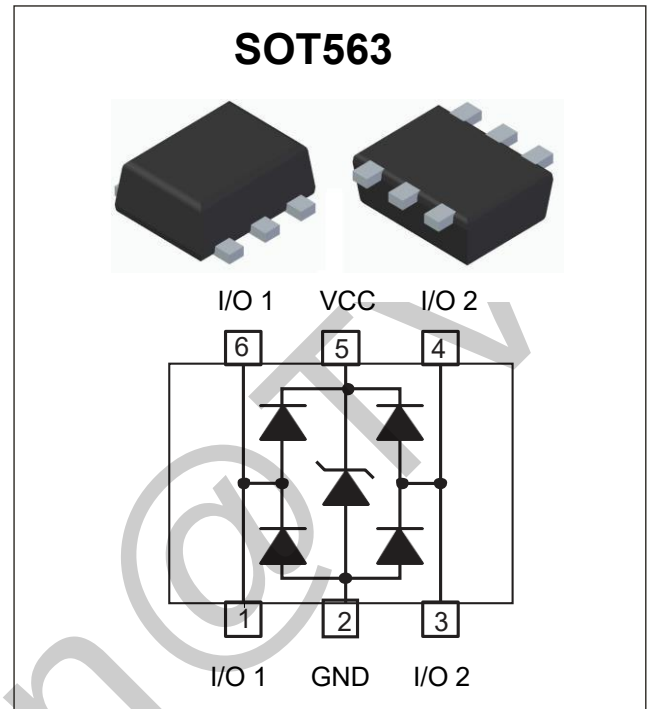


Features

- Two data lines and one power line protects
- Ultra low leakage: nA level
- Low clamping voltage
- Operating voltage: 5V
- Ultra low capacitance: 0.4pF typical (I/O to I/O)
- IEC 61000-4-2 (ESD): Air $\pm 25\text{kV}$, Contact $\pm 20\text{kV}$
- IEC 61000-4-5 (Lightning): 5A (8/20 μs)
- RoHS Compliant

Mechanical Data

- Package: SOT-563
- Lead Finish: Matte Tin
- Case Material: "Green" Molding Compound
- Moisture Sensitivity: Level 3 per J-STD-020
- Marking: 556S (Device Marking Code)



Applications

- USB 2.0 Ports
- Digital Visual Interface (DVI)
- Monitor and Flat Panel Displays
- Gigabit Ethernet
- Ethernet port: 10/100Mb/s
- SIM card protection

Ordering information

Order code	Marking	Package	Packaging option	Base quantity	Packaging specification
DCE0552S6	556S	SOT-563	Tape and reel	3000pcs / reel	EIA STD RS-481

Absolute Maximum Ratings

Ratings at 25 °C, ambient temperature unless otherwise specified

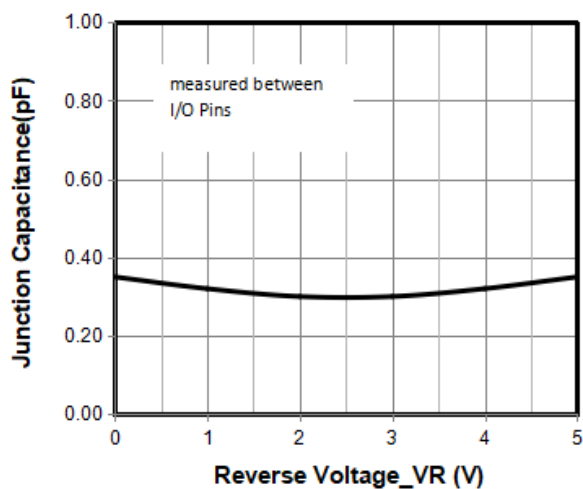
Parameter	Symbol	Value	Unit
Peak Pulse Power ($T_P=8/20\mu\text{s}$)	P_{PP}	75	W
ESD contact/air discharge (IEC-61000-4-2)	V_{ESD}	$\pm 20/\pm 25$	kV
Peak Pulse Current ($T_P = 8/20\mu\text{s}$)	I_{PP}	5	A
Junction Temperature	T_J	-55 to +125	°C
Storage temperature	T_{STG}	-55 to +150	°C

