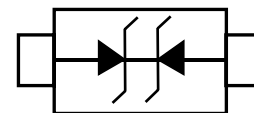


Description

The SXTVSHC3D4V5BH protects sensitive semiconductor components from damage or upset due to electrostatic discharge (ESD) and other voltage induced transient events. They feature large cross-sectional area junctions for conducting high transient currents, offer desirable electrical characteristics for board level protection, such as fast response time, low operating voltage.

SOD-323



Feature

2700W Peak pulse power per line ($t_p = 8/20\mu s$)

SOD-323 package

Response time is typically $< 1\text{ ns}$

Protect one I/O or power line

Low clamping Voltage

RoHS compliant

Transient protection for data lines to IEC 61000-4-2(ESD)

$\pm 30\text{KV}$ (air), $\pm 30\text{KV}$ (contact); IEC 61000-4-4 (EFT) 40A (5/50ns)

Mechanical Characteristics

Lead finish: 100% matte Sn(Tin)

Mounting position: Any

Qualified max reflow temperature: 260°C

Pure tin plating: $7 \sim 17\text{ }\mu\text{m}$

Pin flatness: $\leq 3\text{mil}$

Applications

Cell phone handsets and accessories

Personal digital assistants (PDA's)

Notebooks, desktops, and servers

Portable instrumentation

Cordless phones

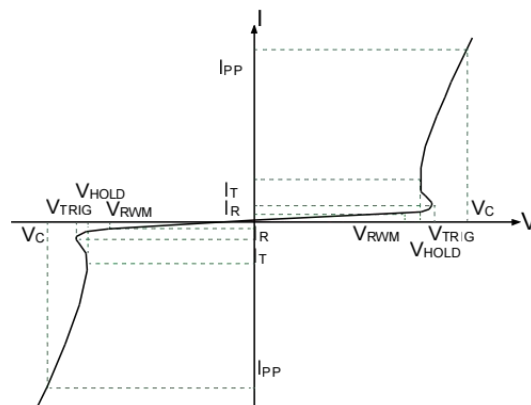
Digital cameras

Peripherals

MP3 players

Electronics Parameter

Symbol	Parameter
V_{RWM}	Peak Reverse Working Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_R
I_T	Test Current
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
P_{PP}	Peak Pulse Power
C_J	Junction Capacitance



Electrical characteristics per line@25°C (unless otherwise specified)

