Absolute Maximum Ratings

Symbol	Parameter	Value	Units
I_{PP}	Peak Current (t_p=8/20µs)	2.0	A
T_{OP}	Operating Temperature	-40 to 125	°C
T_{STOR}	Storage Temperature	-55 to 150	°C

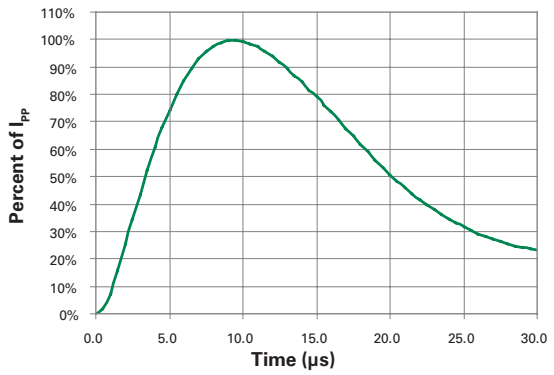
CAUTION: Stresses above those listed in "Absolute Maximum Ratings" may cause permanent damage to the component. This is a stress only rating and operation of the component at these or any other conditions above those indicated in the operational sections of this specification is not implied.

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

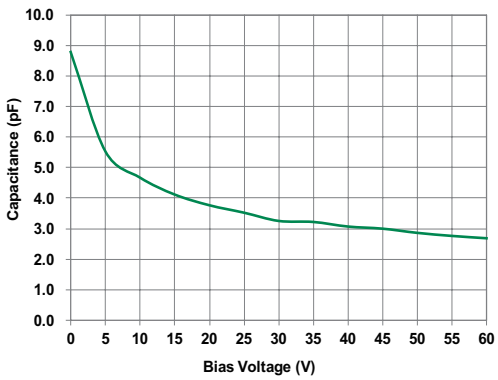
Parameter	Symbol	Test Conditions	Min	Typ	Max	Units
Reverse Standoff Voltage	V_{RWM}	$I_R \leq 1\mu A$			60	V
Reverse Leakage Current	I_{LEAK}	V_R=60V, Any I/O to GND		0.05		µA
Clamp Voltage[1]	V_C	I_{PP}=1A, t_p=8/20µs, Fwd		81		V
		I_{PP}=2A, t_p=8/20µs, Fwd		95		V
Dynamic Resistance [3]	R_{DYN}	TLP, t_P=100ns, I/O to GND		4		Ω
ESD Withstand Voltage[1]	V_{ESD}	IEC 61000-4-2 (Contact)	±15			kV
		IEC 61000-4-2 (Air)	±20			kV
Line Capacitance[1, 2]	C_L	Reverse Bias=0V; f=1MHz		8.5		pF

Note 1: Parameter is guaranteed by design and/or component characterization.
Note 2: Test equipment accuracy ±50fF.
Note 3: Transmission Line Pulse (TLP) with 100ns width, 2ns rise time, and average window t1=70ns to t2= 90ns