Electrical Characteristics

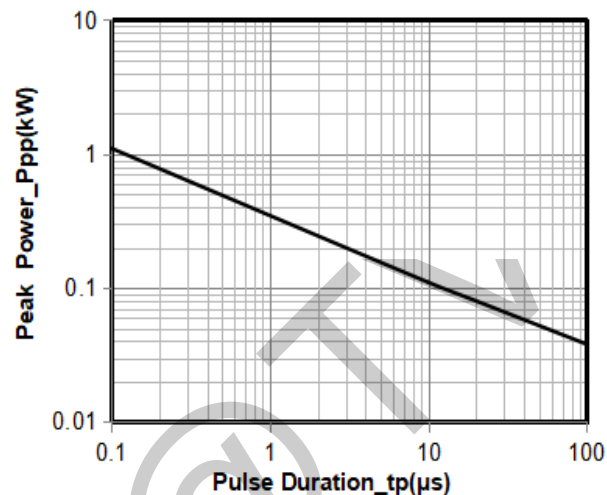
(T_A = 25 °C unless otherwise specified)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Reverse stand-off Voltage	V _{RWM}		-	-	5	V
Holding Voltage	V _{BR}	I _T = 1mA	6	-	-	V
Reverse Leakage Current	I _R	V _{RWM} = 5V	-	-	0.2	uA
Clamping Voltage	V _C	I _{PP} = 1A, t _p = 8/20 μs	-	-	10	V
Clamping Voltage	V _C	I _{PP} = 5A, t _p = 8/20 μs	-	-	15	V
Junction Capacitance	C _J	V _R = 0V, f = 1MHz	-	0.6	0.8	pF
Junction Capacitance	C _J	V _R = 0V, f = 1MHz; I/O-I/O	-	0.3	0.4	pF

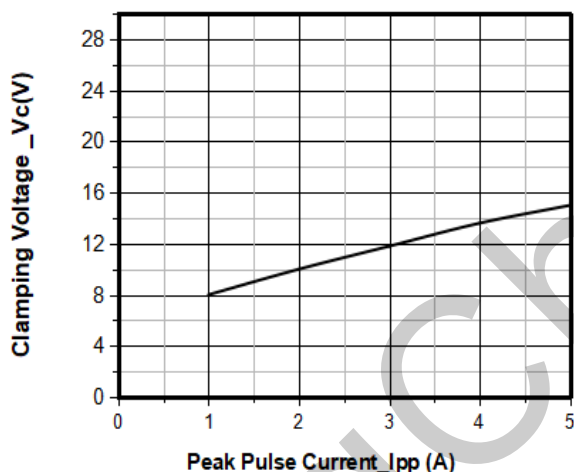
Typical Performance Characteristics (TA=25°C unless otherwise Specified)



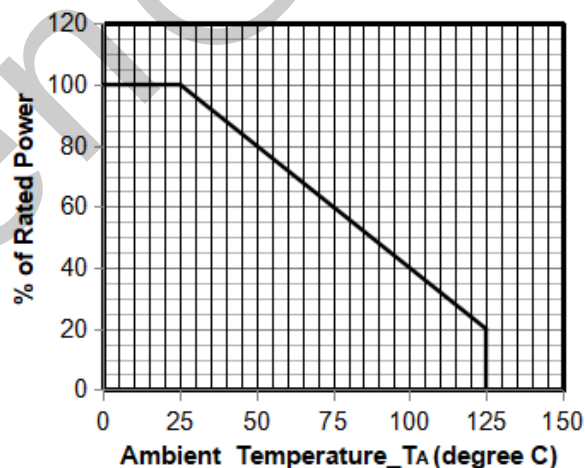
Junction Capacitance vs. Reverse Voltage



