

ESD PROTECTION FOR HDMI INTERFACE

APPLICATIONS

- ◆ High Definition Multi-Media Interface (HDMI)
- ◆ Digital Visual Interface (DVI)
- ◆ 10/100/1000 Ethernet
- ◆ Monitors and Flat Panel Displays
- ◆ Notebook Computers
- ◆ Set Top Box
- ◆ Projection TV

IEC COMPATIBILITY

- ◆ IEC61000-4-2 (ESD) $\pm 15\text{kV}$ (air), $\pm 8\text{kV}$ (contact)
- ◆ IEC61000-4-4 (EFT) 40A (5/50 η s)
- ◆ IEC61000-4-5 (Lightning) 5A (8/20 μ s)

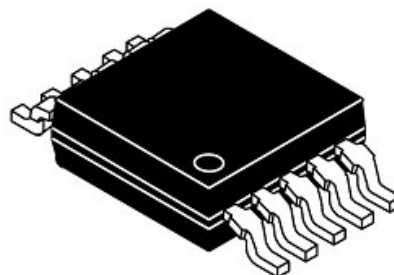
FEATURES

- ◆ 125 Watts Peak Pulse Power per Line ($t_p=8/20\mu\text{s}$)
- ◆ Protects four I/O lines and one Vcc line
- ◆ Low capacitance
- ◆ Working voltages : 5V
- ◆ Low leakage current

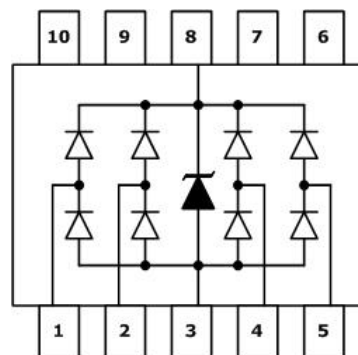
MECHANICAL CHARACTERISTICS

- ◆ MSOP-10 Package
- ◆ Molding Compound Flammability Rating : UL 94V-O
- ◆ Weight 12 Milligrams (Approximate)
- ◆ Quantity Per Reel : 1,000pcs
- ◆ Reel Size : 7 inch
- ◆ Lead Finish : Lead Free

MSOP-10



PIN CONFIGURATION



DEVICE CHARACTERISTICS

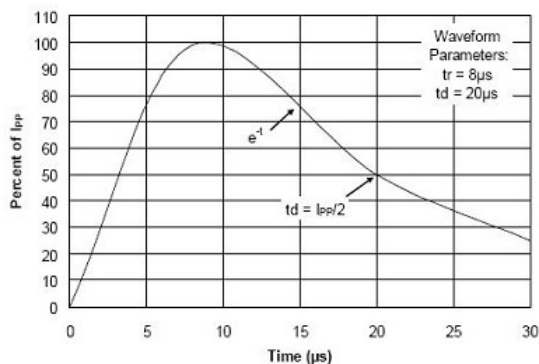
MAXIMUM RATINGS (@ 25°C Unless Otherwise Specified)

PARAMETER	SYMBOL	VALUE	UNITS
Peak Pulse Power (tp=8/20μs waveform)	P _{PP}	125	Watts
Lead Soldering Temperature	T _L	260 (10 sec.)	°C
Operating Temperature Range	T _J	-55 ~ 150	°C
Storage Temperature Range	T _{STG}	-55 ~ 150	°C

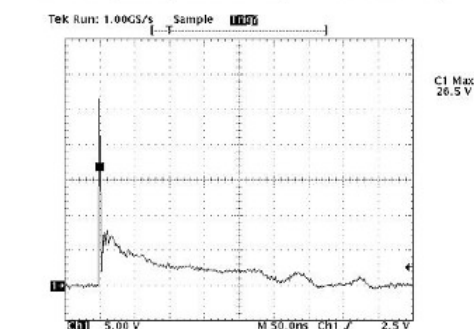
ELECTRICAL CHARACTERISTICS PER LINE (@ 25°C Unless Otherwise Specified)

PART NUMBER	DEVICE MARKING	V _{RWM}	V _B	I _T	V _C	V _C		I _R	C _T
		(V) (max.)	(V) (min.)	(mA)	@1A (max.)	(max.)	(@A)	(μA) (max.)	(pF) (typ.)
ULC0544M	R0544	5	6	1	15	20	5	1	0.5

