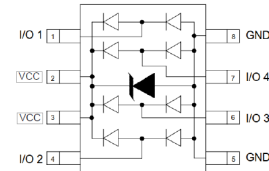
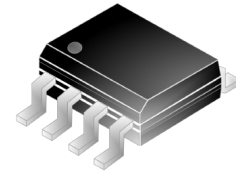


Low Capacitance TVS Array

Features

- Array of surge rated diodes with internal TVS diode
- Protects four I/O lines
- Low capacitance (<15pF) for high-speed interfaces
- Low operating voltage: 3.3V
- Low clamping voltage
- Solid-state technology
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
 - Air discharge: $\pm 15\text{kV}$
 - Contact discharge: $\pm 8\text{kV}$
 - IEC61000-4-5 (Lightning) 24A (8/20 μs)

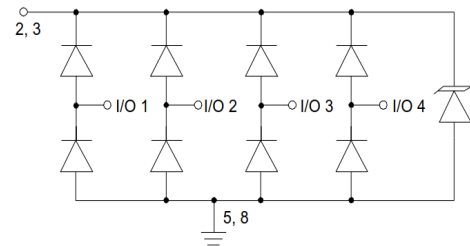


SO-8 Outline

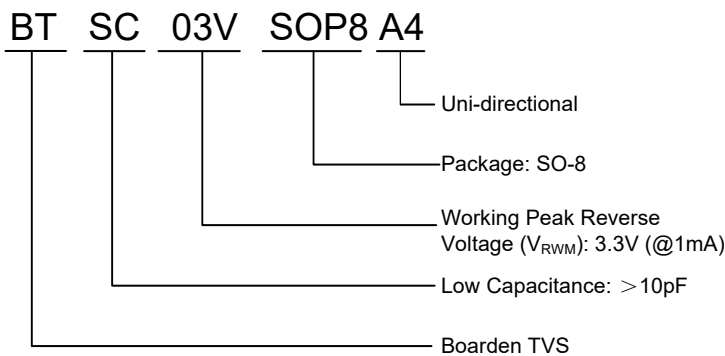
Mechanical Characteristics

- Package: SO-8
- Lead Finish: SnPb or Matte Sn
- Molding compound flammability rating: UL 94V-0
- Terminal Connections: See Diagram Below
- Marking Information: See Below

Dimensions and Pin Configuration



Part Numbering System



Applications

- T1/E1 secondary IC Side Protection
- T3/E3 secondary IC Side Protection
- Analog Video Protection
- Microcontroller Input Protection
- Base stations
- I2C Bus Protection

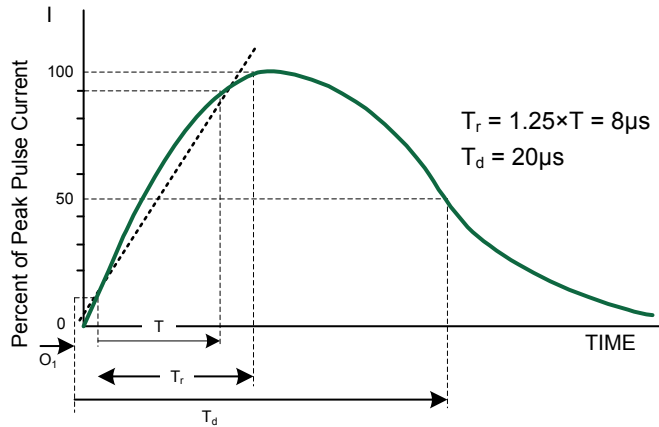
Absolute Maximum Ratings ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs)	Ppk	500	W
Peak Pulse Current (8/20 μs)	I _{PP}	25	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V _{ESD}	± 15 ± 8	kV
Lead Soldering Temperature	TL	260(10 sec.)	$^{\circ}\text{C}$
Operating Temperature Range	T _J	-55 to +125	$^{\circ}\text{C}$
Storage Temperature Range	T _{stg}	-55 to +150	$^{\circ}\text{C}$