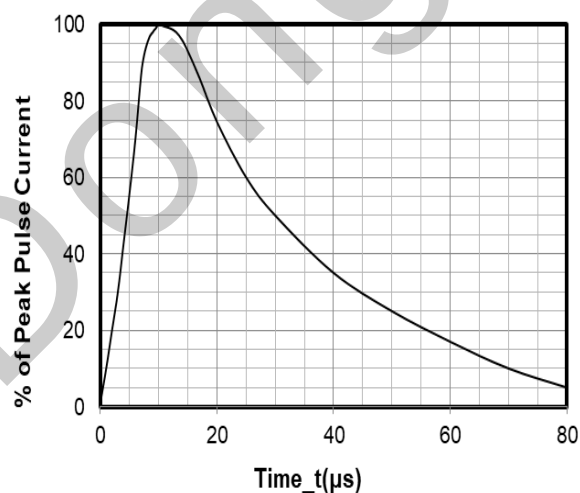
Peak Pulse Power vs. Pulse Time



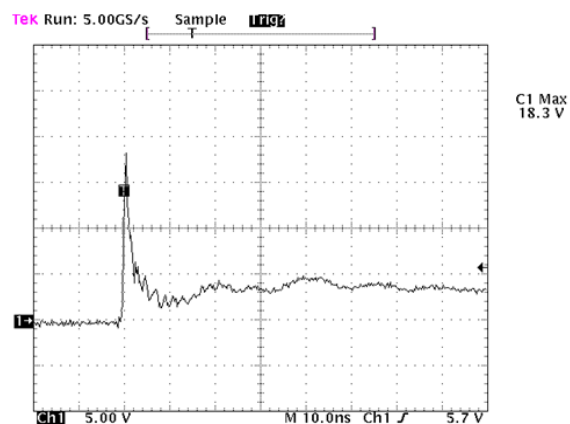
Clamping Voltage vs. Peak Pulse Current



Power Derating Curve



8 X 20μs Pulse Waveform

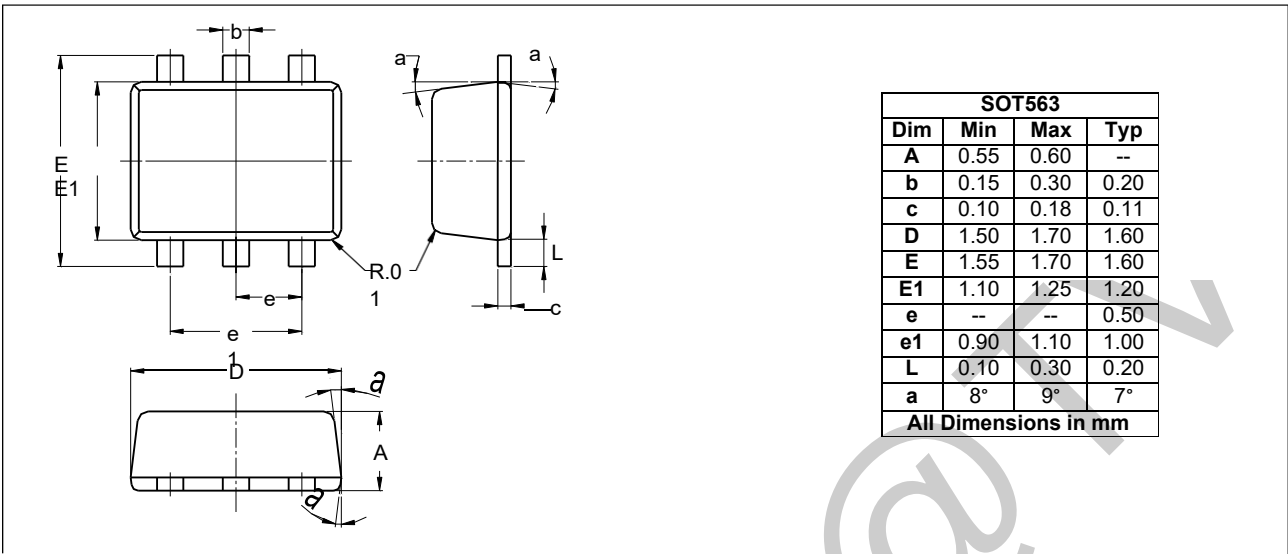


