

# MSKSEMI

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT

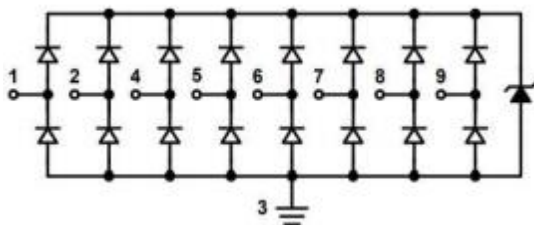


PLED

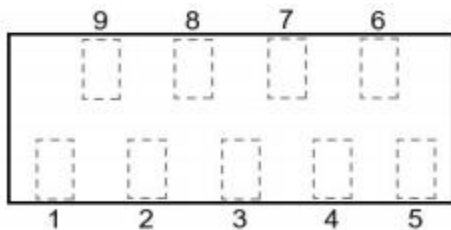
Product data sheet

[www.msksemi.com](http://www.msksemi.com)

**CIRCUIT DIAGRAM**



**PIN CONFIGURATION**



DFN3810-9L

**FEATURES**

- ✦ Transient protection for high-speed data lines  
IEC 61000-4-2(ESD)  $\pm 25KV(\text{Air})$   
 $\pm 20KV(\text{Contact})$   
IEC 61000-4-4(EFT)40A(5/50ns)  
Cable Discharge Event(CDE)
- ✦ Package optimized for high-speed lines
- ✦ Ultra-small package(3.8mm\*1.0mm\*0.5mm)
- ✦ Protects eight data lines
- ✦ Low capacitance: 0.2pF (I/O to I/O)
- ✦ Low leakage current
- ✦ Low clamping voltage
- ✦ Each I/O pin can withstand over 1000 ESD strikes for  $\pm 8KV$  contact discharge

**MACHANICAL DATA**

- ✦ DFN3810-9L package
- ✦ Flammability Rating: UL 94V-0
- ✦ Terminal: Matte tin plated.
- ✦ Packaging: Tape and Reel
- ✦ High temperature soldering guaranteed:260C/10s
- ✦ Reel size: 7 inch

**APPLICATIONS**

- ✦ SATA and eSATA interface
- ✦ LVDS interfaces
- ✦ Desktops, Servers and Notebooks
- ✦ MDDI Ports
- ✦ Display Ports
- ✦ High Definition Multi-Media Interface (HDMI)
- ✦ Digital Visual Interface (DVI)

