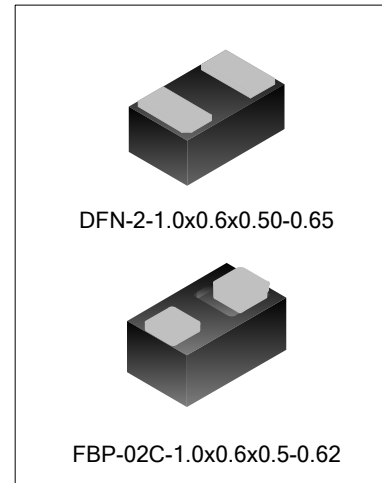


Single Channel Ultra Low Capacitance ESD Protection Diode Array

General Description

The GG2045FNG/FBG is a single-channel ultra low capacitance rail clamp ESD protection diode array device that includes a pair of ESD diodes to steer positive or negative ESD current to respectively positive or negative rails. The maximum capacitance of the channel to ground is 0.9pF. A Zener diode is integrated in the array between the positive and negative supply rails. In a typical application, the negative rail pin is connected with the ground of the circuit protected. Thus, the positive ESD current is steered to the ground through the internal Zener diode to protect the power supply of the circuit protected.

GG2045FNG/FBG is an ideal product to protect high speed data lines.



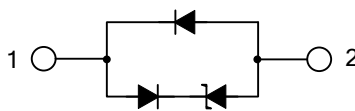
Features

- Single-channel ESD protection
- Provide ESD protection meeting IEC61000-4-2(ESD)
 - $\pm 15\text{kV}$ air discharge
 - $\pm 10\text{kV}$ contact discharge
- Super low capacitance between input and ground is no more than 0.9pF
- Low clamping voltage
- 5V low operating voltage
- Reliable silicon device avalanche breakdown structure
- DFN1006 tiny package

Applications

- Cell phone accessories
- Notebooks
- Digital cameras
- MP3/MP4/PMP players

Pin Configuration



Absolute Maximum Ratings

Characteristics		Symbol	Ratings	Unit
Peak Pulse Power(8/20 μ s)		P _{PP}	120	W
Peak Pulse Current(8/20 μ s)		I _{PP}	5	A
Max. ESD Tolerance	IEC61000-4-2(Air)	V _{ESD1}	± 15	kV
	IEC61000-4-2(Contact)	V _{ESD2}	± 10	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	Test Conditions	Min	Typ	Max	Unit
Reverse Working Voltage	V _{RWM}	Any I/O pin to GND	--	--	5	V
Reverse Breakdown Voltage	V _{BR}	Any I/O pin to GND I _t =1mA	6	--	--	V
Reverse Leakage Current	I _R	V _{RWM} =5V; T=25 $^{\circ}$ C; Any I/O pin to GND	--	--	1	μ A
Positive Clamping Voltage	V _{C1}	I _{PP} =1A, t _p =8/20 μ S; Positive pulse; Any I/O pin to GND	--	8.5	12.0	V
Negative Clamping Voltage	V _{C2}	I _{PP} =1A, t _p =8/20 μ S; Negative pulse; Any I/O pin to GND	--	1.8	--	V
Junction Capacitance Between I/O And GND	C _J	V _R =0V, f=1MHz; Any I/O pin to GND	--	0.5	0.9	pF

Typical Characteristics

Fig.1. ESD lamping voltage
Positive 8kV IEC61000-4-2 contact discharge

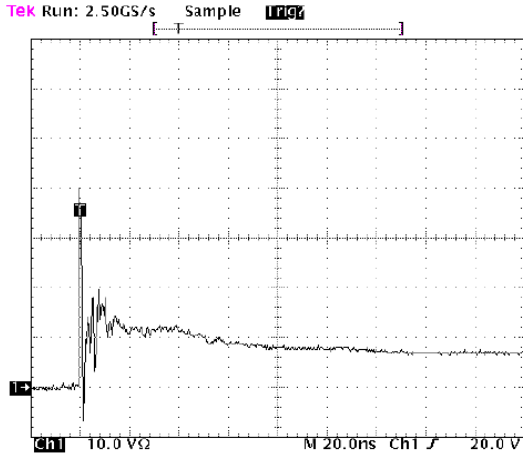
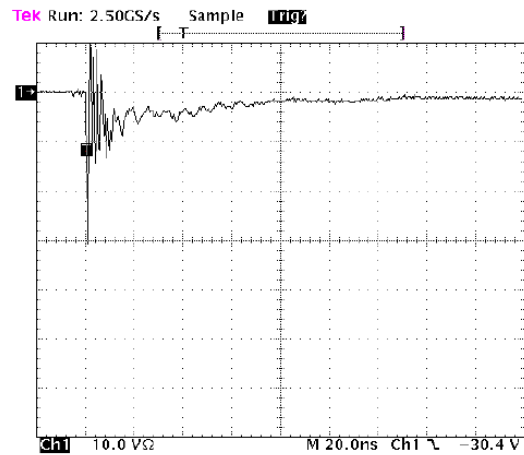


