

MSKSEMI

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT

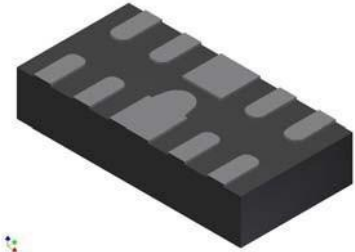
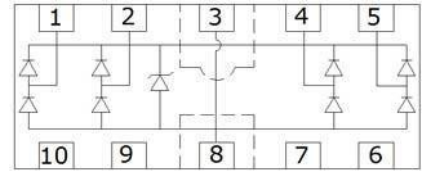


PLED

Product data sheet

Features

- ◆ 150 Watts peak pulse power (tp = 8/20µs)
- ◆ Transient protection for high speed data lines to IEC 61000-4-2 (ESD) ±15kV (air), ±8kV (contact) IEC 61000-4-4 (EFT) 40A (5/50ns)
- ◆ Working voltages : 3.3V
- ◆ 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

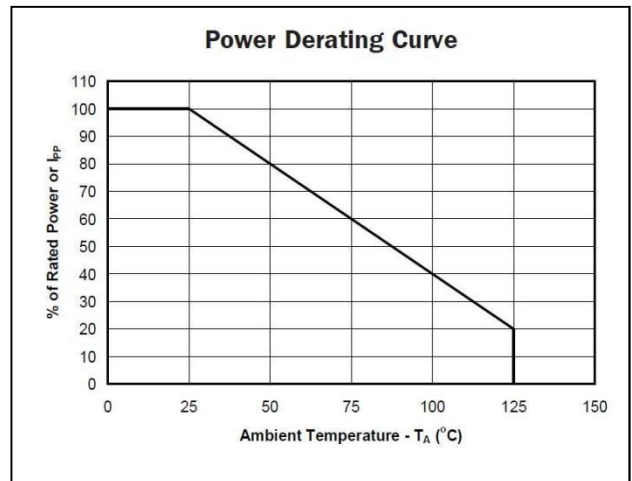
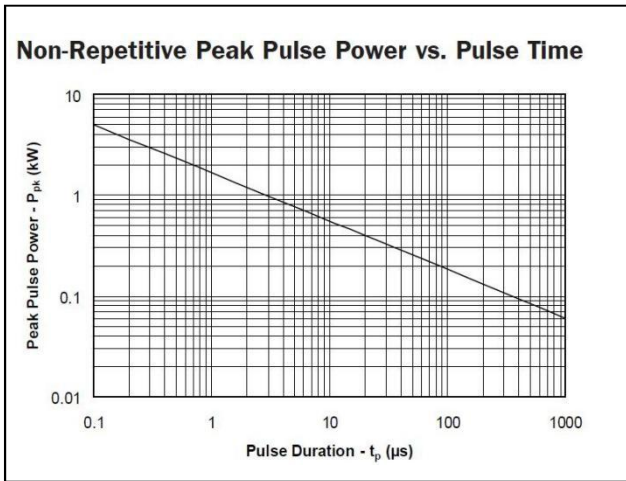
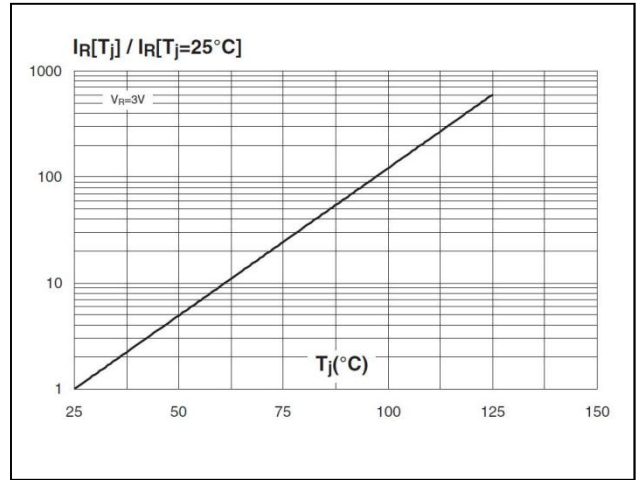
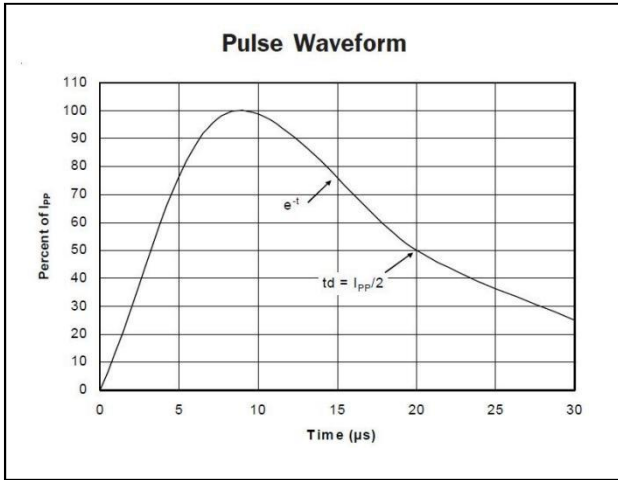
Maximum Rating @ Ta=25°C unless otherwise specified

