

Low Capacitance Uni-directional TVS Diode

Features

- Ultra small package: 1.0x0.6x0.5mm
- Ultra low capacitance: 0.5pF typical
- Ultra low leakage: nA level
- Low operating voltage: 5V
- Low clamping voltage
- 2-pin leadless package
- Complies with following standards:
 - – IEC 61000-4-2 (ESD) immunity test
Air discharge: $\pm 30\text{kV}$
Contact discharge: $\pm 25\text{kV}$
 - – IEC61000-4-5 (Lightning) 4A (8/20 μs)
- RoHS Compliant
- Lead Finish: NiPdAu

Ordering Information

Part Number	Qty per Reel	Reel Size
ESD5V0U05-1006	10000	7"

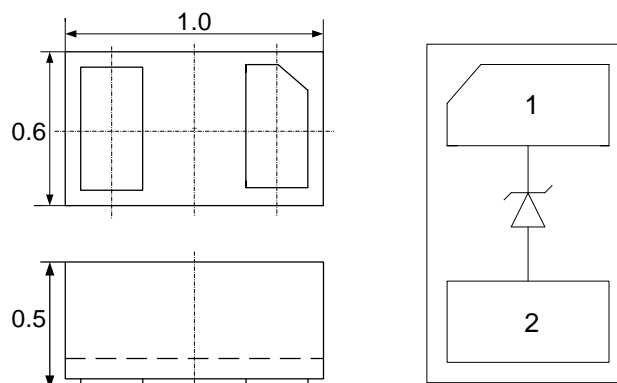
Mechanical Characteristics

- Package: DFN1006-2 (0402)
- Lead Finish: Matte Tin
- Case Material: "Green" Molding Compound.
- Moisture Sensitivity: Level 3 per J-STD-020
- Terminal Connections: See Diagram Below

Applications

- Cellular Handsets and Accessories
- Personal Digital Assistants
- Notebooks and Handhelds
- Portable Instrumentation
- Digital Cameras
- Peripherals
- Audio Players
- Keypads, Side Keys, LCD Displays

Dimensions and Pin Configuration





ESD5V0U05-1006

Absolute Maximum Ratings (T_A=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppk	70	W
Peak Pulse Current (8/20μs)	Ipp	4	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	VESD	±30 ±25	kV
Operating Temperature Range	T _J	-55 to +125	°C
Storage Temperature Range	T _{stg}	-55 to +150	°C

Electrical Characteristics (T_A=25°C unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V _{RWM}			5	V	
Breakdown Voltage	V _{BR}	6.5	7.5	9.0	V	I _T = 1mA
Reverse Leakage Current	I _R			0.08	μA	V _{RWM} = 5V
Clamping Voltage	V _C			10	V	I _{pp} = 1A (8x 20us pulse)
Clamping Voltage	V _C			14	V	I _{pp} = 4A (8x 20us pulse)
Junction Capacitance	C _J		0.5	0.65	pF	V _R = 0V, f = 1MHz, Pin 1 to Pin 2

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

Fig1. 8/20µs Pulse Waveform

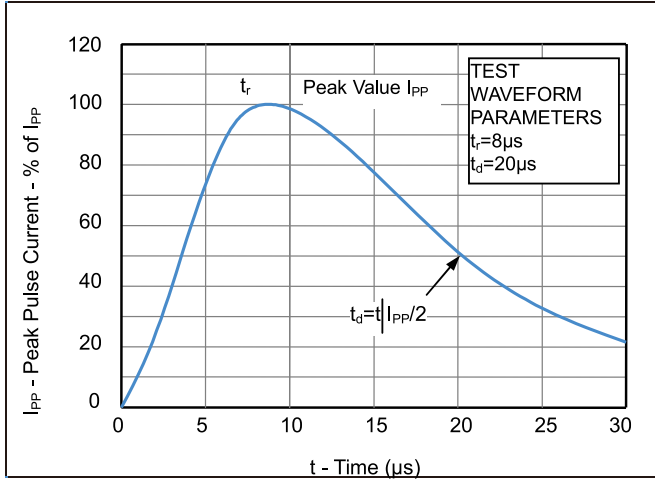


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

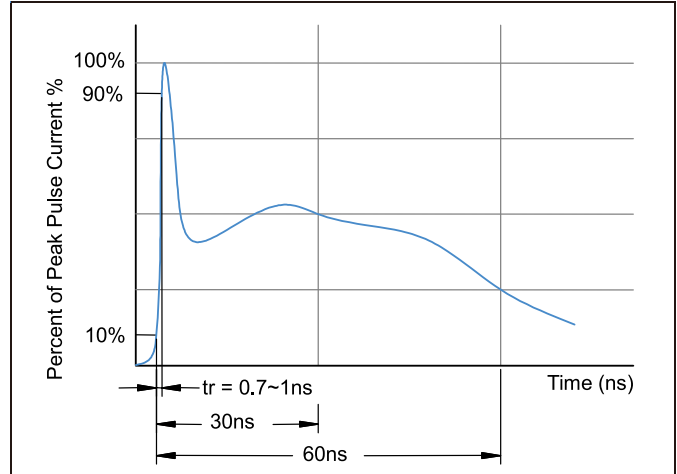


Fig3. Power Derating Curve