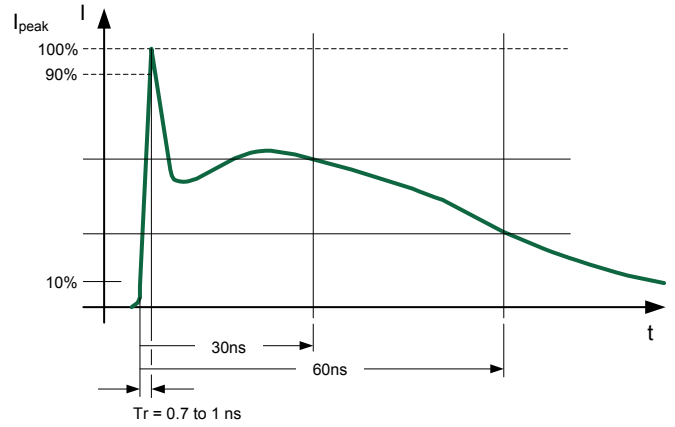
Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V _{RWM}			3.3	V	
Punch-Through Voltage	V _{PT}	3.5			V	I _T = 2 μA
Snapback Voltage	V _{SB}	2.8			V	I _{SB} = 50mA
Reverse Leakage Current	I _R			0.5	μA	V _{RWM} = 3.3V
Clamping Voltage	V _C			5.3	V	I _{PP} = 1A (8 x 20 μs pulse)
Clamping Voltage	V _C			10	V	I _{PP} = 10A (8 x 20 μs pulse)
Clamping Voltage	V _C			15	V	I _{PP} = 25A (8 x 20 μs pulse)
Junction Capacitance	C _J		8	15	pF	V _R = 0V, f = 1MHz, Between I/O pins and Ground
			4		pF	V _R = 0V, f = 1MHz, Between I/O pins

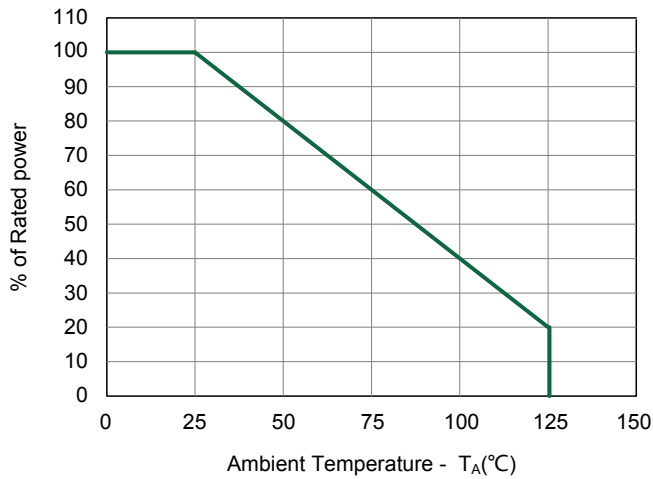
Typical characteristics ($T_A = 25\text{ }^\circ\text{C}$, unless otherwise noted)