Symbol	Parameter	Ratings	Units
P _{PK}	Peak Pulse Power (tp = 8/20µs)	150	Watts
T _L	Lead Soldering Temperature	260(10sec.)	°C
T _J	Operating Temperature	-55 to +125	°C
T _{STG}	Storage Temperature	-55 to +150	°C

Electrical Characteristics@ Ta=25°C unless otherwise

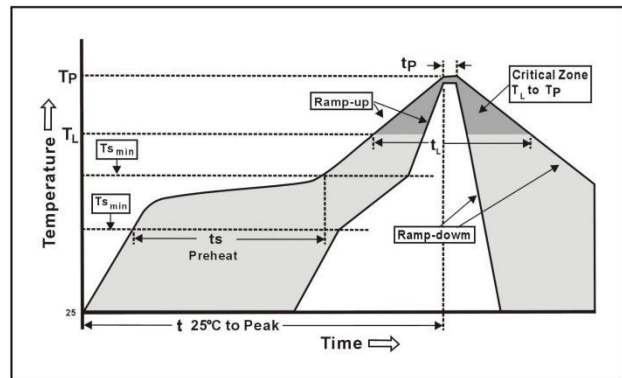
Symbol	Parameter	Conditions	Min.	Typ.	Max.	Units
V _{RWM}	Reverse Working Voltage	Any I/O to Ground		3.3		V
V _{BR}	Reverse Breakdown Voltage	I _T = 1mA, Any I/O to Ground	4.5			V
I _R	Reverse Leakage Current	V _{RWM} = 5V, Any I/O to Ground			1	µA
V _F	Diode Forward Voltage	I _F = 15mA		0.85	1.2	V
V _C	Clamping Voltage	I _{PP} = 1A, tp =8/20µs, any I/O pin to Ground			9.8	V
		I _{PP} = 5A, tp =8/20µs, 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		0.5	0.6	pF

Typical Characteristics@ Ta=25°C unless otherwise specified

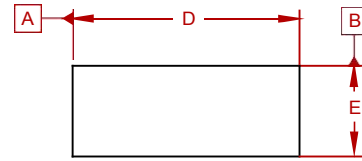
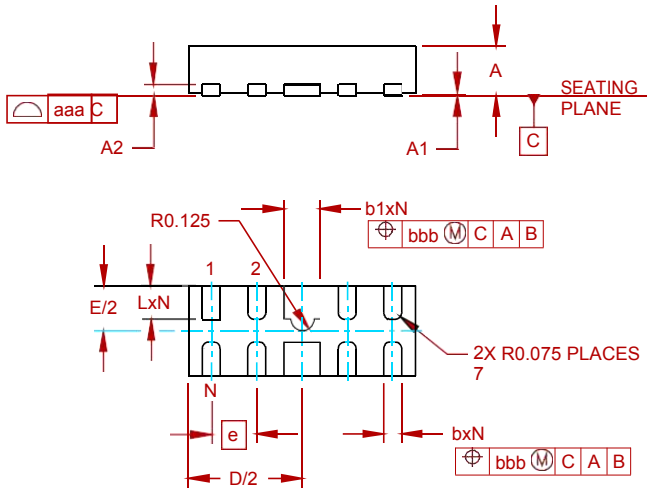


Soldering Parameters

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_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)		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



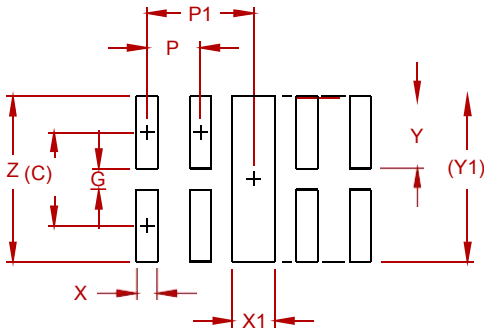
PACKAGE MECHANICAL DATA



DIM	DIMENSI ONS					
	INCHES			MILLIMETERS		
	MIN	NOM	MAX	MIN	NOM	MAX
A	.020	.023	.026	0.50	0.58	0.65
A1	0.00	.001	.002	0.00	0.03	0.05
A2	(.005)			(0.13)		
b	.006	.008	.010	0.15	0.20	0.25
b1	.014	.016	.018	0.35	0.40	0.45
D	.094	.098	.102	2.40	2.50	2.60
E	.035	.039	.043	0.90	1.00	1.10
e	.020 BSC			0.50 BSC		
L	.012	.015	.017	0.30	0.38	0.425
N	8			8		
aaa	.003			0.08		
bbb	.004			0.10		

