

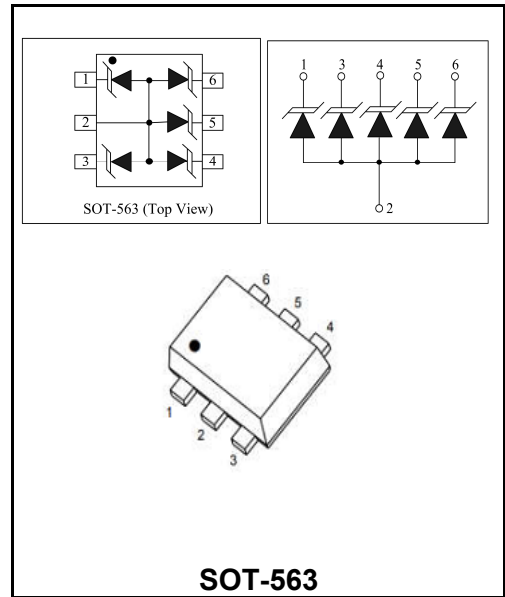
Transient Voltage Suppressor

Features

- ◆ 120 Watts Peak Pulse Power per Line (tp= 8/20μs)
- ◆ 90Watts peak pulse power (tp = 8/20μs)
- ◆ Tiny SOT563 package
- ◆ Solid-state silicon-avalanche technology
- ◆ Low clamping voltage
- ◆ Low leakage current
- ◆ Protection five data/power line
- ◆ IEC 61000-4-2 (ESD) ±15kV (air), ±8kV (contact)
- ◆ IEC 61000-4-4 (EFT) 40A (5/50ns)

Application

- ◆ Cellular Handsets & Accessories
- ◆ Personal Digital Assistants (PDAs)
- ◆ Notebooks & Handhelds
- ◆ Portable Instrumentation
- ◆ Digital Cameras
- ◆ MP3 players



Marking Code

ESD5VFT563	E5C
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Limiting Values(TA = 25 °C, unless otherwise specified)

Symbol	Parameter	Conditions	value	Unit
P _{PP}	Peak Pulse Power	tP = 8/20 μs	90	W
I _{PP}	Rated Peak Pulse Current	tP = 8/20 μs	7.5	A
V _{ESD}	ESD per IEC 61000-4-2	Air	15	kV
V _{ESD}	ESD per IEC 61000-4-2	Contact	8	kV
T _L	Lead Soldering Temperature	-	260(10seconds)	°C
T _J	Junction Temperature	-	-55 to+125	°C
T _{stg}	Storage Temperature Range	-	-55 to+125	°C

Electrical Characteristics(TA = 25 °C unless otherwise specified)

Symbol	Parameter	Conditions	Min	Typ.	Max	Unit
V _{RWM}	Reverse Stand-Off Voltage		-	-	5.0	V
V _{BR}	Reverse Breakdown Voltage	IT = 1mA	6.0	-	-	V
I _R	Reverse Leakage Current	VRWM = 5 V; TA = 25 °C	-	50	500	nA
V _C	Clamping Voltage	I _{PP} =7.5 A, tP =8/20μs	-	-	12	V
C _J	Junction Capacitance	VR = 0V, f = 1 MHz, IO to IO	-	20	-	pF
C _J	Junction Capacitance	VR = 0V, f = 1 MHz, IO to IO	-	40	-	pF