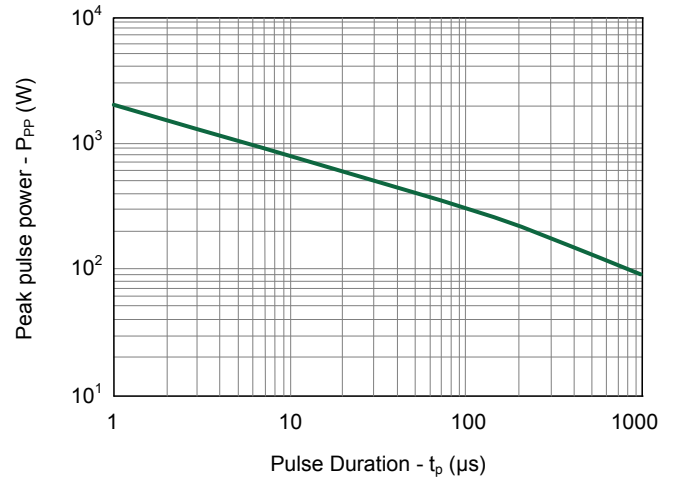
8/20µs Waveform per IEC61000-4-5



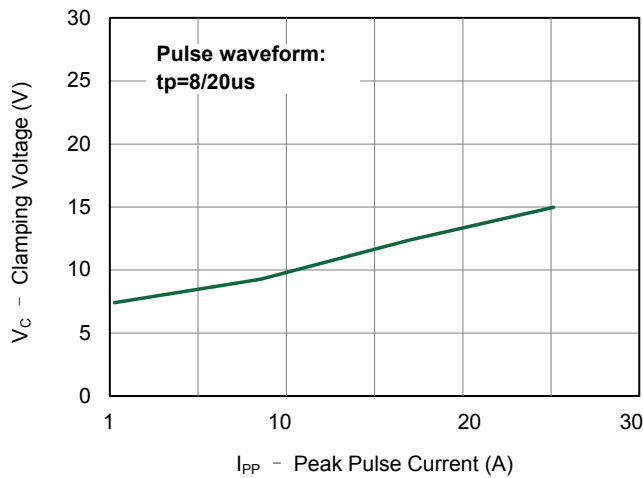
ESD Waveform per IEC61000-4-2



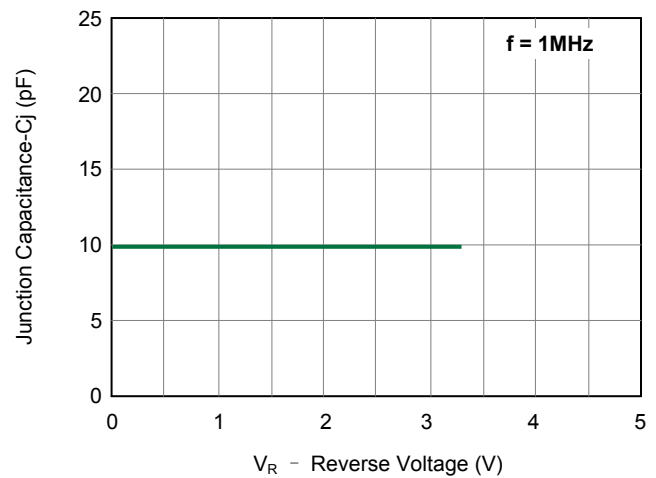
Power Derating vs. Ambient Temperature



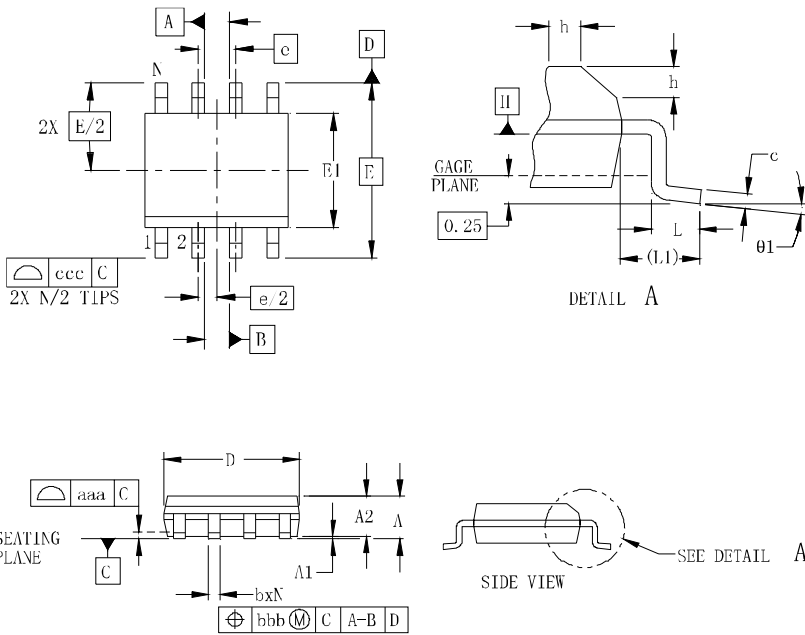
Non-repetitive Peak Pulse Power vs. Pulse Time



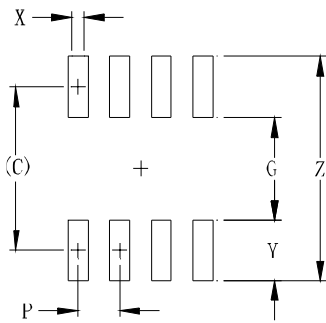
Clamping Voltage vs. Peak Pulse Current



Junction Capacitance vs. Reverse Voltage

SO-8 Package Outline Drawing


SYM	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
E1	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		
theta1	0°		8°	0°		8°
aaa	0.10			0.004		
bbb	0.25			0.010		
ccc	0.20			0.008		

Suggested Land Pattern


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

Ordering Information

Part Number	Packaging	Reel Size
BTSC03VSO8A4	2500/Tape & Reel	13 inch