

MSKSEMI 美森科

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

RClamp7538P-MS

Product specification

FEATURES

- Transient protection for high-speed data lines
- IEC 61000-4-2(ESD) $\pm 25\text{KV(Air)}$
- $\pm 20\text{KV(Contact)}$
- 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 $\pm 8\text{KV}$ contact discharge

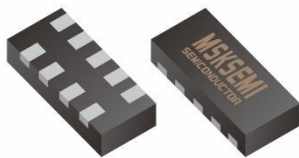
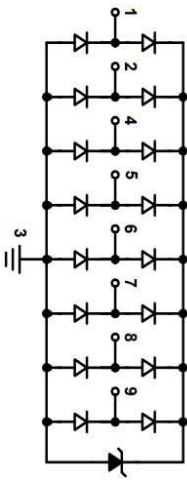
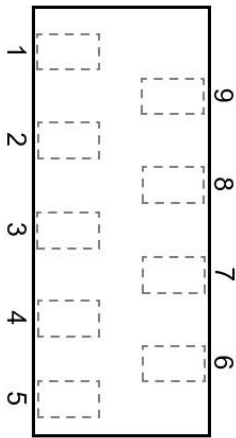

APPLICATIONS

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

MACHANICAL DATA

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

Reference News

PACKAGE OUTLINE	CIRCUIT DIAGRAM	PIN CONFIGURATION	MARKING
 DFN3810-9L			

ABSOLUTE MAXIMUM RATING

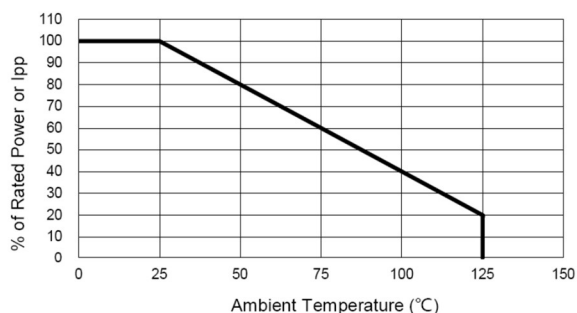
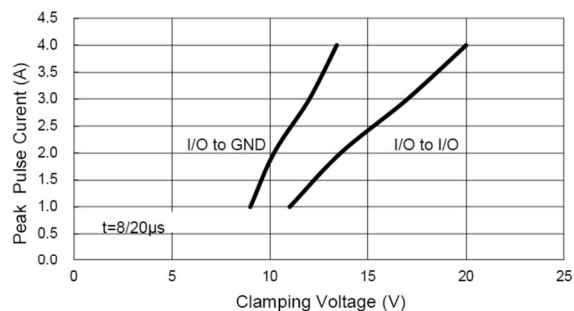
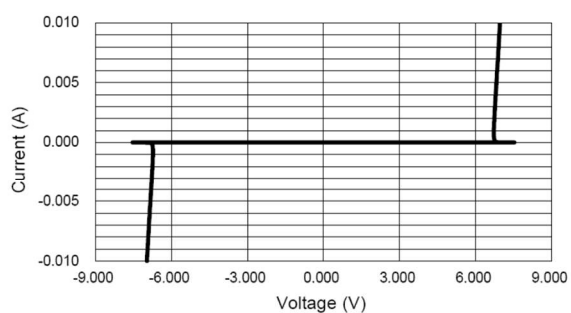
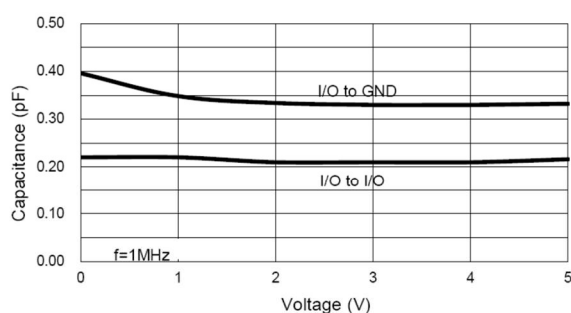
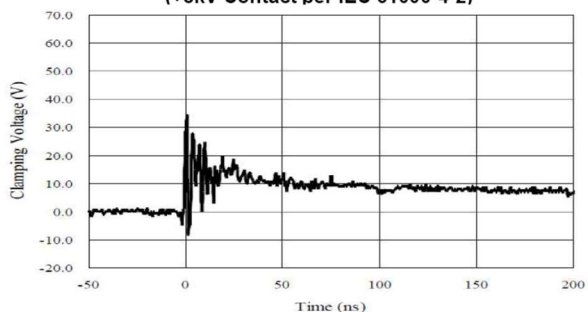
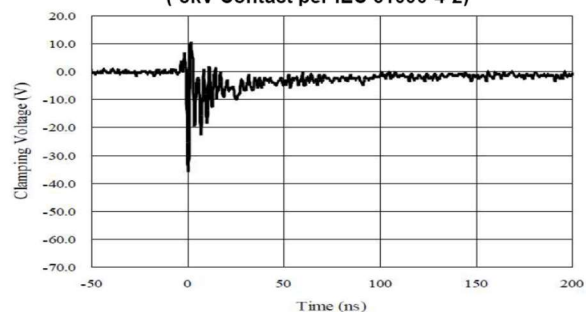
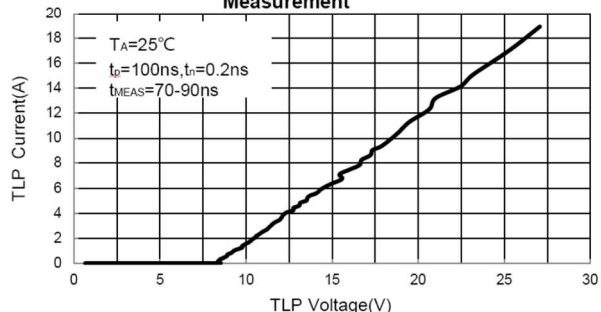
Symbol	Parameter	Value	Units
P _{PP}	Peak Pulse Power (8/20μs)	60	W
V _{ESD}	ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	±25 ±20	kV
T _{OPT}	Operating Temperature	-55/+125	°C
T _{STG}	Storage Temperature	-55/+150	°C

