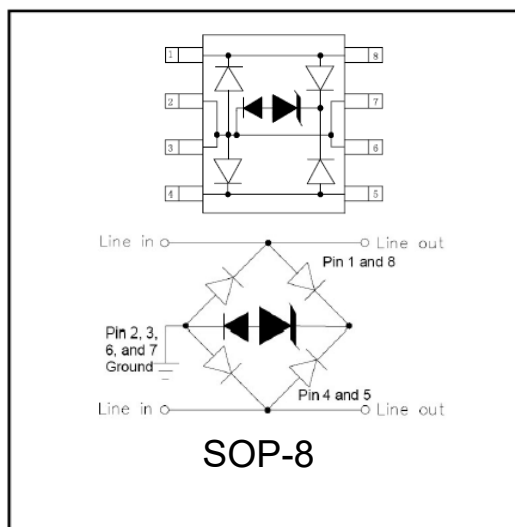
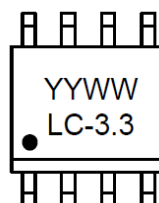


ESD Protection Diode



Features

- Protects two lines in common and differential mode
- Ultra low leakage: nA level
- Low operating voltage: 3.3V
- Moisture Sensitivity: Level 3 per J-STD-020
- JEDEC SOP-8 package
- Marking:



LC-3.3 = Device Marking Code
YYWW = Date Code
Dot denotes Pin1

■Maximum Ratings(Ta=25°C unless otherwise specified)

PARAMETER	SYMBOL	VALUE	UNIT
Operating Temperature Range	T_J	-55 to +125	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C
IEC61000-4-2(ESD)Air	$V_{ESD}^{(1)}$	±30	KV
IEC61000-4-2(ESD)Contact		±30	KV
Peak Pulse Power	$P_{PP}^{(2)}$	1800	W
Peak Pulse Current	$I_{PP}^{(2)}$	100	A

(1).Device stressed with ten non-repetitive ESD pulses.

(2).Non-repetitive current pulse 8/20μs exponential decay waveform according to IEC61000-4-5.

■ Electrical Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER	Symbol	UNIT	Conditions	Min	Typ	Max
Reverse Working Voltage	V _{RWM} ⁽¹⁾	V				3.3
Reverse Leakage Current	I _R	uA	V _{RWM} =3.3V			1.0
Punch-Through Voltage	VPT	V	I _T =2uA	3.5		
Snap-Back Voltage	VSB	V	I _T = 50mA	2.8		
Clamping Voltage	V _C ⁽²⁾	V	I _{pp} =50A any I/O pin to ground ⁽³⁾			11
Clamping Voltage	V _C ⁽²⁾	V	I _{pp} =50A between I/O pins ⁽³⁾			13
Clamping Voltage	V _C ⁽²⁾	V	I _{pp} =100A any I/O pin to ground ⁽³⁾			15
Clamping Voltage	V _C ⁽²⁾	V	I _{pp} =100A between I/O pins ⁽³⁾			18
Junction Capacitance	C _J	pF	V _R =0V, f=1MHz, between I/O pins and ground ⁽³⁾		16	25
Junction Capacitance	C _J	pF	V _R =0V, f=1MHz, between I/O pins		8	12

(1).Other voltages available upon request.

