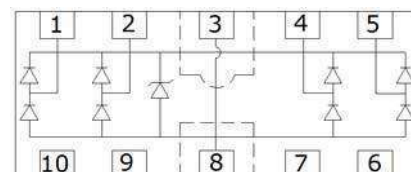


Single Line TVS Diode for ESD

TVS Diode Array

Features

- ◆ 150 Watts peak pulse power ($t_p = 8/20\mu s$)
- ◆ Transient protection for high speed data lines to
IEC 61000-4-2 (ESD) $\pm 15kV$ (air), $\pm 10kV$ (contact)
IEC 61000-4-4 (EFT) 40A (5/50ns)
- ◆ Working voltages : 5V
- ◆ Protects two or four I/O lines
- ◆ Ultra Low capacitance: 0.3pf (typical between I/O channel)
- ◆ Low operating and clamping voltages
- ◆ Solid-state silicon avalanche technology



DFN2510

Applications

- ◆ High Definition Multi-Media Interface (HDMI)
- ◆ USB 1.1/2.0/3.0/OTG
- ◆ IEEE 1394 Firewire Ports
- ◆ Projection TV Monitors and Flat Panel Displays
- ◆ Notebook Computers
- ◆ Set Top Box

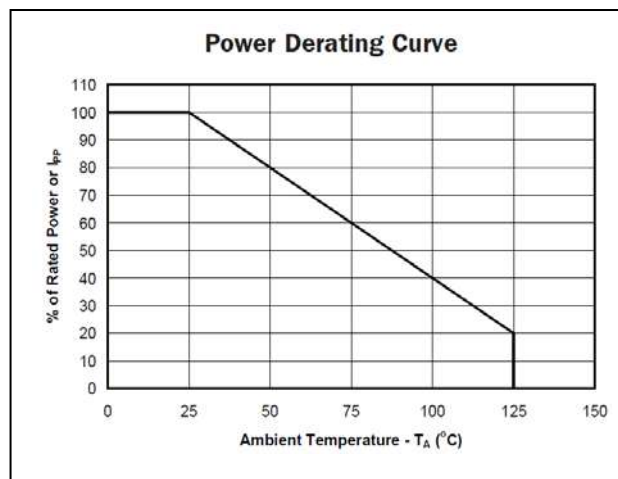
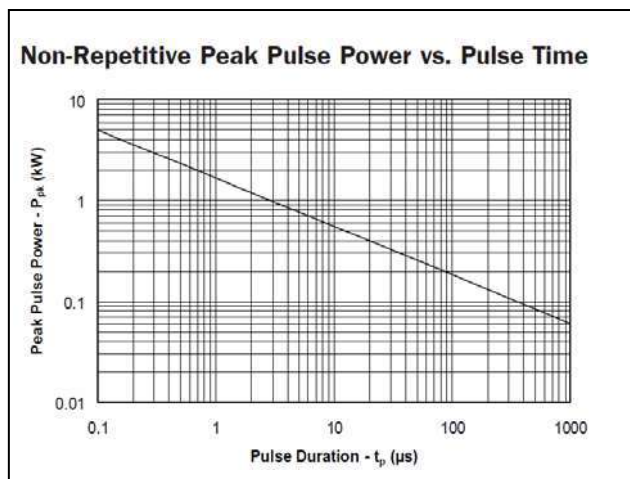
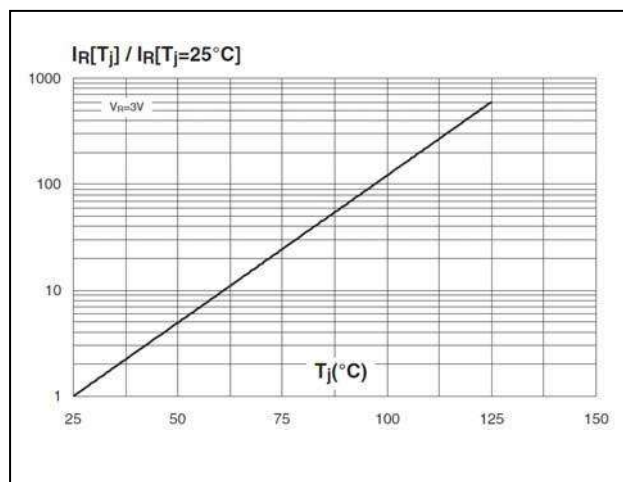
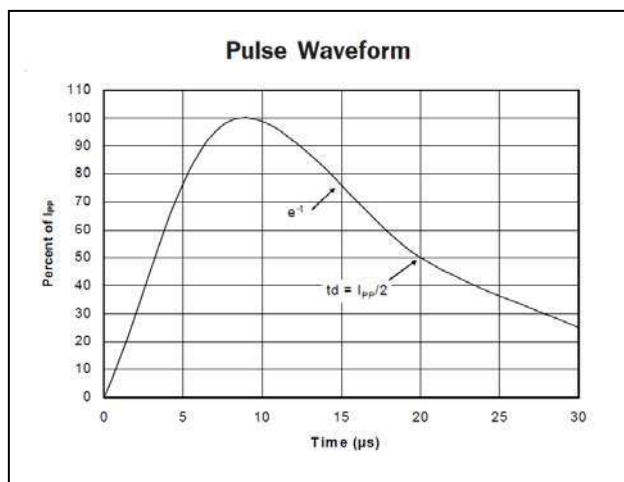
Maximum Rating @ $T_a = 25^\circ C$ unless otherwise specified