ELECTRICAL CHARACTERISTICS (T_{amb}=25°C)

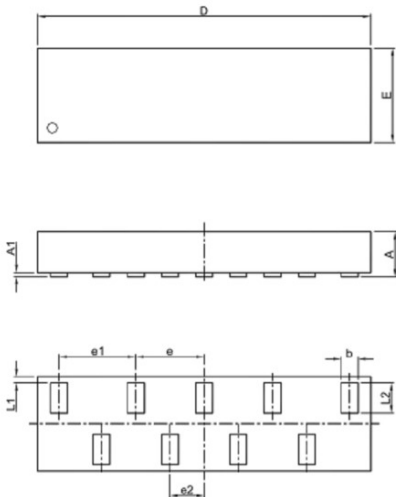
Symbol	Parameter	Test Condition	Min	Typ	Max	Units
V _{RWM}	Reverse Working Voltage	Any I/O pin to GND			5.0	V
V _{BR}	Reverse Breakdown Voltage	I _T = 1mA Any I/O pin to GND	6.0		9.0	V
I _R	Reverse Leakage Current	V _{RWM} = 5V Any I/O pin to GND			1.0	μA
V _C	Clamping Voltage	I _{PP} = 1A, t _p = 8/20μs Any I/O pin to GND			10	V
V _C	Clamping Voltage	I _{PP} = 4A, t _p = 8/20μs 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

Fig 1 Power Derating Curve

Fig 2 Clamping Voltage vs Peak Pulse Current

Fig 3 Voltage Sweeping of I/O to I/O

Fig 4 Voltage vs Capacitance

**Fig 5 ESD Clamping of I/O to GND
(+8kV Contact per IEC 61000-4-2)**

**Fig 6 ESD Clamping of I/O to GND
(-8kV Contact per IEC 61000-4-2)**

**Fig7 Transmission Line Pulsing (TLP)
Measurement**


DFN3810-9 PACKAGE OUTLINE DIMENSIONS



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

REEL SPECIFICATION

P/N	PKG	QTY
RC1amp7538P-MS	DFN3810-9L	3000

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