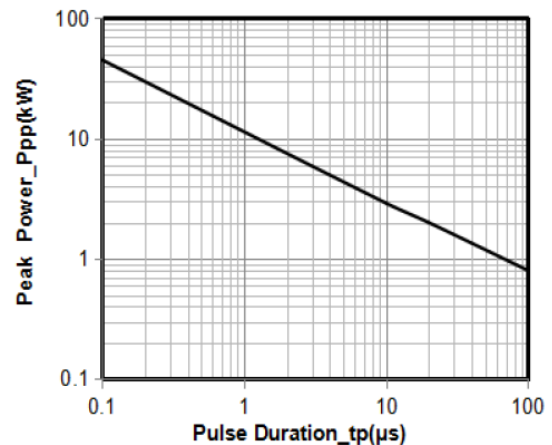
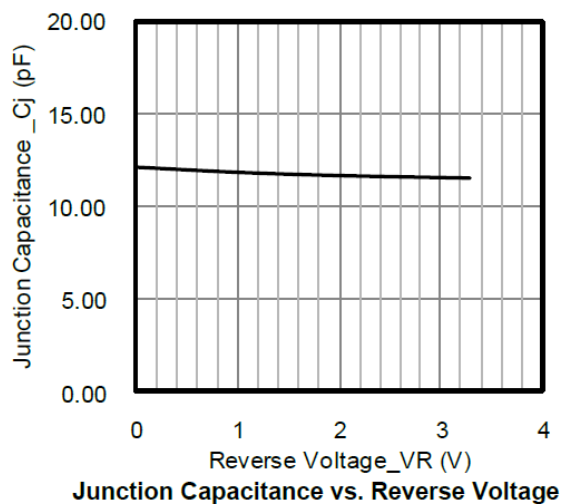
(2).Non-repetitive current pulse 8/20μs exponential decay waveform according to IEC61000-4-5

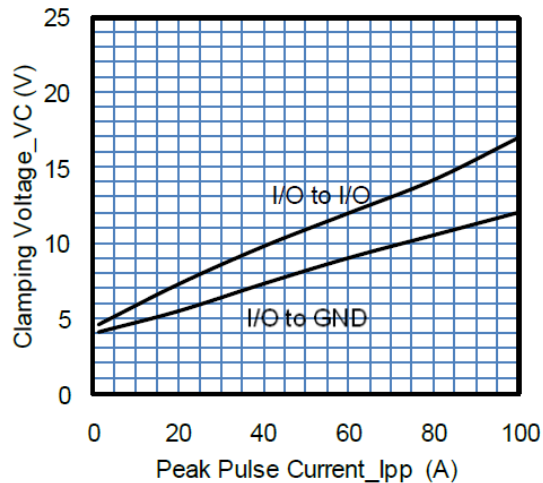
(3).I/O pins are Pin 1,4,5 and 8

■ Thermal Characteristics (T_a=25°C Unless otherwise specified)

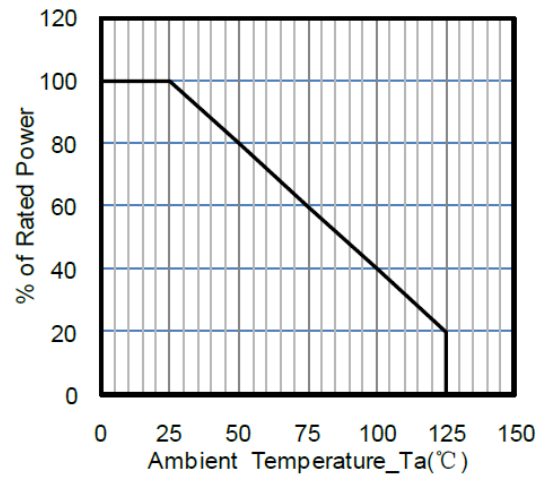
PARAMETER	SYMBOL	UNIT	LC03-3.3
Thermal Resistance(Typical)	R _{θJ-A}	°C/W	184
	R _{θJ-C}	°C/W	74

■ Characteristics (Typical)

