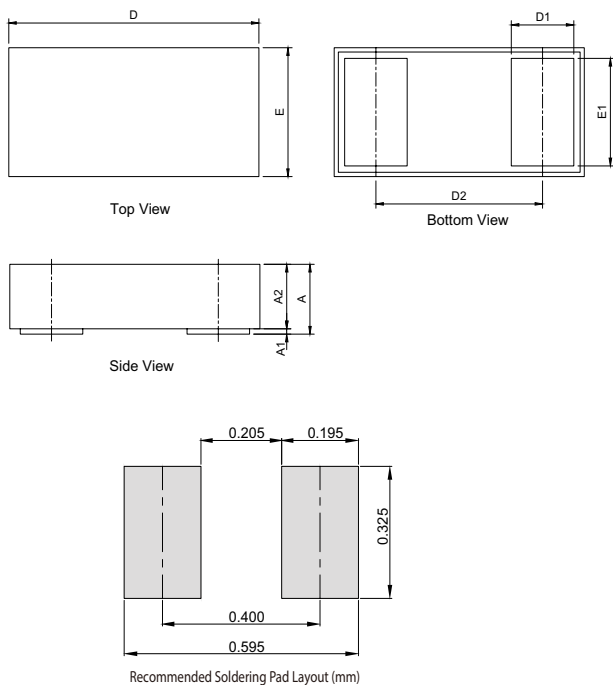
Product Characteristics of SOD882

Lead Plating	Pre-Plated Frame
Lead Material	Copper Alloy
Substrate material	Silicon
Body Material	Molded Epoxy
Flammability	UL Recognized epoxy meeting flammability rating V-0.

Ordering Information

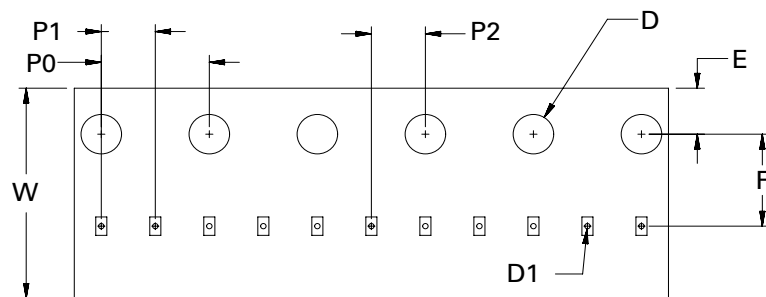
Part Number	Package	Min. Order Qty.
SP3118-01WTG	0201 Flipchip	10000
SP3118-01ETG	SOD882	10000

Package Dimensions — 0201 Flipchip

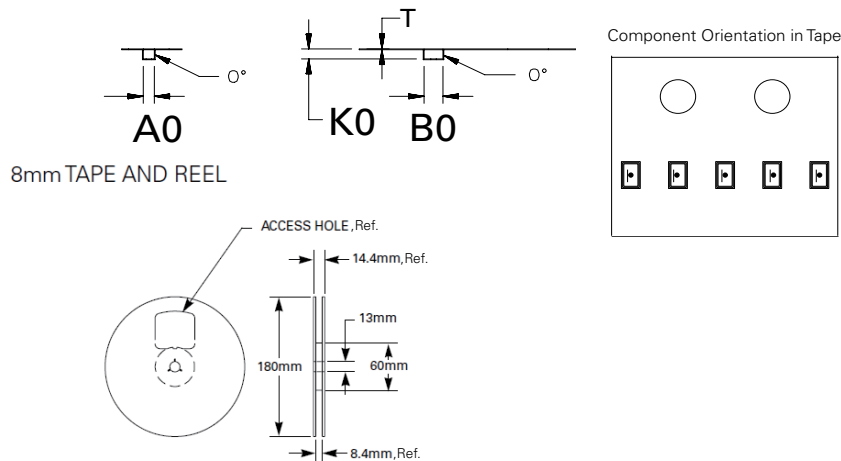


Symbol	0201 Flipchip			
	Millimeters		Inches	
	Min	Max	Min	Max
D	0.605	0.655	0.0238	0.0258
E	0.305	0.355	0.0120	0.0140
D1	0.145	0.155	0.0057	0.0061
E1	0.245	0.255	0.0096	0.0100
D2	0.400 BSC		0.0157 BSC	
A	0.273	0.329	0.0107	0.0130
A2	0.265	0.315	0.0104	0.0124
A1	0.008	0.014	0.0003	0.0006

