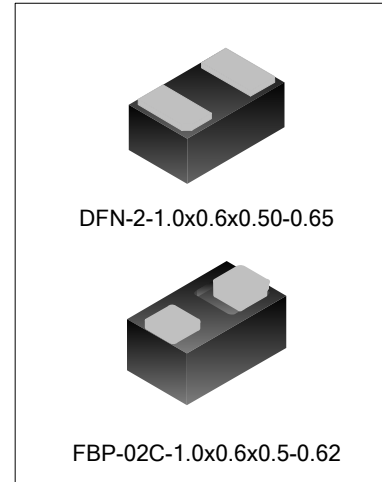


Bi-Directional Voltage Rail Clamp Ultra-Low Capacitance Transient Voltage Suppressor

Description

GG2026FNG/FBG is dual directional voltage rail clamp ultra-low capacitance transient voltage suppressor, electrical characteristics in positive/negative direction are symmetric, and the maximum capacitance is 1.0 pF. It can be used for power supply line protection, control line protection and high-speed data line protection during static discharging, transient pulse and lightning discharge.

GG2026FNG/FBG is suitable for ESD protection for high-speed data lines.



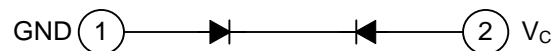
Features

- Bi-directional ESD protection
- Provides ESD protection to IEC61000-4-2
 - ±10kV (air discharge)
 - ±9kV (contact discharge)
- Ultra capacitance structure: no higher than 1.0pF
- Low clamping voltage
- Low operating voltage 5V
- Reliable Silicon avalanche breakdown structure
- DFN1006 super-small package

Applications

- USB interface
- 10/100/1000M Ethernet
- Digital camera
- High-speed data line interface

Pin Configuration



Absolute Maximum Ratings

Characteristics		Symbol	Ratings	Unit
Peak Pulse Current (8/20 μ s)		I_{PP}	1	A
Maximum ESD	IEC61000-4-2 (Air)	V_{ESD1}	± 10	kV
Withstand Capability	IEC61000-4-2 (Contact)	V_{ESD2}	± 9	kV
Operating Temperature Range		T_{opr}	-55 ~ +125	$^{\circ}$ C
Storage Temperature Range		T_{stg}	-55 ~ +150	$^{\circ}$ C

Electrical Characteristics ($T_{amb}=25^{\circ}$ C)

Characteristics	Symbol	Conditions	Min	Typ	Max	Unit
Reverse Working Voltage	V_{RWM}	--	--	--	5	V
Reverse Breakdown Voltage	V_{BR}	$I_t=1mA$	6	--	--	V
Reverse Leakage Current	I_R	$V_{RWM}=5V; T=25^{\circ}C$	--	--	1	μ A
Positive Clamping Voltage	V_{C1}	$I_{PP}=1A, t_P=8/20\mu S;$	--	8.5	12.0	V
Capacitance Between I/O and GND	C_{J2}	$V_R=0V, f=1MHz;$	--	0.5	1.0	pF