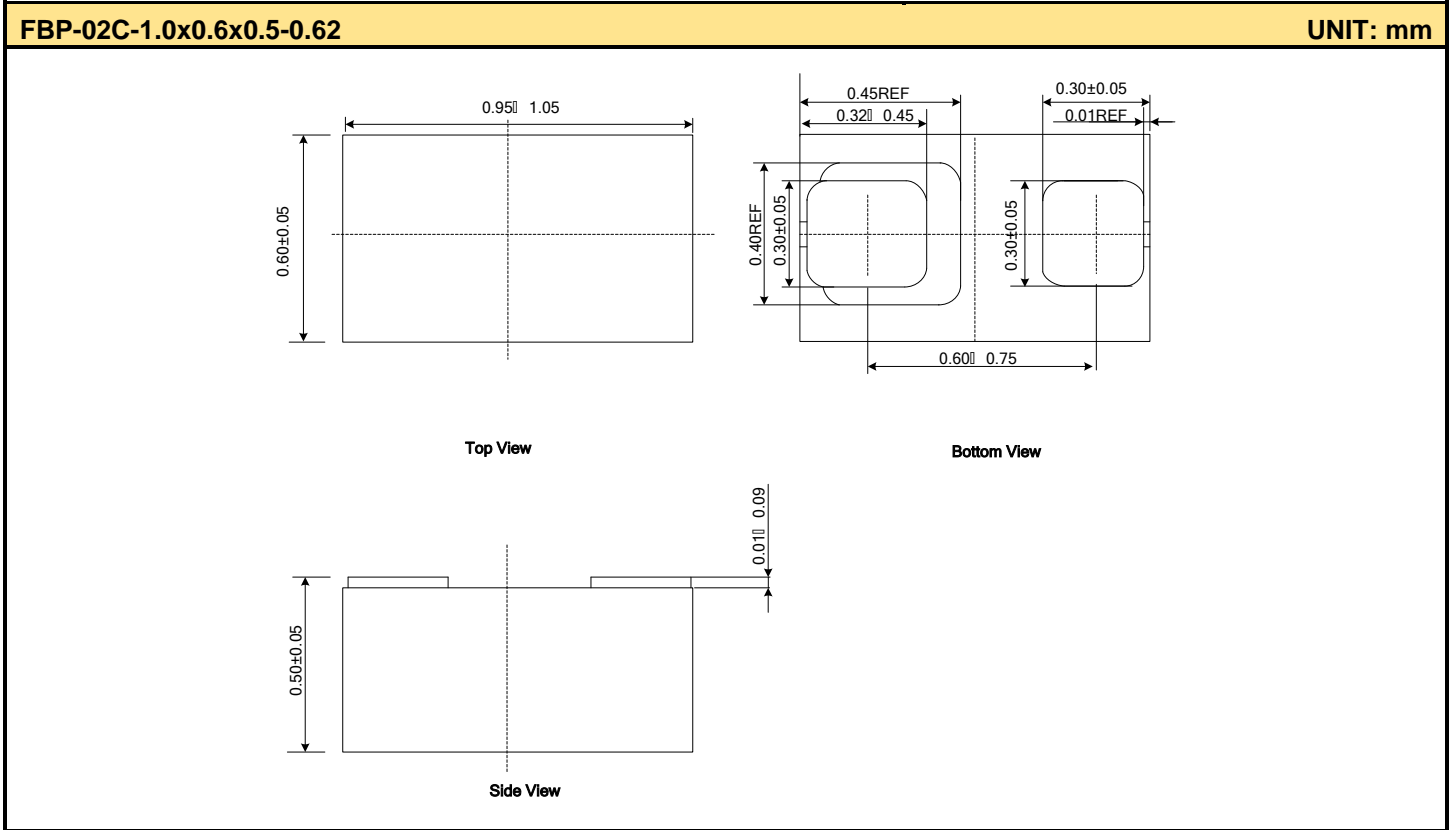
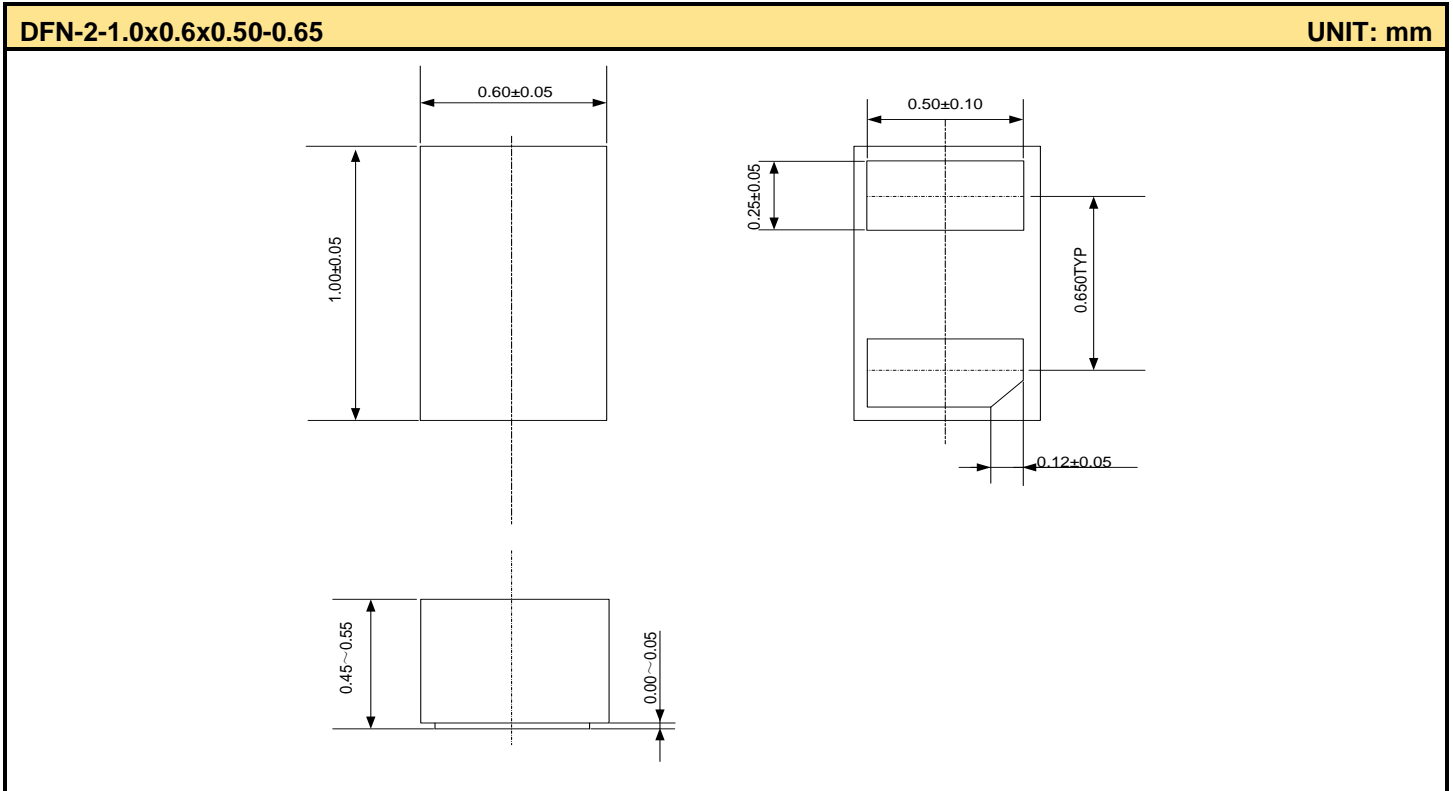
Fig.2. ESD lamping voltage
Negative 8kV IEC61000-4-2 contact discharge



Ordering Information

Part No.	Package	Marking	Material	Packing
GG2045FNGTR	DFN-2-1.0x0.6x0.50-0.65	S	Halogen free	Tape&Reel
GG2045FBGTR	FBP-02C-1.0x0.6x0.5-0.62	S	Halogen free	Tape&Reel

Package Outline



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