Dimensions in millimeters

Suggested Pad Layout



DIM	DIMENSIONS	
	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

NOTES:

CONTROLLING DIMENSIONS ARE IN MILLIMETERS (ANGLES IN DEGREES).
THIS LAND PATTERN IS FOR REFERENCE PURPOSES ONLY.
CONSULT YOUR MANUFACTURING GROUP TO ENSURE YOUR COMPANY'S MANUFACTURING GUIDELINES ARE MET.

REEL SPECIFICATION

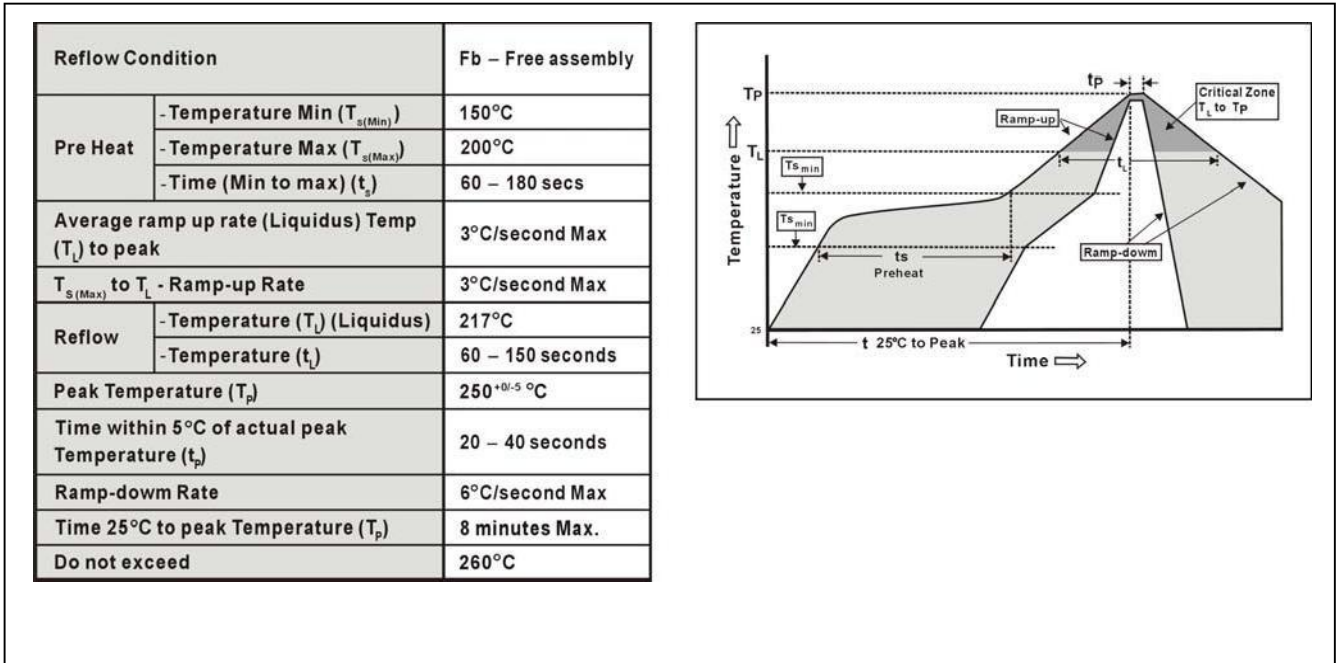
P/N	PKG	QTY
AZ9143-04F-MS	DFN2510	3000

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Transient Voltage Suppressors for ESD Protection

