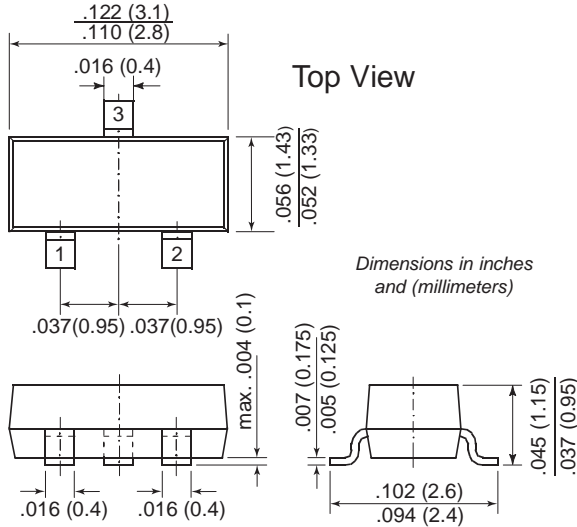


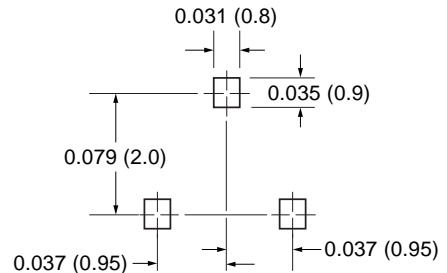


# Miniature Transient Voltage Suppressors

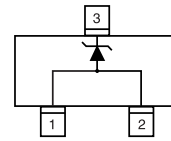
## TO-236AB (SOT-23)



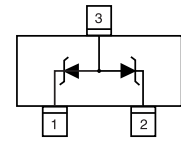
## Mounting Pad Layout



GSOTxx



GSOTxxC



Top View

## Mechanical Data

**Case:** SOT-23 Plastic Package

**Weight:** approx. 0.008g

**Terminals:** Solderable per MIL-STD-750, method 2026

**High temperature Soldering Guaranteed:**  
230°C for 10 seconds.

### Packaging Codes – Options:

- E8 – 10K per 13" reel (8mm tape)
- E9 – 3K per 7" reel (8mm tape)

## Features

- Transient protection for data lines as per IEC 1000-4-2 (ESD) 15kV (air), 8kV (contact) IEC 1000-4-4 (EFT) 40A (tp = 5/50ns) IEC 1000-4-5 (Lightning) 24A (tp = 8/20µs)
- Bidirectional or unidirectional configurations available
- Devices with a "C" suffix have dual diodes, which can protect two unidirectional lines with pin 3 used as a common anode connection, or a single bidirectional line between pins 1 & 2.
- Ideal for ESD Protection

## Maximum Ratings and Thermal Characteristics (TA = 25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak Power Dissipation <sup>(1)</sup> for 8/20µs pulse	P <sub>pk</sub>	300	W
Forward Surge Current for single 8.3ms half sine wave	I <sub>FSM</sub>	10	A
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>stg</sub>	-55 to +150	°C

### Notes:

- (1) Nonrepetitive current pulse and derate above T<sub>A</sub> = 25°C. For GSOT03, GSOT03C, GSOT04, GSOT04C the peak power dissipation is 270W.
- (2) FR-5 = 1.0 x 0.75 x 0.62 in.

