

MSKSEMI

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



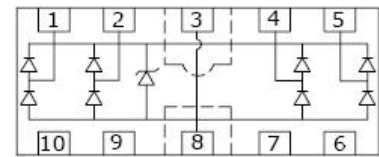
PLED

Product data sheet

www.msksemi.com

Features

- Protects two or four I/O lines
- Low capacitance: 0.5pF Typical between I/O channel
- Low leakage current
- 5V operating voltage
- Response time < 1ns
- Solid-state silicon avalanche technology
- Device meets MSL 1 requirements
- RoHS compliant



DFN2510

Applications

- High Definition Multi-Media Interface (HDMI)
- Digital Visual Interface (DVI)
- USB 1.1/2.0/3.0/OTG
- IEEE 1394 Firewire Ports
- Notebooks & Handhelds
- Projection TV & Monitors
- Set-top box
- Flat Panel Displays
- PCI Express

Mechanical Characteristics

- DFN2510 package
- Flammability Rating: UL 94V-0
- Terminal: Matte tin plated.
- Packaging: Tape and Reel
- High temperature soldering guaranteed: 260°C/10s
- Reel size: 7 inch

Maximum Ratings And Characteristics @ 25°C Ambient Temperature (unless otherwise noted)

Symbol	Parameter	Value	Units
P _{PP}	Peak Pulse Power (8/20μs)	150	W
I _{PP}	Peak Pulse Current (8/20μs)	5	A
V _{ESD}	ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	±15 ±8	kV
T _{OPT}	Operating Temperature	-55/+150	°C
T _{STG}	Storage Temperature	-55/+150	°C

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

Symbol	Parameter	Test Condition	Min	Typ	Max	Units
V _{RWM}	Reverse Working Voltage	Any I/O pin to GND			5.0	V
V _{BR}	Reverse Breakdown Voltage	I _T = 1mA Any I/O pin to GND	6.0			V
I _R	Reverse Leakage Current	V _{RWM} = 5V Any I/O pin to GND			1	μA
V _F	Diode Forward Voltage	I _F = 15mA		0.85	1.2	V
V _{C1}	Clamping Voltage 1	I _{PP} = 1A, t _p = 8/20μs Any I/O pin to GND			15.5	V
V _{C2}	Clamping Voltage 2	I _{PP} = 5, t _p = 8/20μs Any I/O pin to GND			25	V
C _{J1}	Junction Capacitance 1	V _R = 0V, f = 1MHz Between I/O pins		0.3	0.6	pF
C _{J2}	Junction Capacitance 2	V _R = 0V, f = 1MHz Any I/O pin to GND		0.45	0.8	pF

Note: I/O pins are pin 1,2,4,5.