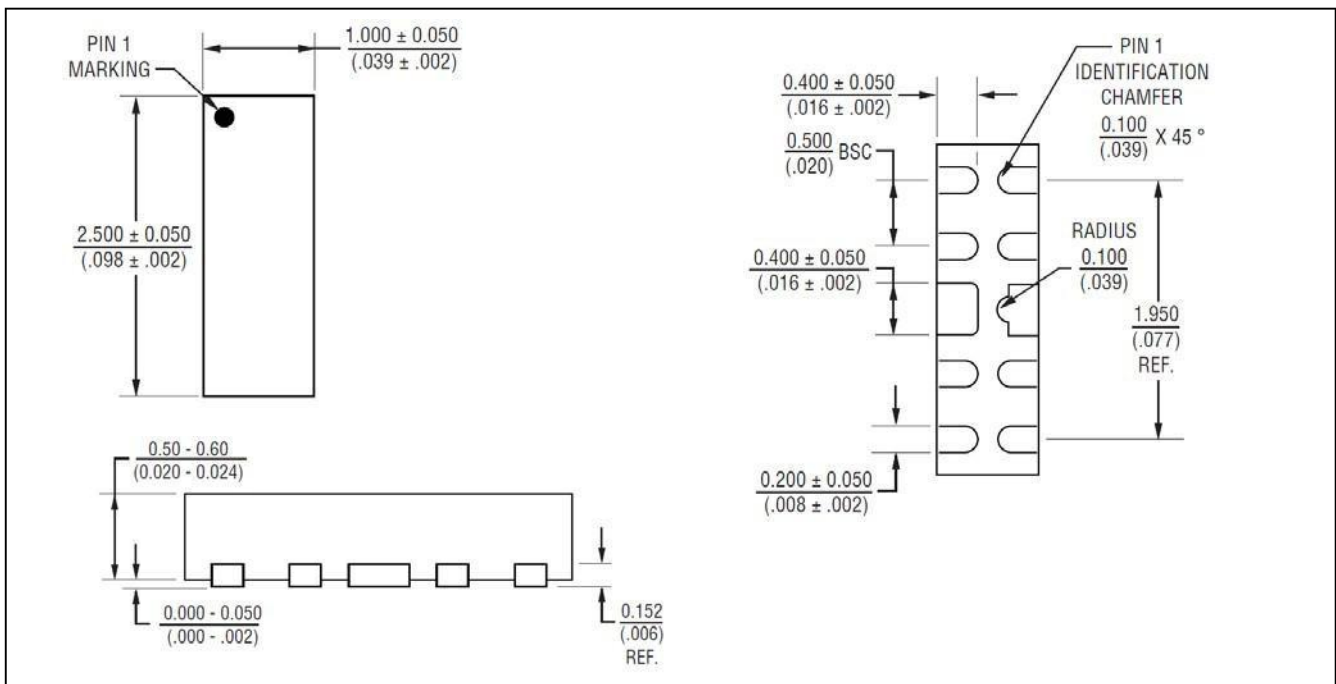
Soldering Parameters



Package Outline

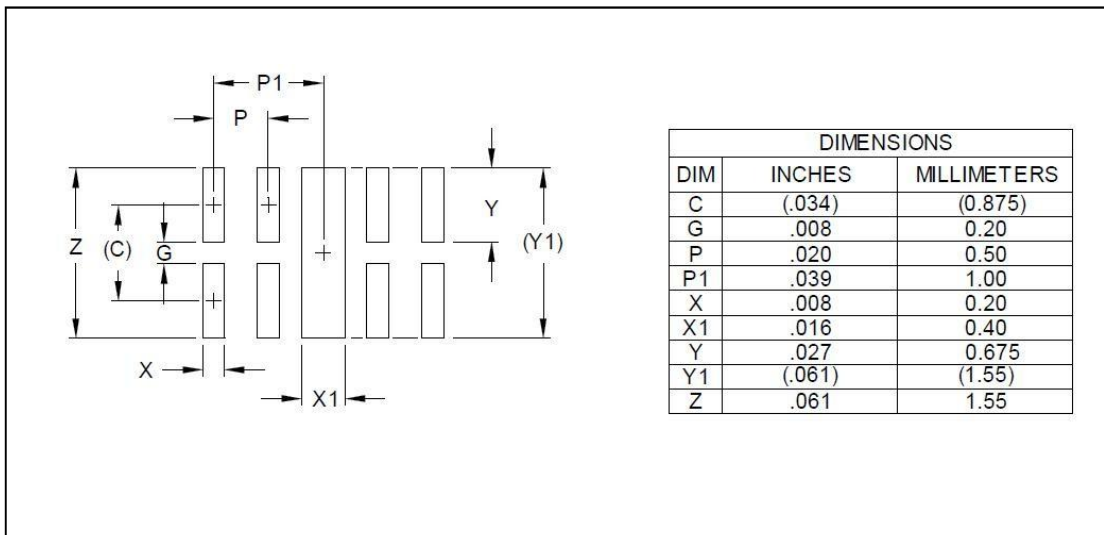
Plastic surface mounted package

DFN2510



Transient Voltage Suppressors for ESD Protection

Soldering Footprint



Package And Marking Information

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