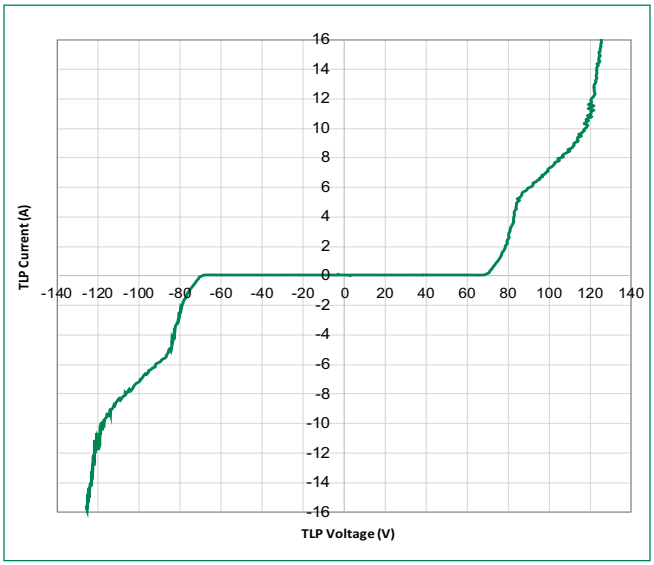
8/20µs Pulse Waveform



Capacitance vs. Reverse Bias

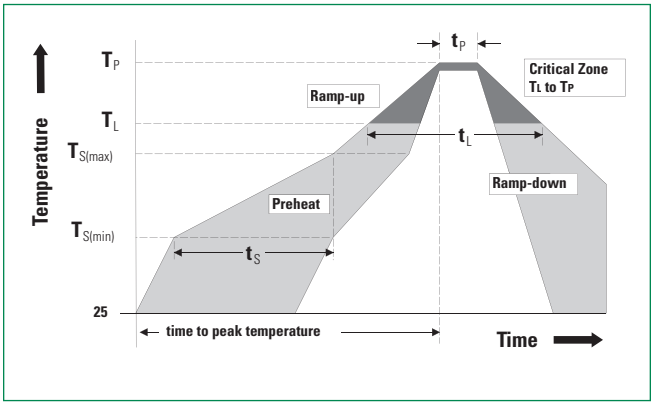


Transmission Line Pulsing (TLP) Plot



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

Revised: JC.11/03/20

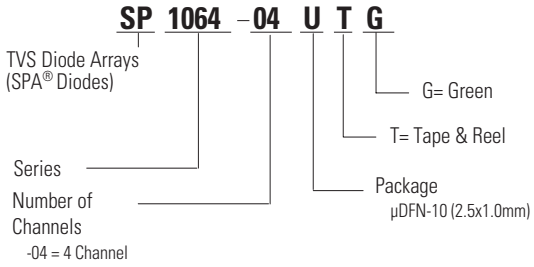
TVS Diode Array (SPA®Diodes)

General Purpose ESD Protection - SP1064 Series

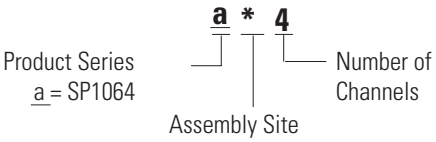
Ordering Information

Part Number	Package	Min. Order Qty.
SP1064-04UTG	µDFN-10	3000

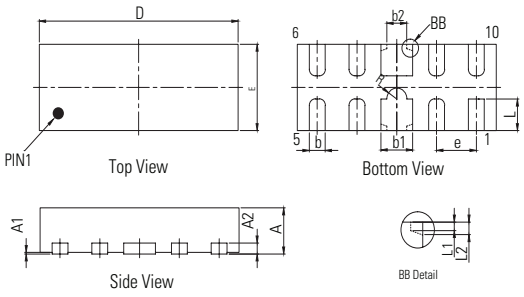
Part Numbering System



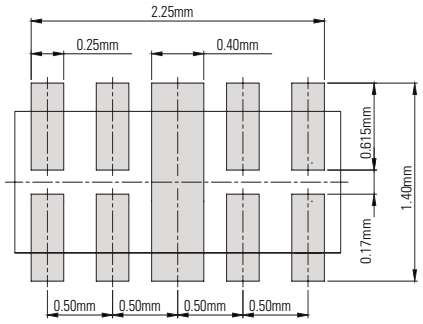
Part Marking System



Package Dimensions — µDFN-10 (2.5x1.0x0.5mm)



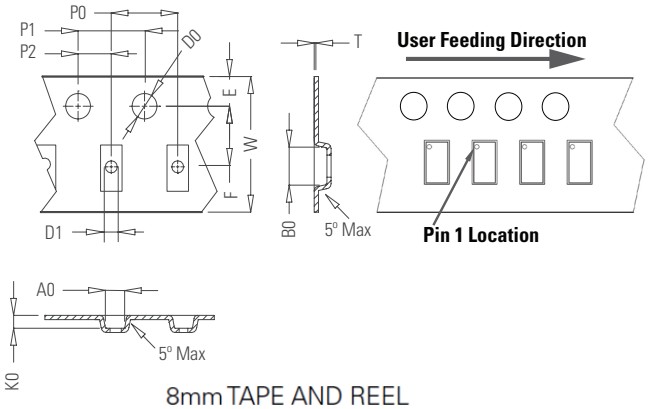
Package	µDFN-10 (2.5x1.0x0.5mm)			
JEDEC	MO-229			
Symbol	Millimeters		Inches	
	Min	Max	Min	Max
A	0.45	0.55	0.018	0.022
A1	0.00	0.05	0.000	0.002
A2	0.10	0.20	0.004	0.008
b	0.15	0.25	0.006	0.010
b1	0.35	0.45	0.014	0.018
b2	0.25 REF (Optional)		0.010 REF (Optional)	
D	2.40	2.60	0.098	0.106
E	0.90	1.10	0.037	0.045
L	0.30	0.45	0.012	0.018
e	0.50 BSC		0.020 BSC	
R	0.05	0.15	0.002	0.006



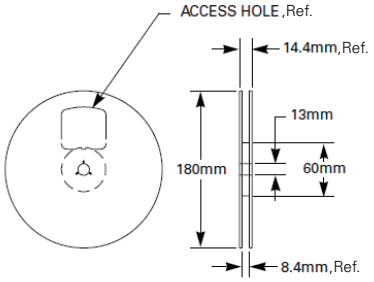
Recommended Soldering Layout

Revised: JC.11/03/20

Embossed Carrier Tape & Reel Specification — µDFN-10



8mm TAPE AND REEL



Package	µDFN-10 (2.5x1.0x0.5mm)
Symbol	**Millimeters**
A0	1.30 +/- 0.10
B0	2.83 +/- 0.10
D0	Ø 1.50 + 0.10
D1	Ø 1.00 + 0.25
E	1.75 +/- 0.10
F	3.50 +/- 0.05
K0	0.65 +/- 0.10
P0	4.00 +/- 0.10
P1	4.00 +/- 0.10
P2	2.00 +/- 0.05
T	0.254 +/- 0.02
W	8.00 + 0.30 /- 0.10

Revised: JC.11/03/20