Pulse Waveform

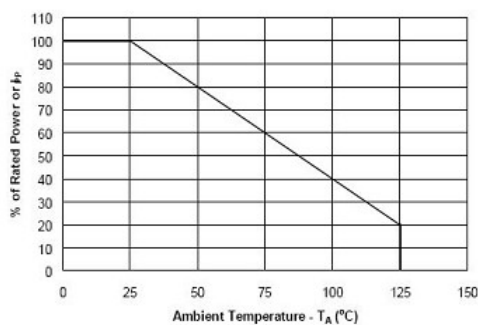


ESD Response (8kV Contact per IEC 61000-4-2)

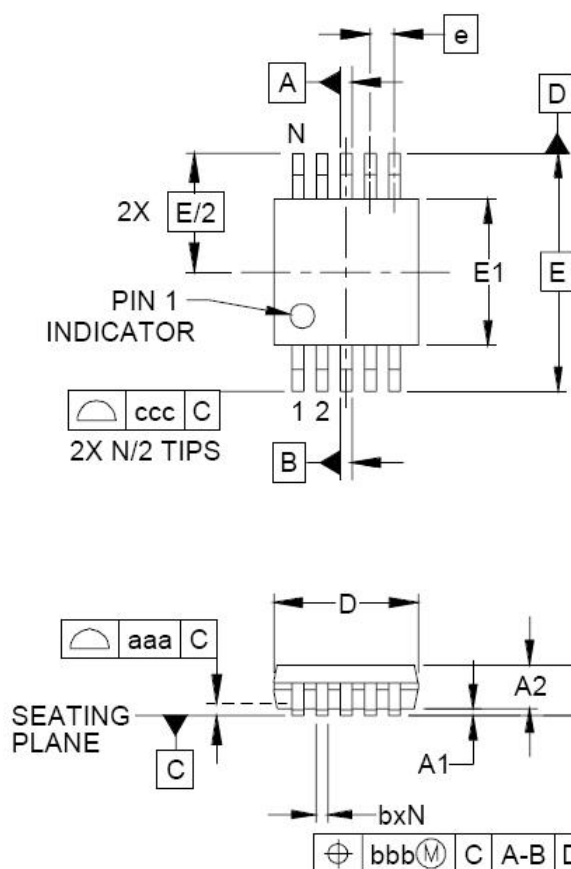


Note: Data is taken with a 10x attenuator

Power Derating Curve

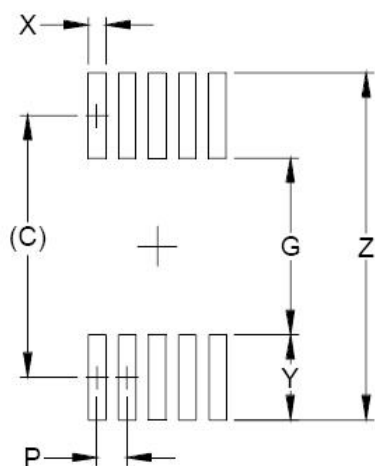


MSOP-10 PACKAGE OUTLINE & DIMENSIONS



DIM	INCHES			MILLIMETERS		
	MIN	NOM	MAX	MIN	NOM	MAX
A	-	-	.043	-	-	1.10
A1	.000	-	.006	0.00	-	0.15
A2	.030	-	.037	0.75	-	0.95
b	.007	-	.011	0.17	-	0.27
c	.003	-	.009	0.08	-	0.23
D	.114	.118	.122	2.90	3.00	3.10
E1	.114	.118	.122	2.90	3.00	3.10
E	.193 BSC			4.90 BSC		
e	.020 BSC			0.50 BSC		
L	.016	.024	.032	0.40	0.60	0.80
L1	(.037)			(.95)		
N	10			10		
theta 1	0°	-	8°	0°	-	8°
aaa	.004			0.10		
bbb	.003			0.08		
ccc	.010			0.25		

* SOLDERING FOOTPRINT



DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
C	(.161)		(4.10)	
G	.098		2.50	
P	.020		0.50	
X	.011		0.30	
Y	.063		1.60	
Z	.224		5.70	

SHANGHAI LEIDITECH ELECTRONICS TECHNOLOGY CO., LTD

Phone: +86- 021-50827201 <http://www.leiditech.com>

Email:sale1@leiditech.com