Typical Characteristics

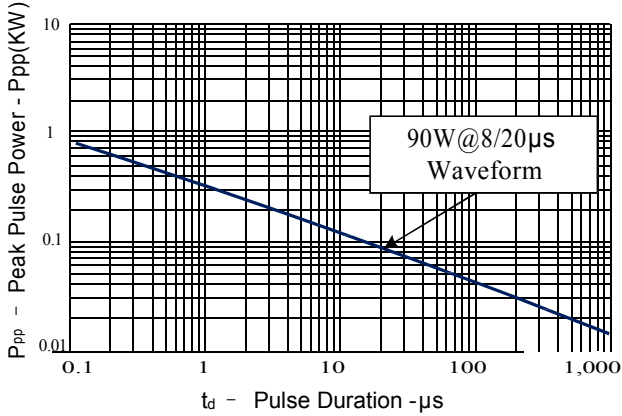


Fig.1 Peak Pulse Power vs. Pulse Time

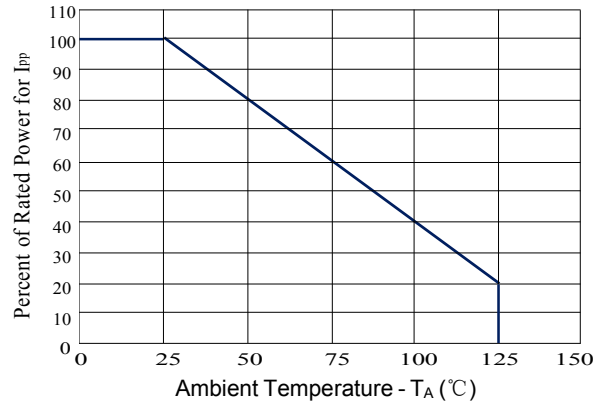


Fig.2 Power Derating Curve

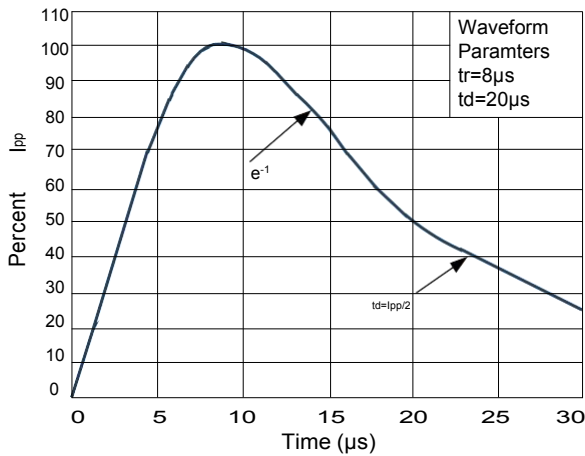


Fig.3 Pulse Waveform

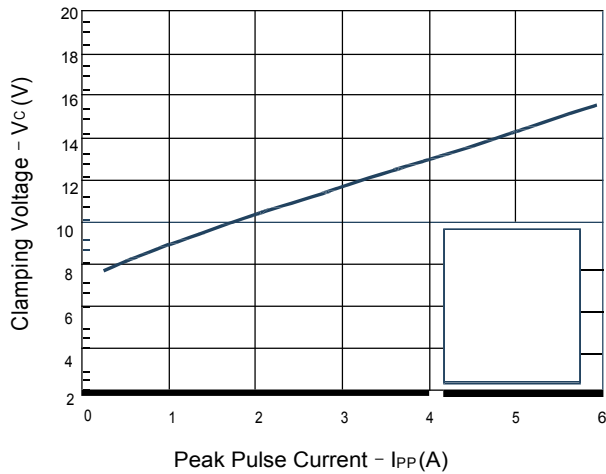


Fig.4 Clamping Voltage vs. Ipp

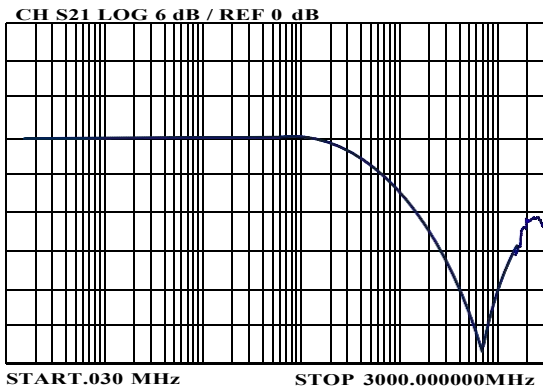


Fig.5 Clamping Voltage vs. Ipp

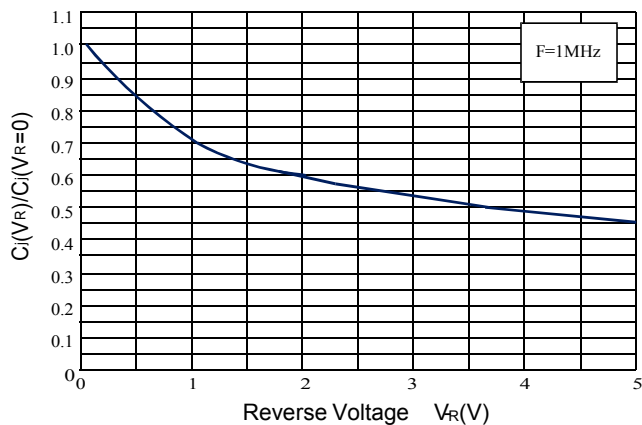
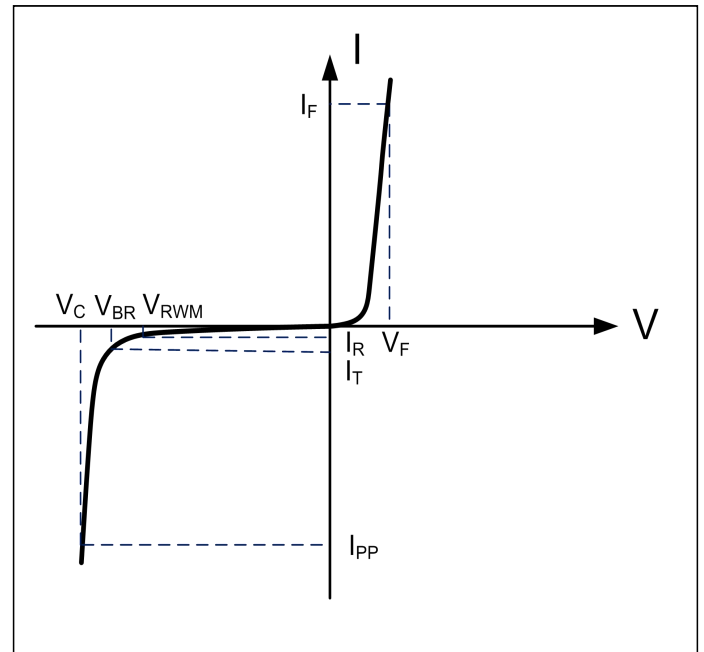


Fig.6: Normalized Junction Capacitance vs. Reverse Voltage

Electrical Parameters (T=25°C)

Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_F	Forward Current
V_F	Forward Voltage @ I_F