# GSOT03 thru GSOT36C

Vishay Semiconductors  
formerly General Semiconductor



## Electrical Characteristics (T<sub>J</sub> = 25°C unless otherwise noted)

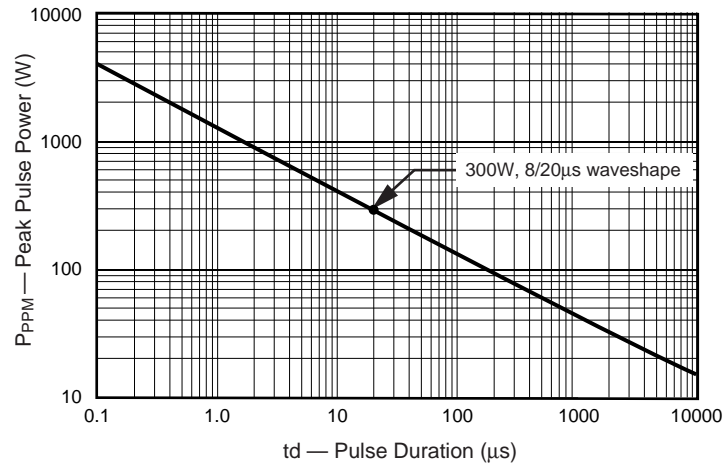
Part Number <sup>(1)</sup>	Device Marking Code	Rated Stand-off Voltage  V <sub>WM</sub> Volts	Minimum Breakdown Voltage @ 1mA V <sub>(BR)</sub> Volts	Maximum Clamping Voltage @ I <sub>P</sub> = 1A <sup>(2)</sup> V <sub>C</sub> Volts	Maximum Clamping Voltage @ I <sub>P</sub> = 5A <sup>(2)</sup> V <sub>C</sub> Volts	Maximum Leakage Current @ V <sub>WM</sub> I <sub>D</sub> μA	Maximum Capacitance @ 0V, 1MHz C pF
GSOT03	03	3.3	4.0	6.5	7.5	125	800
GSOT03C	03C	3.3	4.5	7.0	9.0	125	600
GSOT04	04	4.0	5.0	8.5	10.5	125	800
GSOT04C	04C	4.0	5.0	8.5	10.5	125	600
GSOT05	05	5.0	6.0	9.8	12.5	100	550
GSOT05C	05C	5.0	6.0	9.8	12.5	100	400
GSOT08	08	8.0	8.5	13.4	15.0	10	400
GSOT08C	08C	8.0	8.5	13.4	15.0	10	350
GSOT12	12	12.0	13.3	19.0	28.0	2	185
GSOT12C	12C	12.0	13.3	19.0	28.0	2	150
GSOT15	15	15.0	16.7	24.0	35.0	1	140
GSOT15C	15C	15.0	16.7	24.0	35.0	1	100
GSOT24	24	24.0	26.7	43.0	60.0	1	83
GSOT24C	24C	24.0	26.7	43.0	60.0	1	63
GSOT36	36	36.0	40	60.0	75.0	1	80
GSOT36C	36C	36.0	40	60.0	75.0	1	60

**Note:** (1) Part numbers with a "C" suffix are bidirectional devices (dual junction)

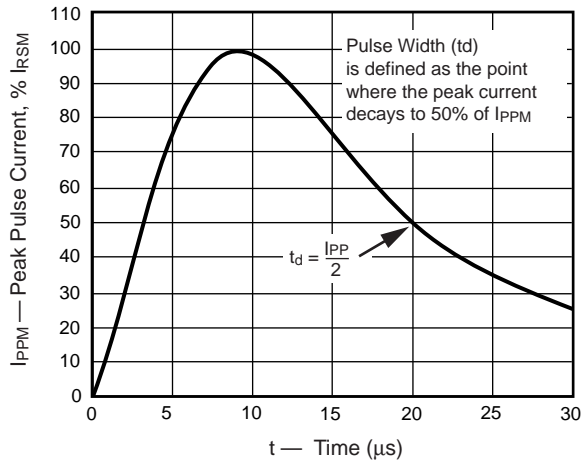
(2) 8/20μs waveform used (see figure 2)

## Ratings and Characteristic Curves (T<sub>A</sub> = 25°C unless otherwise noted)

**Fig. 1 – Non-Repetitive Peak Pulse Power vs. Pulse Time**



**Fig. 2 – Pulse Waveform**



**Fig. 3 – Power Derating Curve**