Symbol	Parameter	Ratings	Units
P_{PK}	Peak Pulse Power ($t_p = 8/20\mu s$)	150	Watts
T_L	Lead Soldering Temperature	260(10sec.)	$^\circ C$
T_J	Operating Temperature	-55 to +125	$^\circ C$
T_{STG}	Storage Temperature	-55 to +150	$^\circ C$

Electrical Characteristics@ Ta=25°C unless otherwise

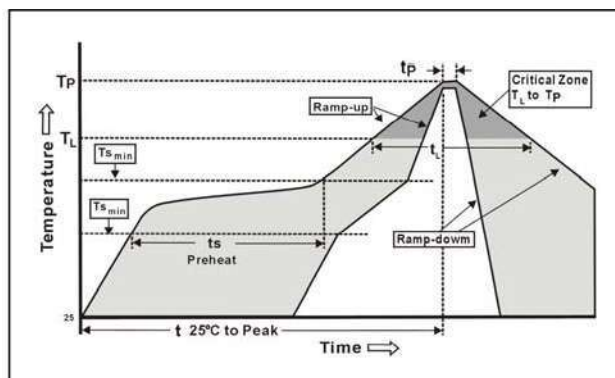
Symbol	Parameter	Conditions	Min.	Typ.	Max.	Units
V_{RWM}	Reverse Working Voltage	Any I/O to Ground			5.0	V
V_{BR}	Reverse Breakdown Voltage	$I_R = 1mA$, Any I/O to Ground	6.0		7.8	V
I_R	Reverse Leakage Current	$V_{RWM} = 5V$, Any I/O to Ground			1	μA
V_F	Diode Forward Voltage	$I_F = 15mA$		0.85	1.2	V
V_C	Clamping Voltage	$I_{PP} = 1A$, $t_p = 8/20\mu s$, any I/O pin to Ground			9.8	V
		$I_{PP} = 4A$, $t_p = 8/20\mu s$, any I/O pin to Ground			15	V
C_J	Junction Capacitance	$V_R = 0V$, $f = 1MHz$, between I/O pins		0.25	0.3	pF
		$V_R = 0V$, $f = 1MHz$, any I/O pin to Ground		0.3	0.6	pF

Typical Characteristics@ Ta=25°C unless otherwise specified



Soldering Parameters

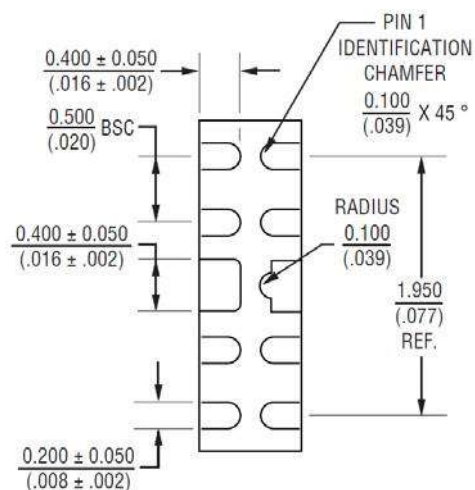
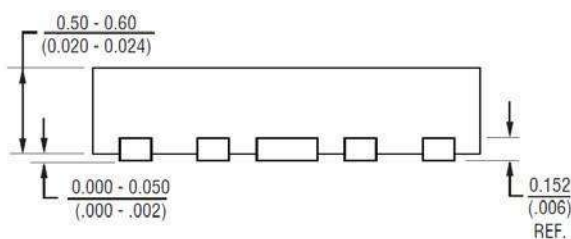
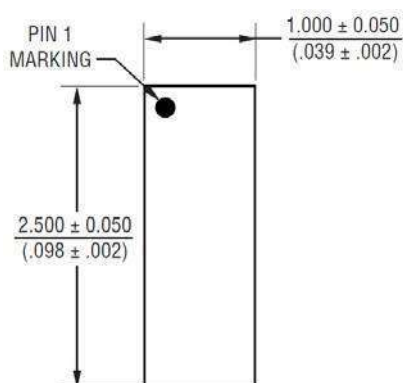
Reflow Condition		Fb – Free assembly
Pre Heat	-Temperature Min ($T_{s(Min)}$)	150°C
	-Temperature Max ($T_{s(Max)}$)	200°C
	-Time (Min to max) (t_i)	60 – 180 secs
Average ramp up rate (Liquidus) Temp (T_L) to peak		3°C/second Max
$T_{s(Max)}$ to T_L - Ramp-up Rate		3°C/second Max
Reflow	-Temperature (T_L) (Liquidus)	217°C
	-Temperature (t_L)	60 – 150 seconds
Peak Temperature (T_p)		250 ^{+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



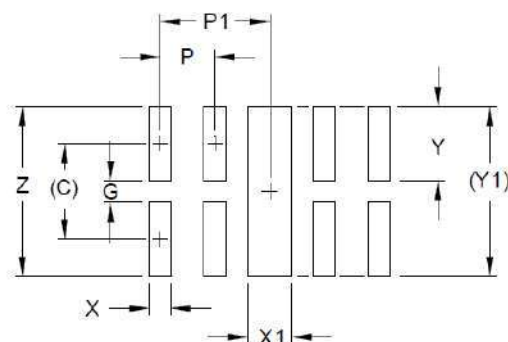
Package Outline

Plastic surface mounted package

DFN2510



Soldering Footprint



DIMENSIONS		
DIM	INCHES	MILLIMETERS
C	(.034)	(0.875)
G	.008	0.20
P	.020	0.50
P1	.039	1.00
X	.008	0.20
X1	.016	0.40
Y	.027	0.675
Y1	(.061)	(1.55)
Z	.061	1.55

Package And Marking Information

Device	Package	Shipping	Reel Size
KW0524P	DFN2510	3000/Reel	7 inch