Ordering information

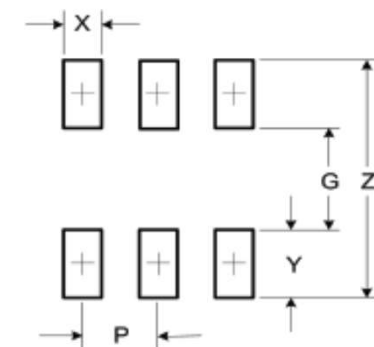
Package	Packing Description	Packing Quantity
SOT-563	Tape/Reel,7"reel	3000PCS/Reel 120000PCS/Carton

Package Dimensions

SOT-563

Dim.	Millimeter(mm)		Inches	
	Min.	Max.	Min.	Max.
A	0.525	0.600	0.021	0.024
A1	-	0.050	-	0.002
e	0.450	0.550	0.018	0.022
c	0.090	0.160	0.004	0.006
D	1.500	1.700	0.059	0.067
b	0.170	0.270	0.007	0.011
E1	1.100	1.300	0.043	0.051
E	1.500	1.700	0.059	0.067
L	0.100	0.300	0.004	0.012
θ	7°		7°	

The recommended mounting pad size



Dim.	Millimeter(mm)
	TYP
Z	1.91
G	0.89
P	TYP0.51
X	0.30
Y	0.51

Disclaimer

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