**ABSOLUTE MAXIMUM RATING**

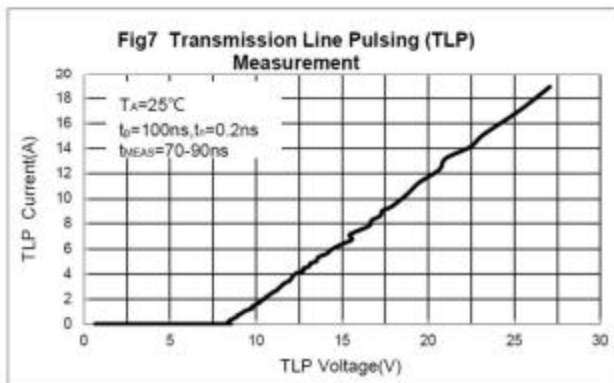
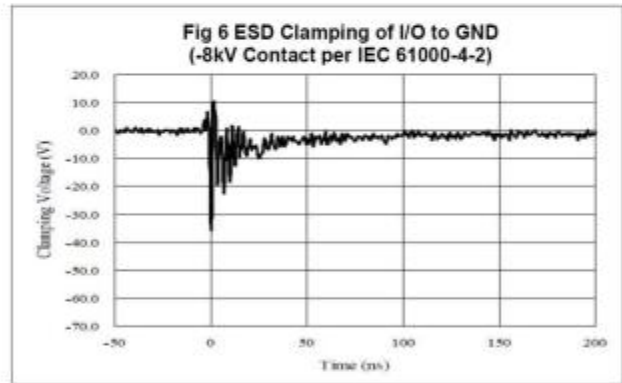
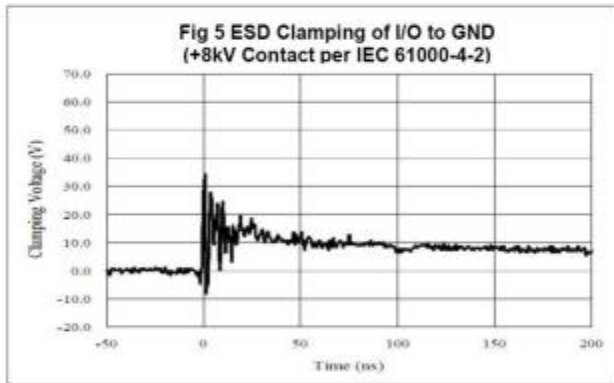
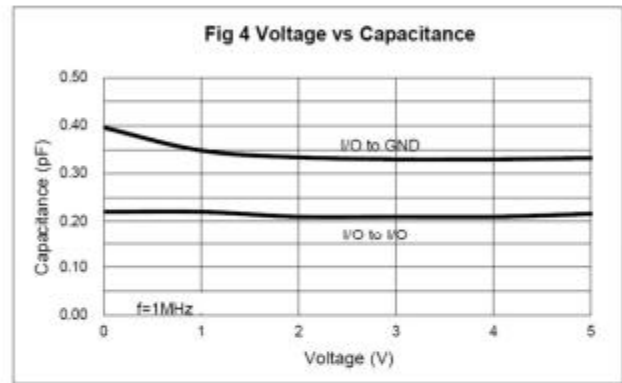
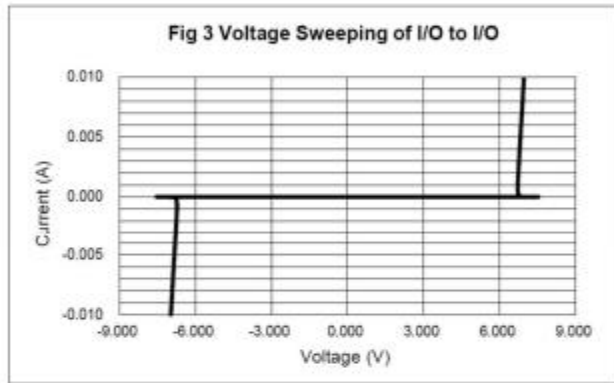
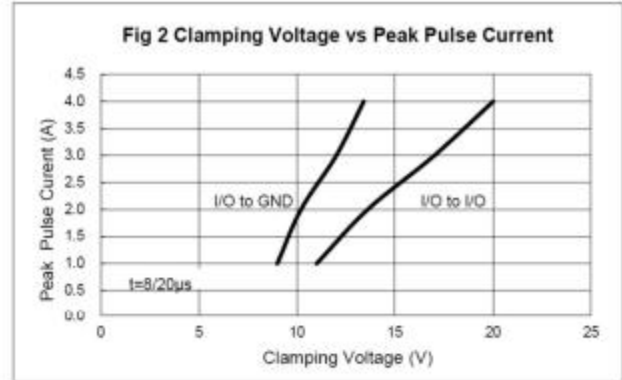
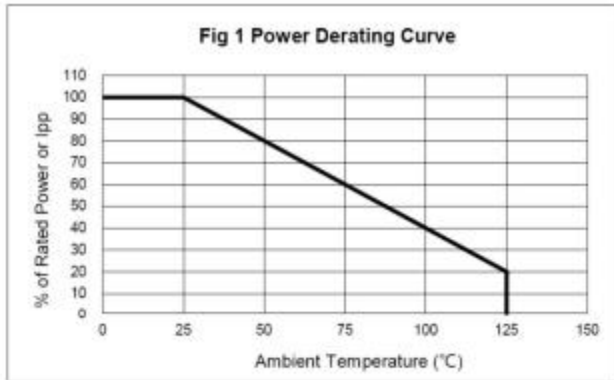
Symbol	Parameter	Value	Units
$P_{PP}$	Peak Pulse Power (8/20 $\mu$ s)	60	W
$V_{ESD}$	ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	$\pm 25$ $\pm 20$	kV
$T_{OPT}$	Operating Temperature	-55/+125	$^{\circ}$ C
$T_{STG}$	Storage Temperature	-55/+150	$^{\circ}$ C

**ELECTRICAL CHARACTERISTICS (T<sub>amb</sub>=25  $^{\circ}$ C)**

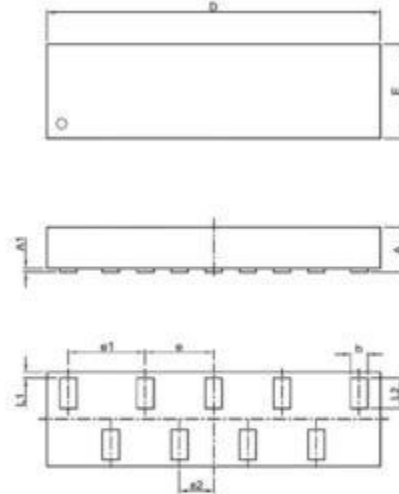
Symbol	Parameter	Test Condition	Min	Typ	Max	Units
$V_{RWM}$	Reverse Working Voltage	Any I/O pin to GND			5.0	V
$V_{BR}$	Reverse Breakdown Voltage	$I_T = 1mA$ Any I/O pin to GND	6.0		9.0	V
$I_R$	Reverse Leakage Current	$V_{RWM} = 5V$ Any I/O pin to GND			1.0	$\mu A$
$V_C$	Clamping Voltage	$I_{PP} = 1A, t_p = 8/20\mu s$ Any I/O pin to GND			10	V
$V_C$	Clamping Voltage	$I_{PP} = 4A, t_p = 8/20\mu s$ Any I/O pin to GND			15	V
$C_{ESD}$	Parasitic Capacitance	$V_R = 0V, f = 1MHz$ Between I/O and GND		0.4	0.5	pF
$C_{ESD}$	Parasitic Capacitance	$V_R = 0V, f = 1MHz$ Between I/O and I/O		0.2	0.3	pF

Note: I/O pins are pin 1,2,4,5, 6,7,8,9; GND pins are pin 3.

**ELECTRICAL CHARACTERISTICS CURVE**



**DFN3810-9 PACKAGE OUTLINE DIMENSIONS**



UNIT	A	A1	b	D	E	e	e1	e2	L1	L2
mm	0.475	0	0.15	3.70	0.90	0.80	0.90	0.40	0.025	0.25
	0.525	0.05	0.25	3.90	1.10				0.075	0.35

**REEL SPECIFICATION**

P/N	PKG	QTY
AZ1045-08F-MS	DFN3810-9L	3000

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