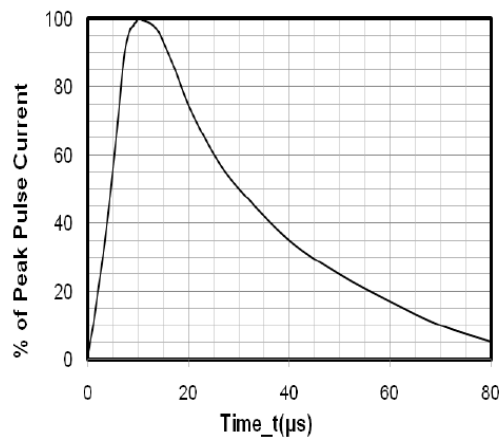




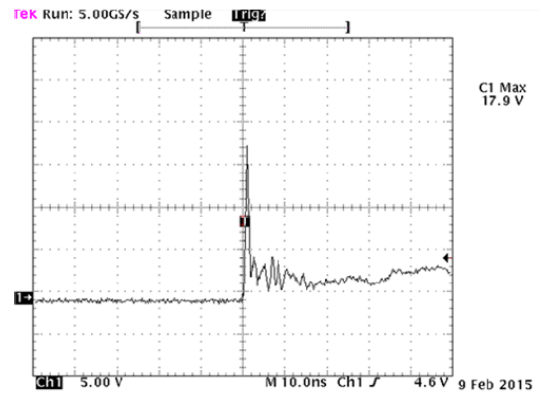
Clamping Voltage vs. Peak Pulse Current



Power Derating Curve



8 X 20µs Pulse Waveform

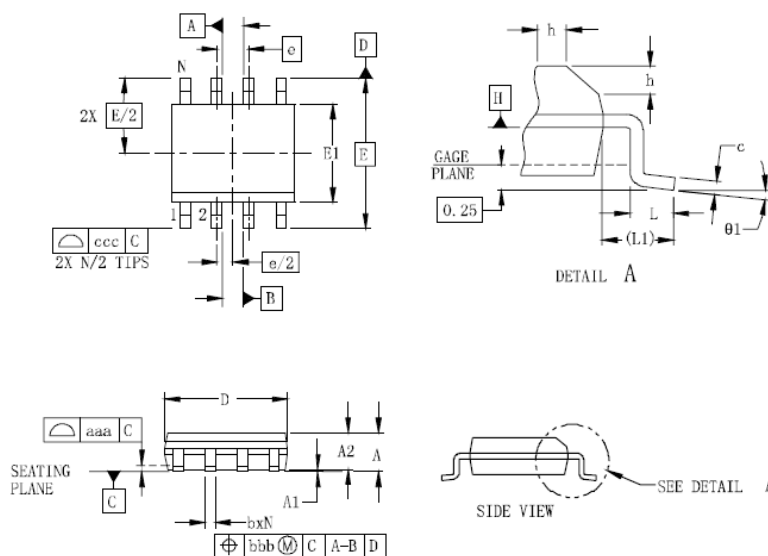


Note: Data is taken with a 10x attenuator

ESD Clamping Voltage

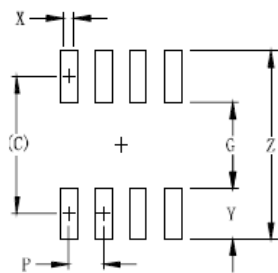
+8 kV Contact per IEC61000-4-2

■ Outline Dimensions



SY	M	DIMENSIONS					
		MILLIMETERS			INCHES		
		MIN	NOM	MAX	MIN	NOM	MAX
A		1.35		1.75	0.053		0.069
A1		0.10		0.25	0.004		0.010
A2		1.25		1.65	0.049		0.065
b		0.31		0.51	0.012		0.020
c		0.17		0.25	0.007		0.010
D		4.80	4.90	5.00	0.189	0.193	0.197
E		3.80	3.90	4.00	0.150	0.154	0.157
E		6.00 BSC			0.236 BSC		
e		1.27 BSC			0.050 BSC		
h		0.25		0.50	0.010		0.020
L		0.40	0.72	1.04	0.016	0.028	0.041
L1		(1.04)			(0.041)		
N		8			8		
θ1		0°		8°	0°		8°
aaa		0.10			0.004		
bbb		0.25			0.010		
ccc		0.20			0.008		

■ Soldering Footprint



SYM	DIMENSIONS	
	MILLIMETERS	INCHES
C	(5.20)	0.205
G	3.00	0.118
P	1.27	0.050
X	0.60	0.024
Y	2.20	0.087
Z	7.40	0.291

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