

Low Capacitance TVS Diode Array

APPLICATIONS

- ◆ USB OTG
- ◆ Video Graphics Cards
- ◆ Monitors and Flat Panel Displays
- ◆ High-Definition Multimedia Interface (HDMI)
- ◆ 10/100/1000 Ethernet
- ◆ IEEE 1394 Firewire Ports
- ◆ SIM Ports
- ◆ ATM Interfaces

IEC COMPATIBILITY

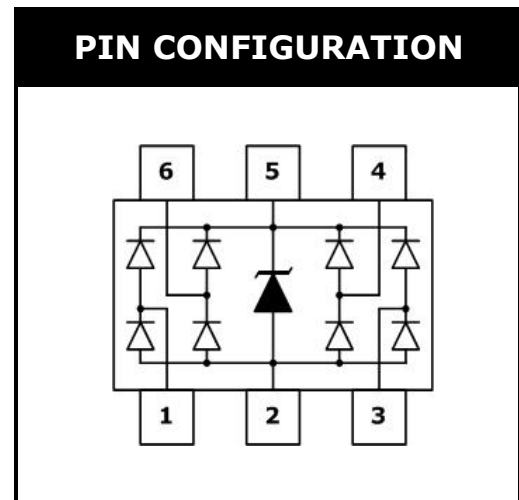
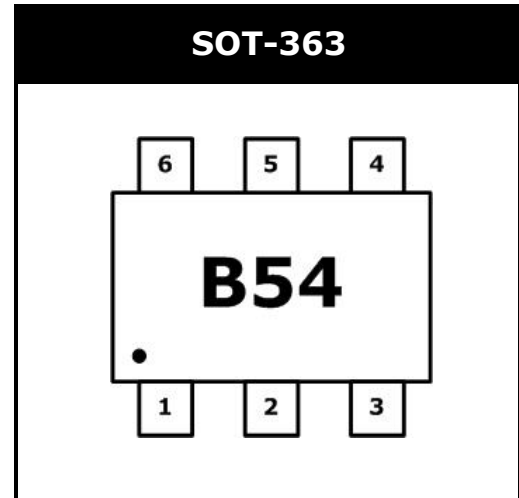
- ◆ IEC61000-4-2 (ESD) $\pm 15\text{kV}$ (air), $\pm 8\text{kV}$ (contact)
- ◆ IEC61000-4-4 (EFT) 40A (5/50 η s)
- ◆ IEC61000-4-5 (Lightning) 12A (8/20 μ s)

FEATURES

- ◆ 150 Watts Peak Pulse Power per Line ($t_p=8/20\mu$ s)
- ◆ Protects four I/O lines
- ◆ Low clamping voltage
- ◆ Working voltages : 5V
- ◆ Low leakage current

MECHANICAL CHARACTERISTICS

- ◆ JEDEC SOT-363 Package
- ◆ Molding Compound Flammability Rating : UL 94V-O
- ◆ Weight 8 Milligrams (Approximate)
- ◆ Quantity Per Reel : 3,000pcs
- ◆ Reel Size : 7 inch
- ◆ Lead Finish : Lead Free



DEVICE CHARACTERISTICS

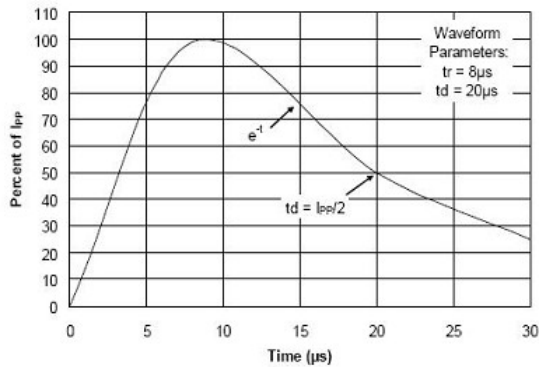
MAXIMUM RATINGS (@ 25°C Unless Otherwise Specified)

PARAMETER	SYMBOL	VALUE	UNITS
Peak Pulse Power (tp=8/20µs waveform)	P _{PP}	150	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

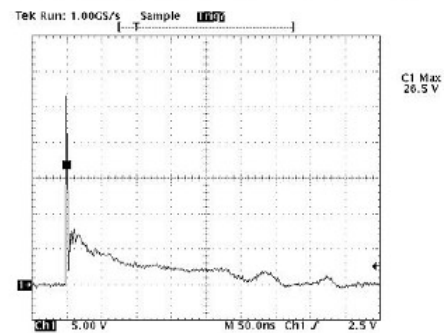
ELECTRICAL CHARACTERISTICS PER LINE (@ 25°C Unless Otherwise Specified)

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) (max.)
LC0504F	B54	5.0	6.0	1	15.0	25.0	6	1	2

Pulse Waveform

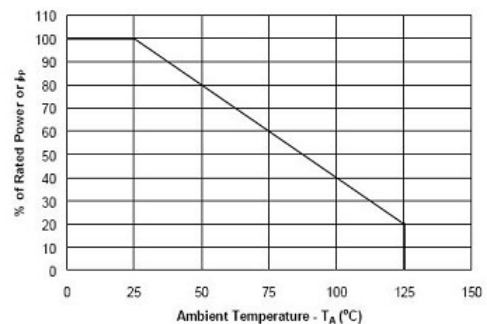


ESD Response (8kV Contact per IEC 61000-4-2)