Typical Characteristics

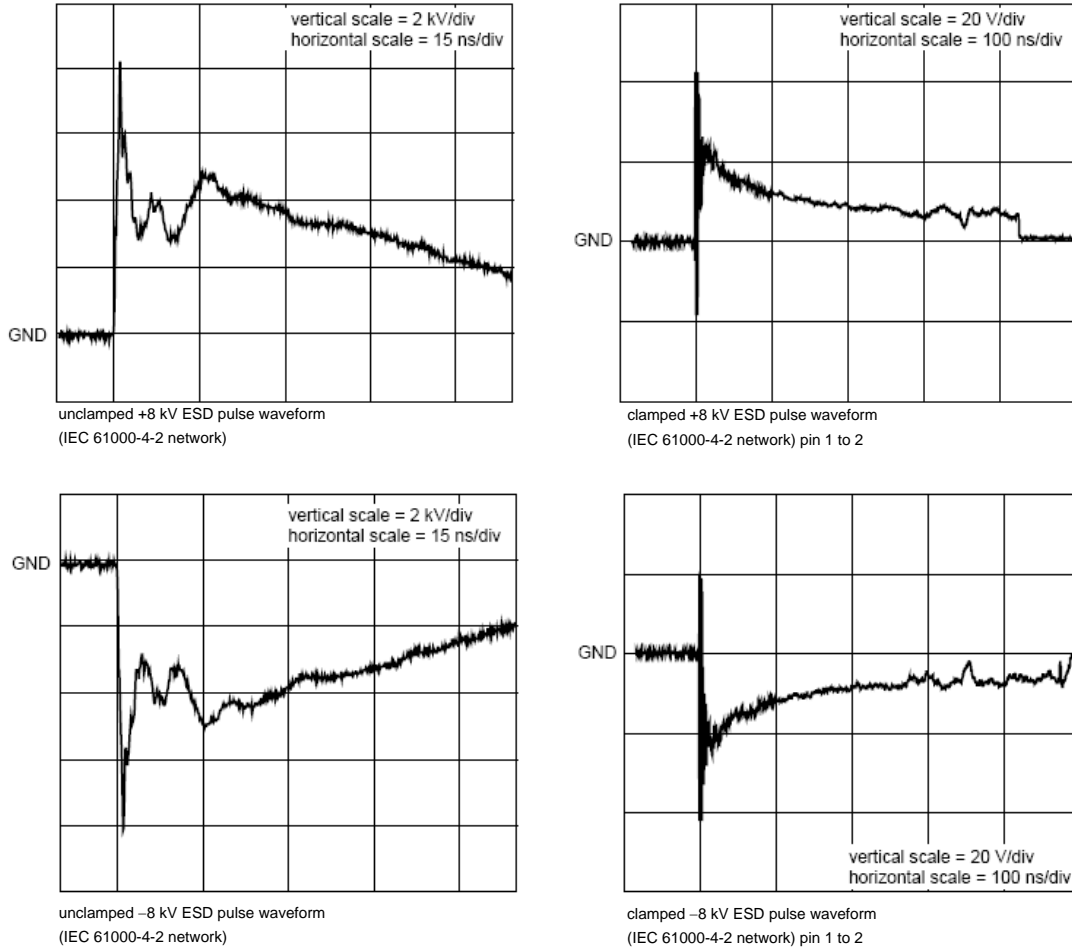


Fig. 1. ESD clamping test setup and waveform

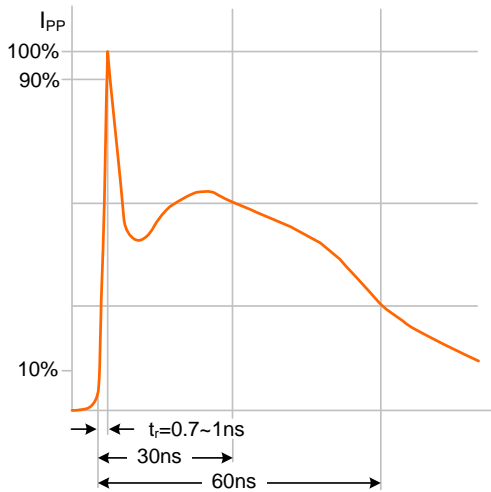


