

Features

Miniaturized packaging size suitable
for high-density applications
4-Channel uni-directional ESD diode
Standard Capacitance 0.65 pF
Low Clamping Voltage: $V_C=13V@I_{PP}=5A$
Reverse Working (Stand-off) Voltage: 5V
Low Leakage current
Response Time is Typically < 1 ns

Mechanical Data

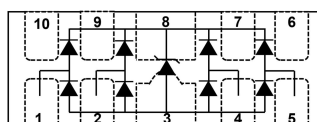
Package: DFN2510-10 (2.5×1.0×0.5mm)
Ultra low leakage: nA level
Case Material: "Green" Molding Compound.
UL Flammability Classification Rating 94V-0
Moisture Sensitivity: Level 3 per J-STD-020
Terminal Connections: See Diagram Below

Applications

Smartphones, tablet computers
Blu-ray and DVD recorders and players
Video equipment and accessories

0524P

Schematic & PIN Configuration



DFN2510

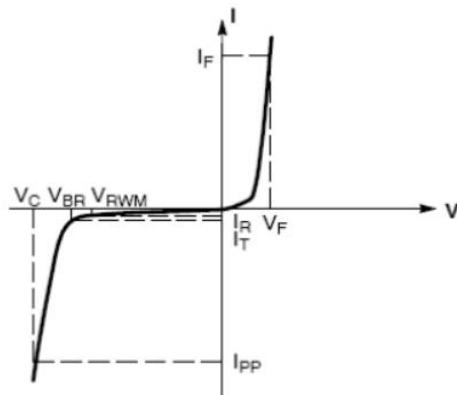


Absolute Maximum Rating

Rating	Symbol	Value	Unit
Peak pulse power ($t_p = 8/20\mu s$)	P_{PK}	90	W
ESD according to IEC61000-4-2 air discharge	V_{ESD}	± 20	kV
ESD according to IEC61000-4-2 contact discharge		± 20	
Operating Temperature Range	T_J	-55~125	$^{\circ}C$
Storage temperature	T_{STG}	-55~150	$^{\circ}C$

Electrical Characteristics (TA=25°C unless otherwise specified)

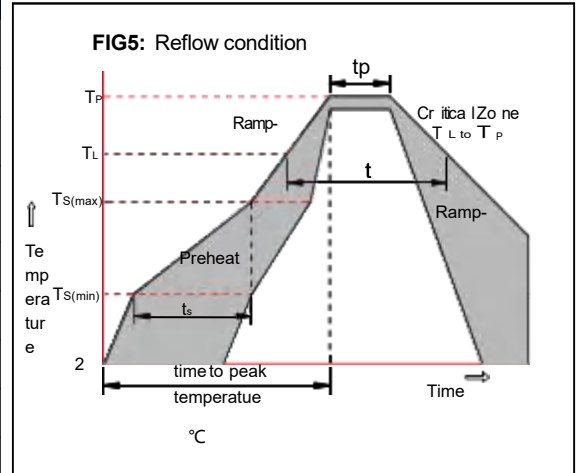
Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
I_T	Test Current
V_{BR}	Breakdown Voltage @ I_T
P_{PK}	Peak Power Dissipation
C	Max. Capacitance @ $V_R = 0$ and freq.=1 MHz



Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Stand-off Voltage	V_{RW}				5	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	6.0			V
Forward Voltage	V_F	$I_F=15mA$			1.2	V
Reverse Leakage Current	I_R	$V_{RWM}=5.0V$			100	nA
Clamping Voltage	V_C	$I_{PP}=1A, t_p=8/20\mu s$			10	V
Clamping Voltage	V_C	$I_{PP}=5A, t_p=8/20\mu s$			13	V
Junction Capacitance	C_J	$V_R=0V, f=1MHz$, Any I/O to Ground		0.45	0.65	pF
Junction Capacitance	C_J	$V_R=0V, f=1MHz$, between I/O pins		0.25	0.35	pF

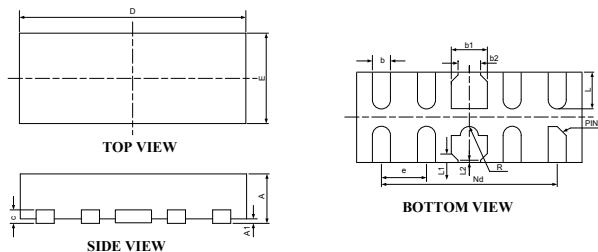
Soldering parameters

Reflow Condition		Pb-Free assembly (see as below)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150°C
	-Temperature Max($T_{s(max)}$)	+200°C
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3°C/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217°C
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_P)		+260(+0/-5)°C
Time within 5°C of actual Peak Temp (t_P)		30 secs. Max
Ramp-down Rate		6°C/sec. Max
Time 25°C to Peak Temp (T_P)		8 min. Max
Do not exceed		+260°C