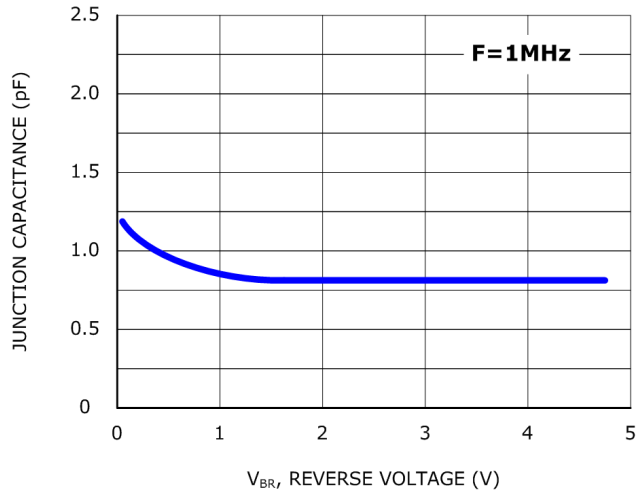


Note: Data is taken with a 10x attenuator

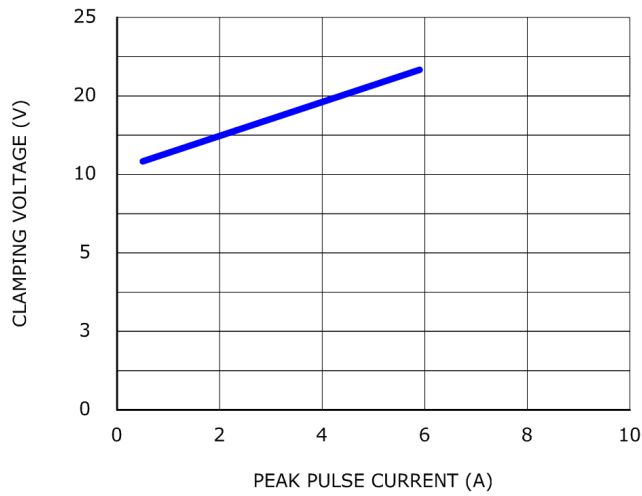
Power Derating Curve



DEVICE CHARACTERISTICS

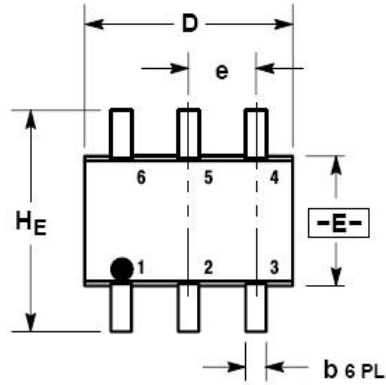


Normalized Capacitance vs. Reverse Voltage



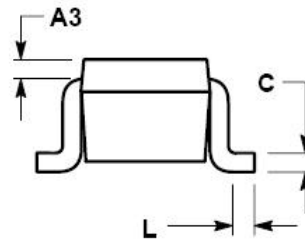
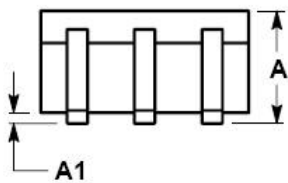
Clamping Voltage vs. Peak Pulse Current

SOT-363 PACKAGE OUTLINE & DIMENSIONS

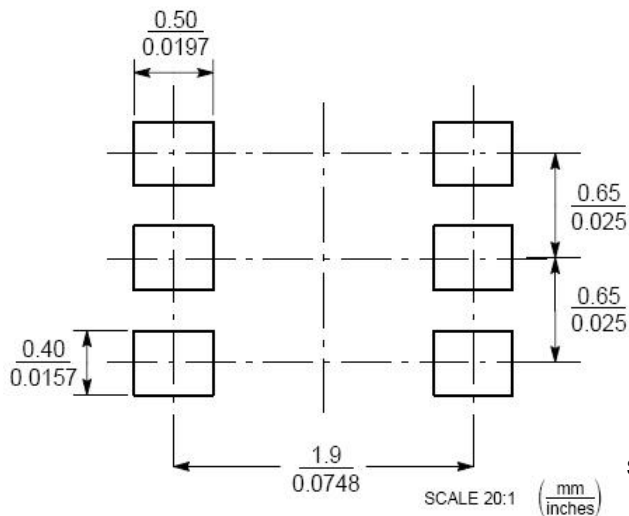


DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.80	0.95	1.10	0.031	0.037	0.043
A1	0.00	0.05	0.10	0.000	0.002	0.004
A3	0.20 REF			0.008 REF		
b	0.10	0.21	0.30	0.004	0.008	0.012
C	0.10	0.14	0.25	0.004	0.005	0.010
D	1.80	2.00	2.20	0.070	0.078	0.086
E	1.15	1.25	1.35	0.045	0.049	0.053
e	0.65 BSC			0.026 BSC		
L	0.10	0.20	0.30	0.004	0.008	0.012
H _F	2.00	2.10	2.20	0.078	0.082	0.086

\oplus 0.2 (0.008) (M) E (M)



* SOLDERING FOOTPRINT



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