Note: Data is taken with a 10x attenuator

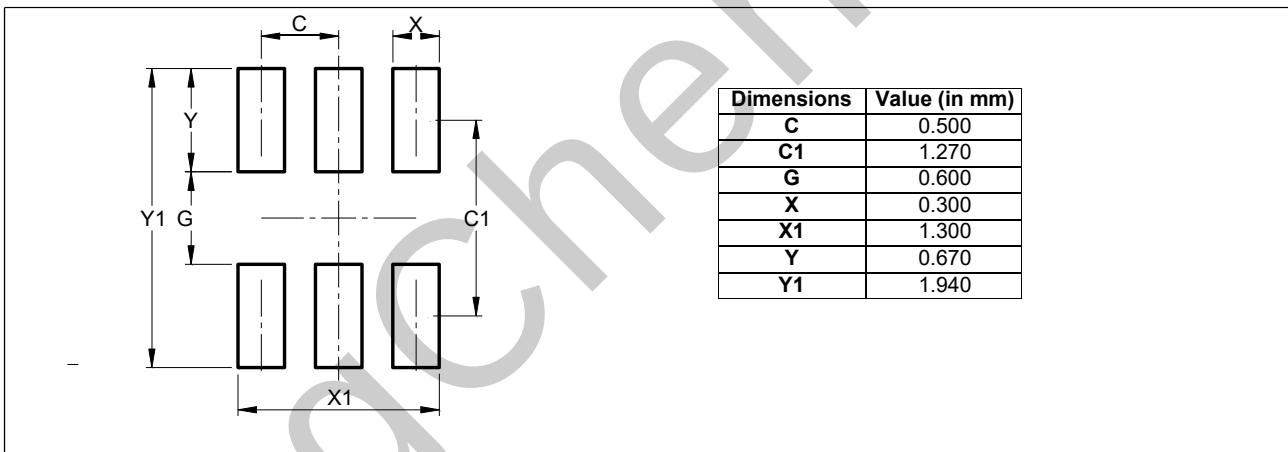
ESD Clamping Voltage

8 kV Contact per IEC61000-4-2

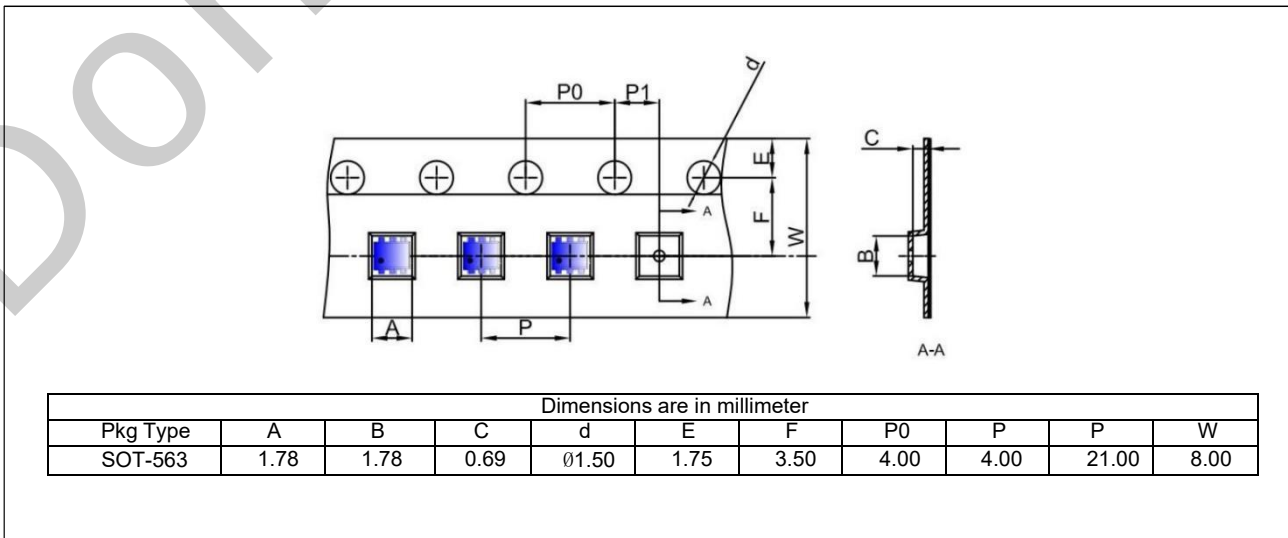
Package Dimensions



Pad Dimensions



Package Information



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