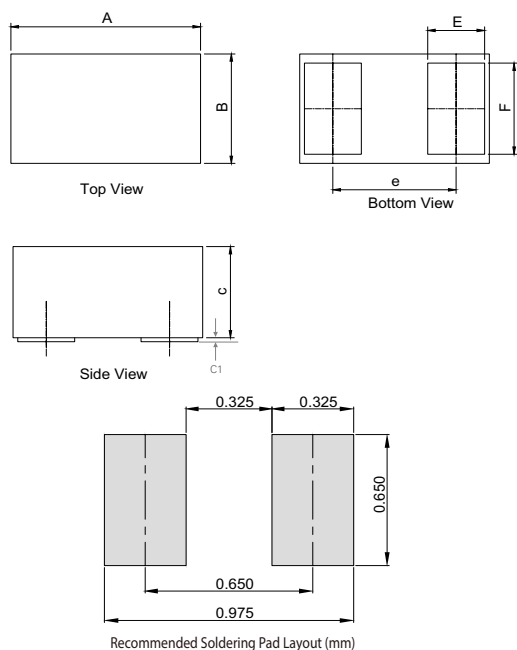
Embossed Carrier Tape & Reel Specification — 0201 Flipchip



Symbol	Millimeters
A0	0.41 +/- 0.03
B0	0.70 +/- 0.03
D	ø 1.50 + 0.10
D1	ø 0.20 +/- 0.05
E	1.75 +/- 0.10
F	3.50 +/- 0.05
K0	0.38 +/- 0.03
P0	4.00 +/- 0.10
P1	2.00 +/- 0.05
P2	2.00 +/- 0.05
W	8.00 + 0.30 / - 0.10
T	0.23 +/- 0.02

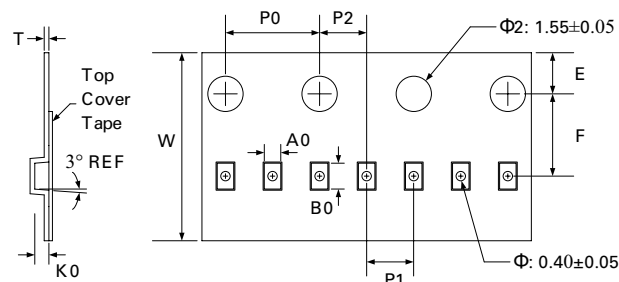


Package Dimensions — SOD882

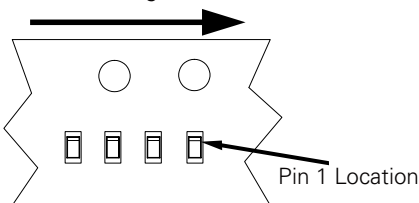


Symbol	Package	SOD882			
	JEDEC	MO-236			
	Millimeters		Inches		
	Min	Max	Min	Max	
A	0.90	1.10	0.035	0.043	
B	0.50	0.70	0.020	0.028	
C	0.40	0.60	0.016	0.024	
C1	0.00	0.05	0.000	0.002	
E	0.20	0.35	0.008	0.014	
F	0.45	0.55	0.018	0.022	
e	0.65 BSC		0.026 BSC		

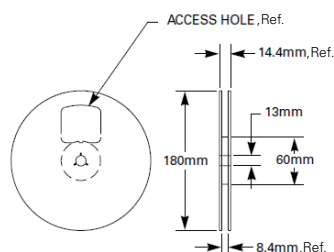
Embossed Carrier Tape & Reel Specification — SOD882



User Feeding Direction



8mm TAPE AND REEL



Tape Dimensions		
Symbol	Millimetres	
	Min	Max
A0	0.65	0.75
B0	1.10	1.20
K0	0.50	0.60
E	1.65	1.85
F	3.45	3.55
P0	3.90	4.10
P1	1.90	2.10
P2	1.95	2.05
T	1.95	2.05
W	7.90	8.10

Reel Dimensions (Size Φ178)		
Symbol	Millimetres	
	Min	Max
M	177.0	179.0
N	59.0	61.0
W	11.0	12.0
W1	8.5	9.5
H	12.5	13.5
S	1.9	2.1
K	10.8	11.2
R	0.95	1.05

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