Fig. 2. ESD pulse waveform according to IEC 61000-4-2

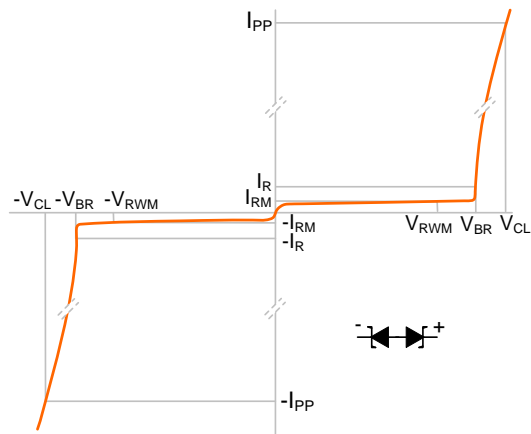
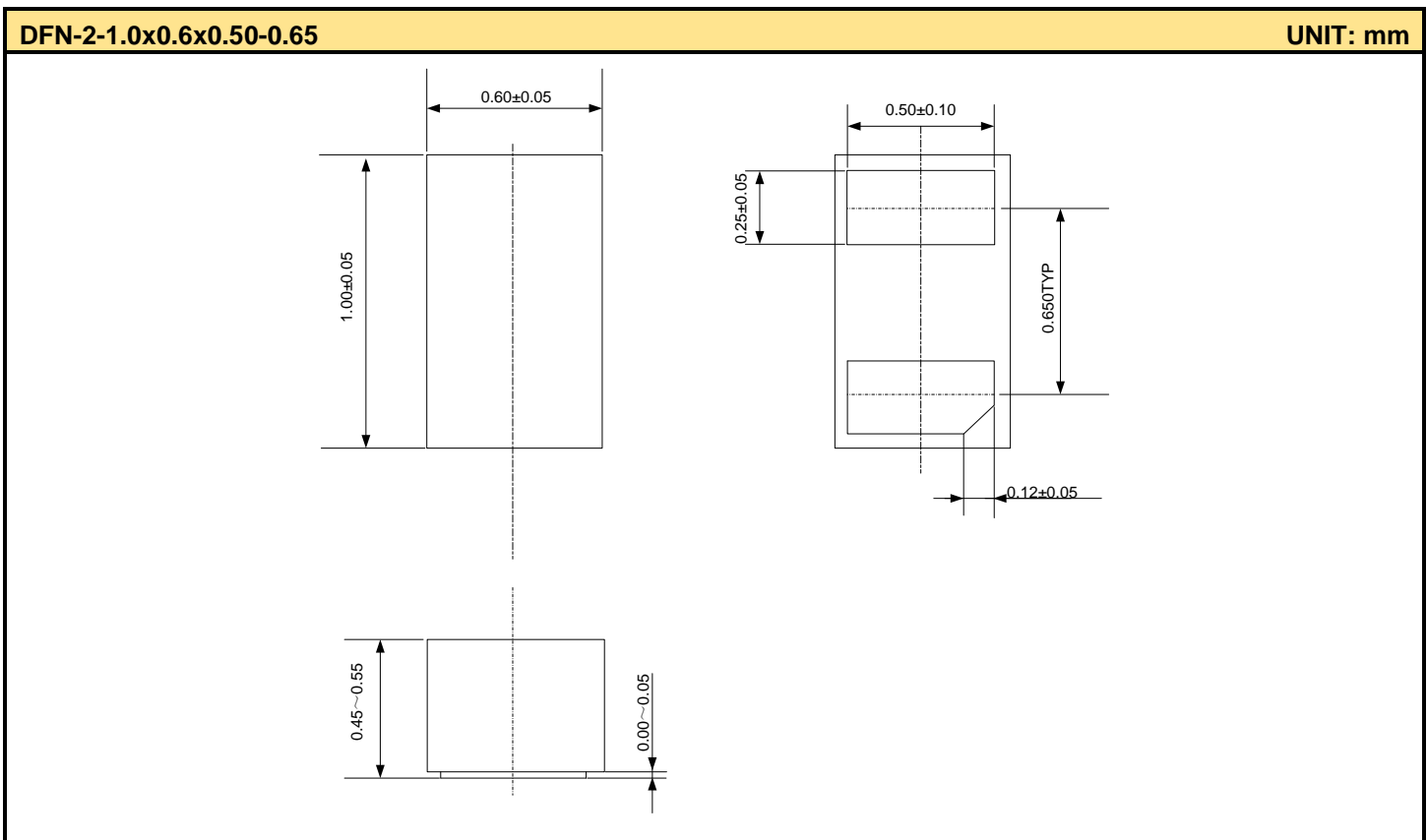