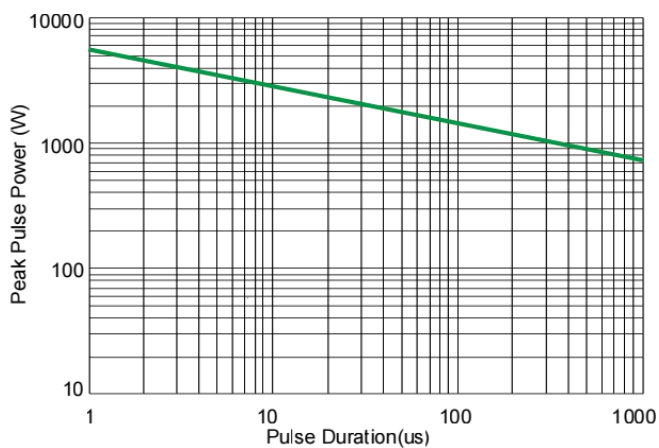
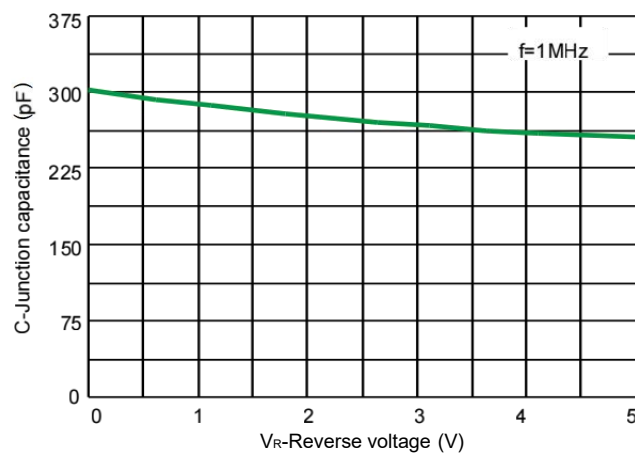
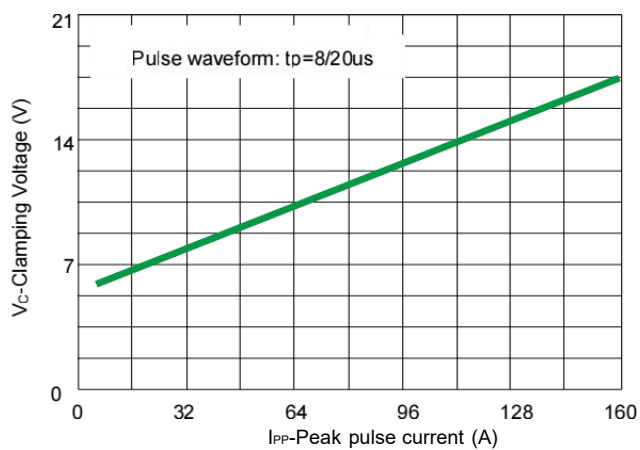
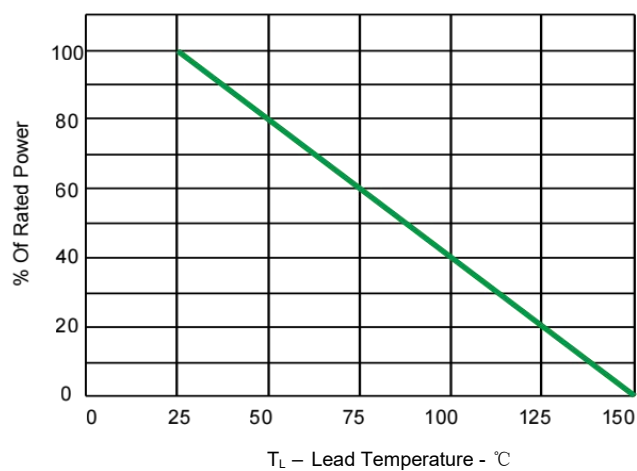
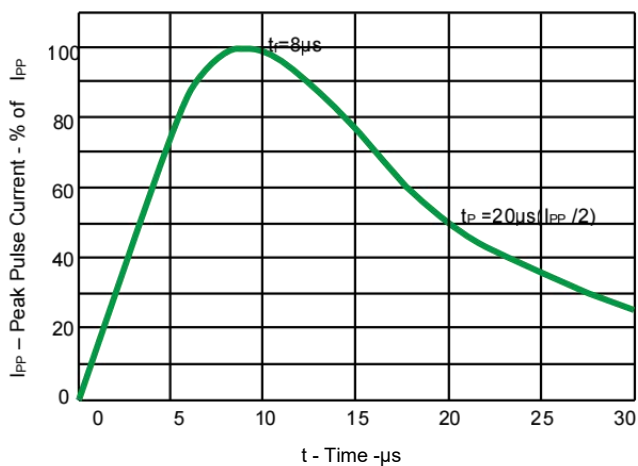
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Zener Voltage	V_Z	$I_{ZT} = 5mA$		5.1		V
Reverse Working Voltage ⁽¹⁾	V_{RWM}				4.5	V
Breakdown Voltage	V_{BR}	$I_T = 1mA$	4.6			V
Reverse Leakage Current	I_R	$V_{RWM} = 4.5V$			2	μA
Clamping Voltage	V_C	$I_{PP} = 20A$ $t_P = 8/20\mu s$		7	8	V
Clamping Voltage	V_C	$I_{PP} = 50A$ $t_P = 8/20\mu s$		8.5	10	V
Clamping Voltage	V_C	$I_{PP} = 100A$ $t_P = 8/20\mu s$		12.5	14	V
Clamping Voltage	V_C	$I_{PP} = 160A$ $t_P = 8/20\mu s$		17.5	20	V
Junction Capacitance	C_J	$V_R = 0V$ $f = 1MHz$		300	330	pF

Note 1: V_{RWM} is the maximum reverse working voltage, or reverse stand-off voltage. ESD can protect signal line properly within its rated voltage. If the signal line's voltage is over V_{RWM} , ESD will change to other state.