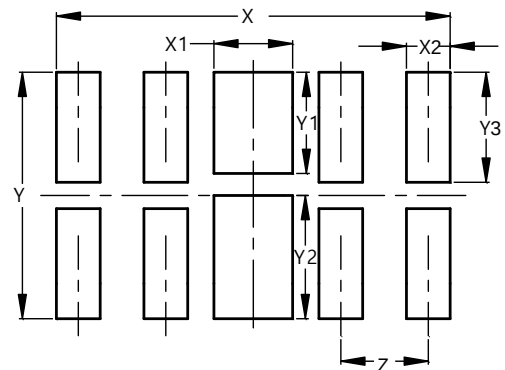


Package Dimensions & Suggested Pad Layout

DFN2510-10L



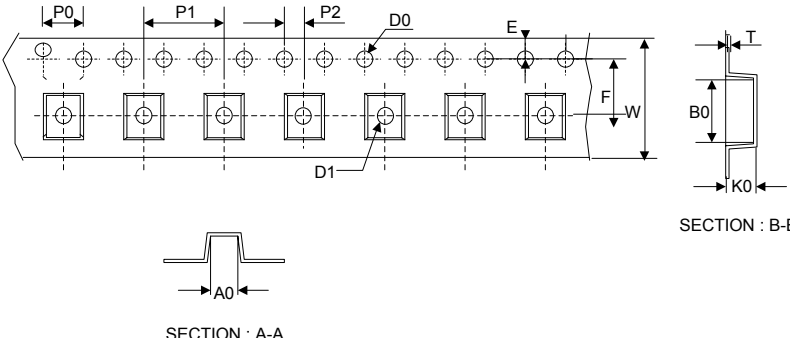
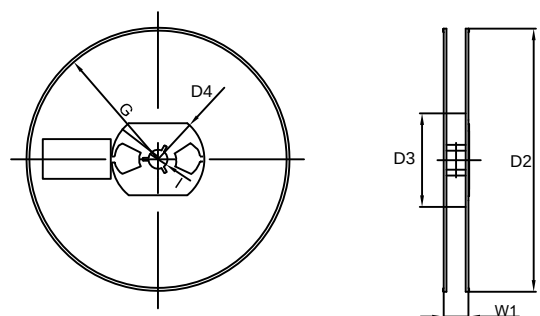
SYM	DIMENSIONS					
	MILLIMETERS			INCHES		
A	0.45	0.50	0.55	0.018	0.020	0.022
A1	0.00	0.02	0.05	0.000	0.001	0.002
b	0.15	0.20	0.25	0.006	0.008	0.010
b1	0.35	0.40	0.45	0.014	0.016	0.018
b2	0.20	0.25	0.30	0.008	0.010	0.012
c	0.10	0.15	0.20	0.004	0.006	0.008
D	2.45	2.50	2.55	0.098	0.100	0.102
e	0.50BSC			0.020BSC		
Nd	2.00BSC			0.080BSC		
E	0.95	1.00	1.05	0.038	0.040	0.042
L	0.35	0.40	0.45	0.014	0.016	0.018
L1	0.075REF			0.003REF		
L2	0.050REF			0.002REF		
h	0.08	0.12	0.15	0.003	0.005	0.006
R	0.05	0.10	0.15	0.002	0.004	0.006



Dimensions	Value (in mm)
Z	0.500
X	2.250
X1	0.450
X2	0.250
Y	1.400
Y1	0.570
Y2	0.700
Y3	0.600

Dimensions in inches and (millimeters)

Tape & reel specification

Tape		Symbol	Dimension (mm)
		P0	4.00±0.20
		P1	4.00±0.20
		P2	1.55±0.20
		D0	1.55±0.20
		D1	0.65±0.20
		E	1.55±0.25
		F	3.60±0.20
		W	8.00±0.20
		A0	1.65±0.20
		B0	3.00±0.20
		K0	1.10±0.20
		T	0.20±0.20
		D2	177.0±5.0
		D3	55Min.
7" Reel		D4	R24.6±2.0
		G	R82.0±2.0
		I	13.0±2.0
		W1	10.20±3.0
		Quantity: 3000PCS	