Fig. 3. V-I characteristics for a bidirectional ESD protection diode

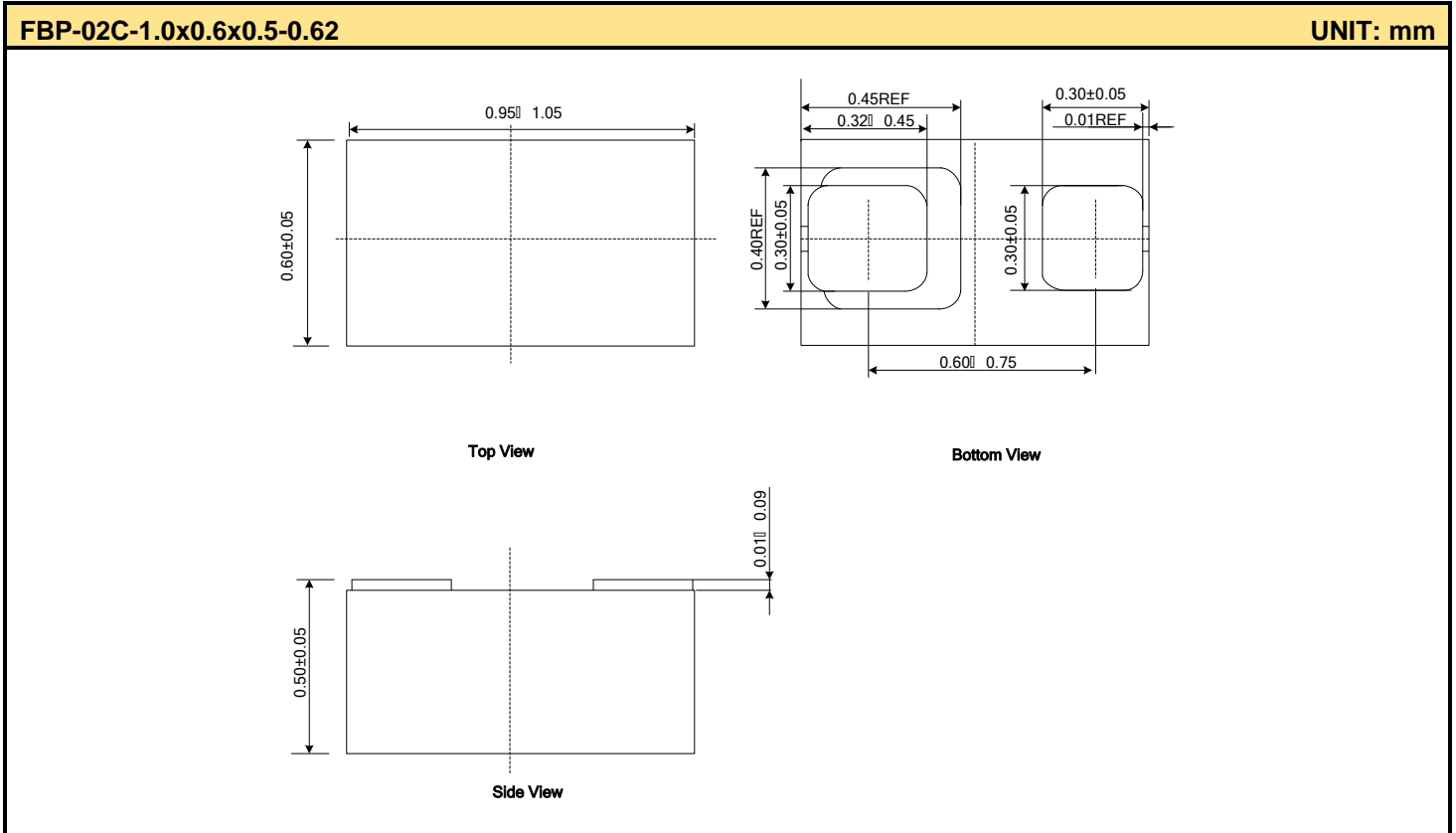
Ordering Information

Part No	Package	Marking	Material	Packing
SU2026FNGTR	DFN-2-1.0x0.6x0.50-0.65	C	Halogen free	Tape&Reel
SU2026FBGTR	FBP-02C-1.0x0.6x0.5-0.62	C	Halogen free	Tape&Reel

Package Outline



Package Outline (continued)



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