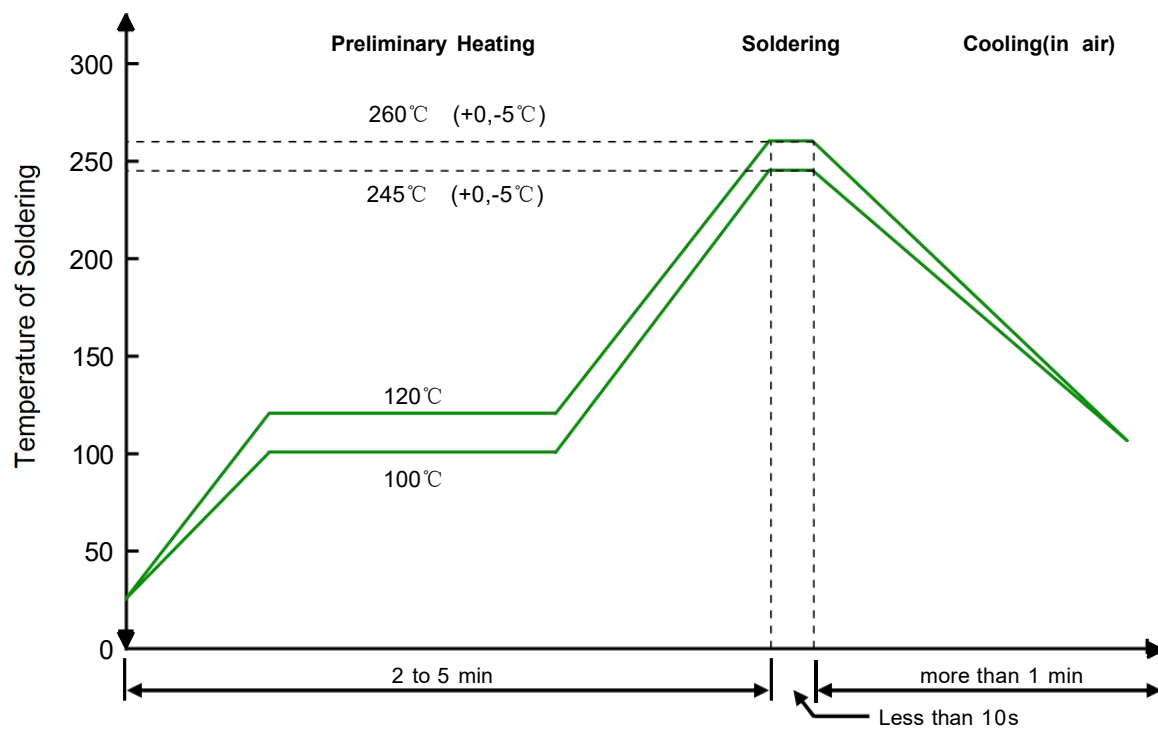
Absolute maximum rating@25°C

Rating	Symbol	Value	Units
Peak Pulse Power ($t_P = 8/20\mu s$)	P_{PP}	2700	W
Total Device Dissipation FR-5 Board	P_D	500	mW
Lead Soldering Temperature	T_L	260 (10 sec)	°C
Operating Temperature	T_J	-55 to +125	°C
Storage Temperature	T_{STG}	-55 to +150	°C

Typical Characteristics

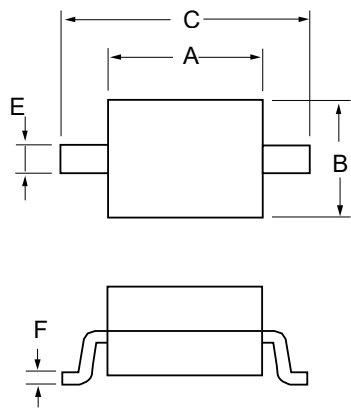


Solder Reflow Recommendation

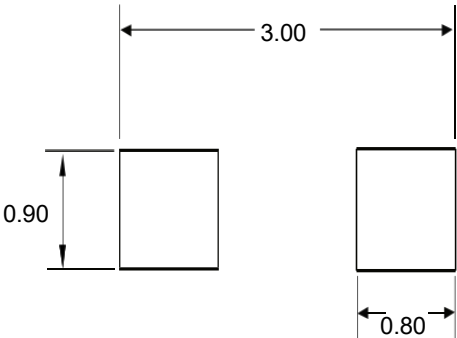


Remark: Pb free for 260°C ; Pb for 245°C .

Product dimension (SOD-323)



Dim	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	0.063	0.075	1.60	1.90
B	0.045	0.057	1.15	1.45
C	0.090	0.106	2.30	2.70
D	0.031	0.043	0.80	1.00
E	0.010	0.01	0.25	0.40
F	0.004	0.007	0.09	0.18
H	0.000	0.004	0.00	0.10



Suggested PCB Layout

Unit:mm

Ordering information

Device	Package	Reel	Shipping
TAPING	SOD-323 (Pb-Free)	7"	3000 / Tape & Reel