

FEATURES

- 0402 or 0603 Package
- Protect I/O lines etc.
- Low Clamping Voltage
- Low leakage current
- Solid-state silicon-avalanche technology
- Response Time is Typically <math><0.5\text{ ns}</math>
- RoHS compliant in Lead-Free versions



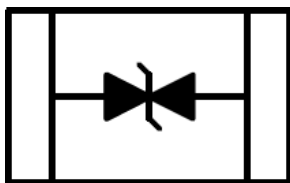
APPLICATIONS

- Notebooks and PC peripheral accessories
- Digital consumer electronics, MID, Bluetooth and Wi-Fi equipment
- Household Audio, Car Stereo
- Monitors and Flat Panel Displays
- Set Top Box and OTT Box, DVBT
- Networking and Telecom equipment, such as Cellphone, Net Switch, Router
- Medical Electronic such as Sphygmomanometer, Blood Glucose Meter
- Security equipment such as CCTV Camera, DVR, NCR, Optical Transceiver
- Industrial Equipment

IEC COMPATIBILITY (EN61000-4)

- IEC 61000-4-2 (ESD)
 $\pm 30\text{kV}$ (air), $\pm 30\text{kV}$ (contact)
- IEC 61000-4-4 (EFT) 30A (5/50ns)
- IEC 61000-4-5 (Lightning) 5A (8/20 μs)

SCHEMATIC & PIN CONFIGURATION





BTR04G02/BTR06G02

Low Capacitance Single-Line ESD Suppressor

ELECTRICAL CHARACTERISTICS

(T_A=25°C Unless otherwise noted)

Part Number	Working Voltage (V _{DC})	Trigger Voltage(V _V) ΔV _V =±30%	Clamping Voltage (V _C)	Capacitance Type(C _P)	Capacitance Max.(C _P)	Leakage Current (I _L)	Package
BTR04G02	24V	300V	30V	0.2pF	0.3pF	<50nA	0402
BTR06G02	24V	300V	30V	0.2pF	0.3pF	<50nA	0603

ELECTRICAL PARAMETERS (T=25°C)

Symbol	Parameter
V _{DC}	Maximum DC Operating Voltage
V _V	In the case of electrostatic discharge, V _V is the turn-on voltage of ESD suppressor instant grounding
V _C	Per IEC61000-4-2, level 4 waveform(8KV contact discharge mode,30A), measurement made 30ns after initiation of pulse
C _P	capacitance measurement at 1MHz test frequency
I _L	Leakage Current

ABSOLUTE MAXIMUM RATINGS

(T_A=25°C Unless otherwise noted)

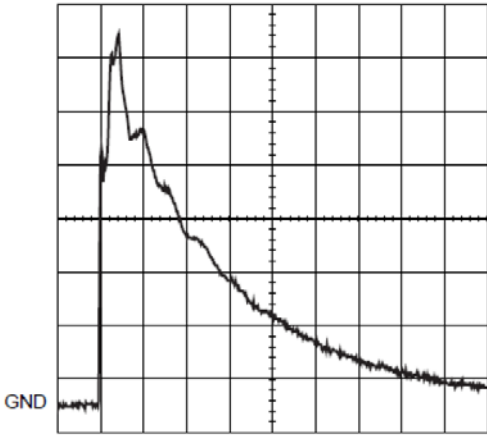
Parameter	Symbol	Typical	Unit
Operating Junction Temperature	T _J	-50 ~ 125	°C
Storage Temperature Range	T _{STG}	-55 ~ 150	°C

ENVIRONMENTAL SPECIFICATIONS

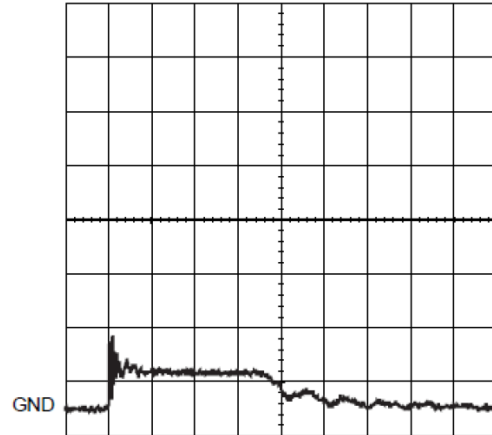
Characteristics	Specifications	Test Condition
Bias humidity	ΔV _V N _V ≤ ±10%	90%RH, 40 °C, Working voltage, 1000 hours
Thermal shock		-40 °C to 85 °C, 30 min. , 5 cycles
Full load voltage		Working voltage, 85 °C, 1000hours
Solder leach resistance	1. ΔV _V N _V ≤ ±10% 2. I _r ≤ 50mA at working voltage 3. Solder Wetting area ≥ 95%	260°C, 10s