Electrical Characteristics Curve

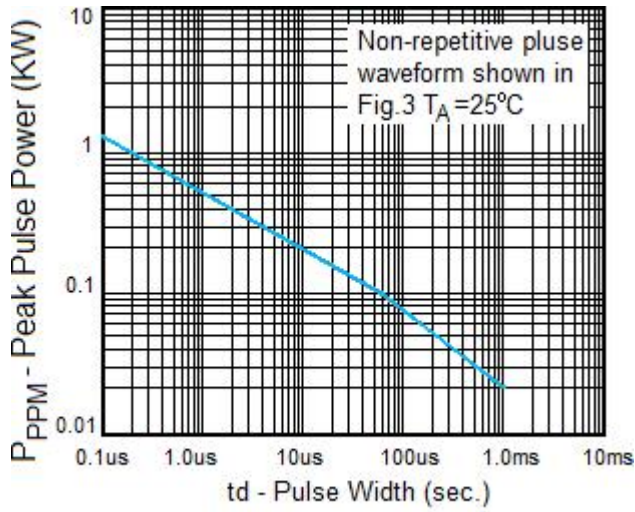


Fig. 1 Peak Pulse Power Rating

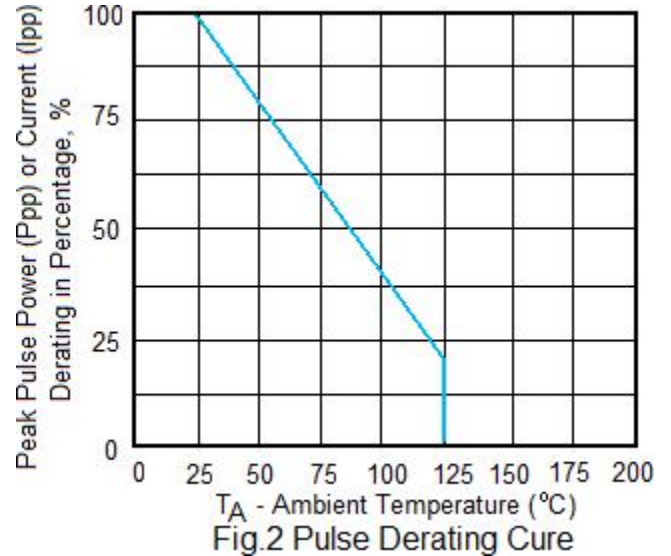


Fig. 2 Pulse Derating Cure

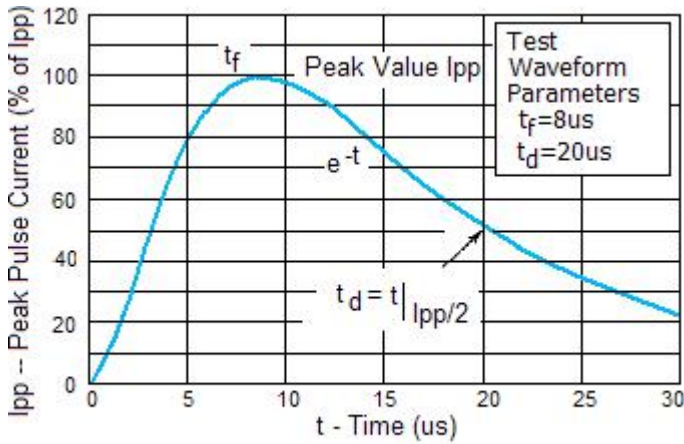


Fig. 3 Pulse Waveform

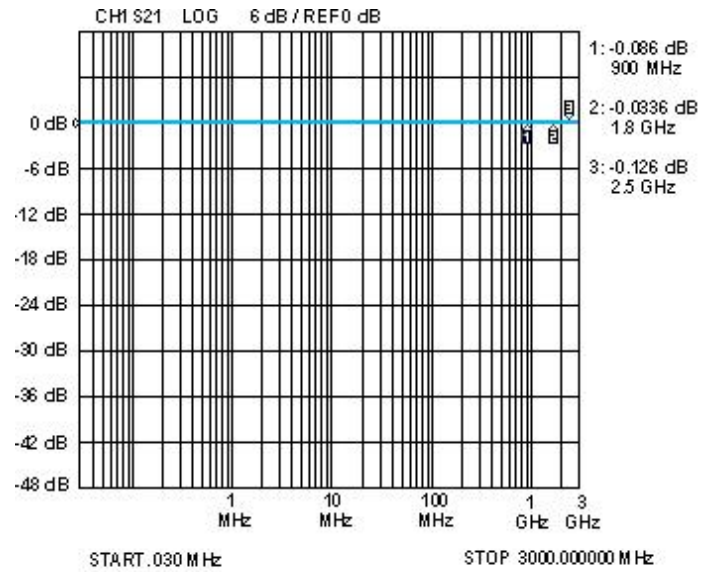
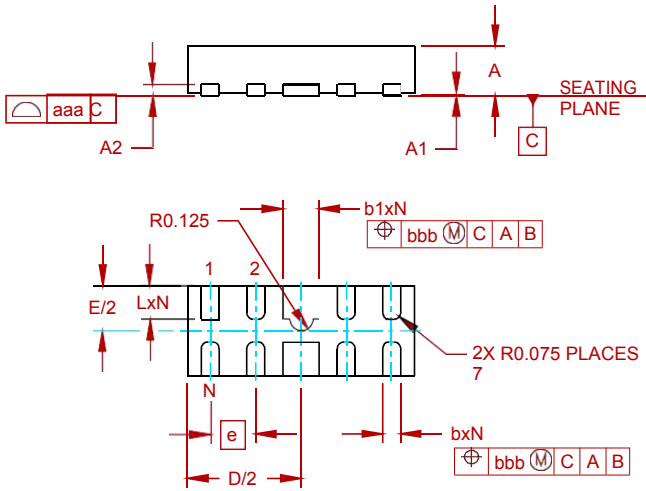
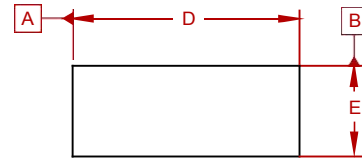


Fig. 4 Insertion Loss S21 - I/O to I/O

PACKAGE MECHANICAL DATA

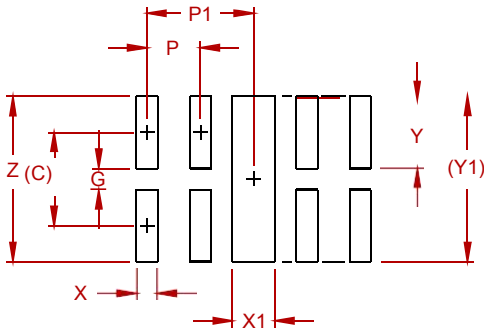


Dimensions in millimeters



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		

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
AZ1345-04F-MS	DFN2510	3000

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