TYPICAL CHARACTERISTICS

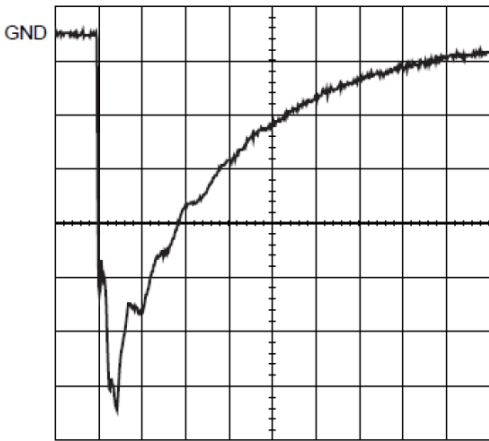
Without ESD Suppressor/+8KVESD Voltage Waveform



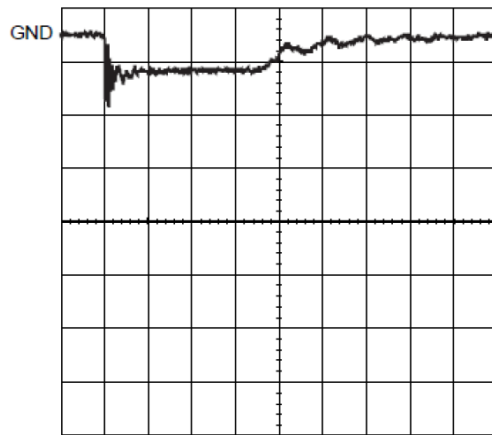
ESD Suppressor Clamped/+8KVESD Voltage Waveform



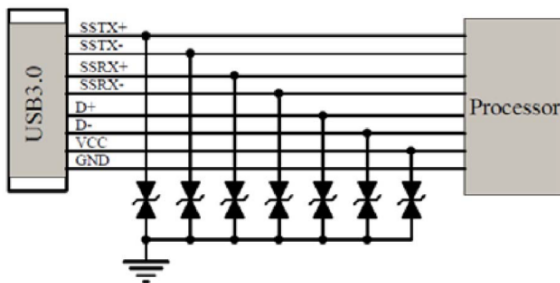
Without ESD Suppressor/-8KVESD Voltage Waveform



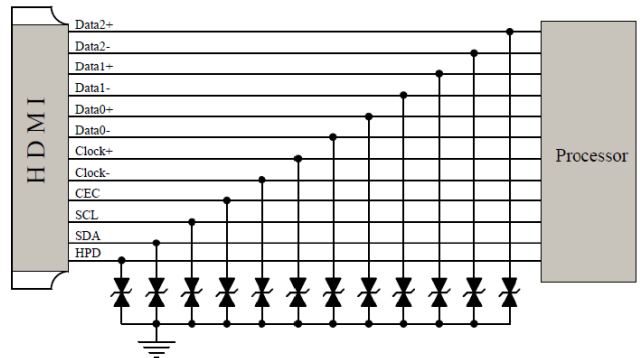
ESD Suppressor Clamped/-8KV ESD Voltage Waveform



TYPICAL APPLICATIONS

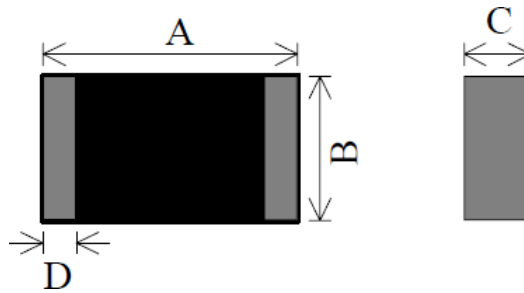


USB 3.0 Port



HDMI Port

PACKAGE OUTLINE



Dim	Millimeters	
	0402 Package	0603 Packag
A	1.00±0.10	1.60±0.15
B	0.50±0.10	0.80±0.10
C	0.60 Max.	0.90 Max.
D	0.25±0.10	0.30±0.10

ORDERING INFORMATION

Chip Size	Parts on 7 inch (178 mm) Reel
0402	10,000PCS
0603	5,000PCS