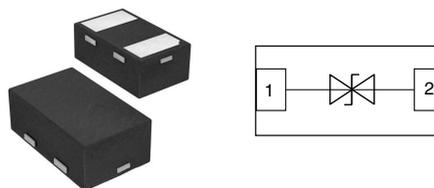


ESD Protection Diode in DFN1006

Features

- 500Watts peak pulse power ($T_P = 8/20\mu s$)
- DFN1006 package
- Bidirectional configurations
- Low clamping voltage
- Low leakage current
- Normal capacitance ($C_j = 130pF$ typ.)
- Protection one data/power line to:
 - IEC 61000-4-2 $\pm 30kV$ contact $\pm 30kV$ air
 - IEC 61000-4-4 (EFT) 40A (5/50ns)
 - IEC 61000-4-5 (Lightning) 42A (8/20 μs)



Mechanical Data

- **Case:** DFN1006 (plastic package).
Lead free; RoHS compliant; Halogen free
- **Molding Compound Flammability Rating:**
UL 94 V-0
- **Terminals:** High temperature soldering guaranteed:
260 °C/10 sec. at terminals

Applications

- Microprocessor based equipment
- Personal Digital Assistants (PDAs)
- Notebooks & Handhelds
- Portable Instrumentation
- Digital Cameras
- Portable Instrumentation

Absolute Maximum Ratings

Ratings at 25 °C, ambient temperature unless otherwise specified

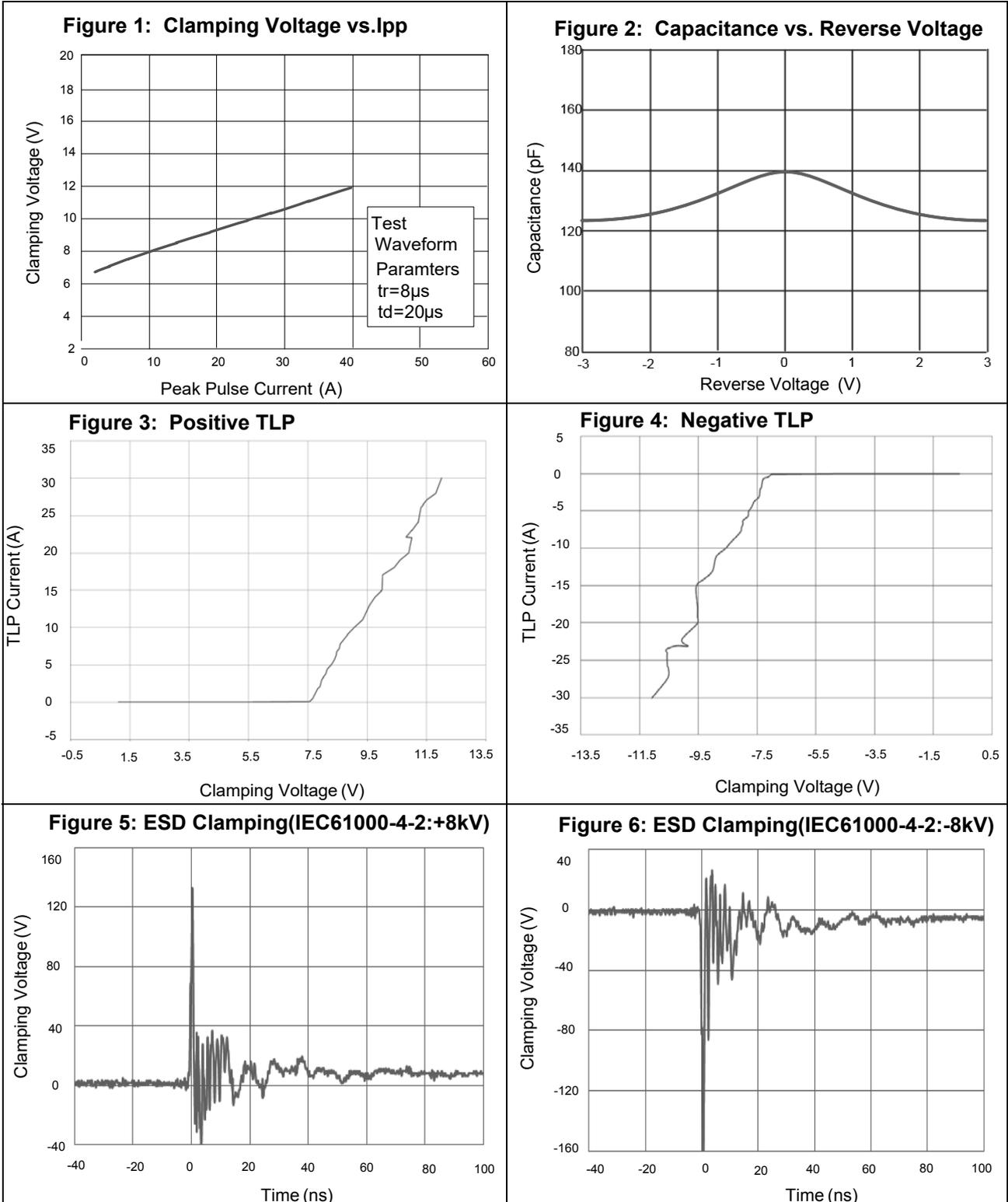
Parameter	Symbol	Value	Unit
Peak Pulse Power ($T_P = 8/20\mu s$)	P_{PP}	500	W
ESD contact/air discharge (IEC-61000-4-2)	V_{ESD}	30/30	kV
Peak Pulse Current ($T_P = 8/20\mu s$)	I_{PP}	42	A
Junction Temperature	T_J	-55 to +125	°C
Storage temperature	T_{STG}	-55 to +150	°C

Electrical Characteristics

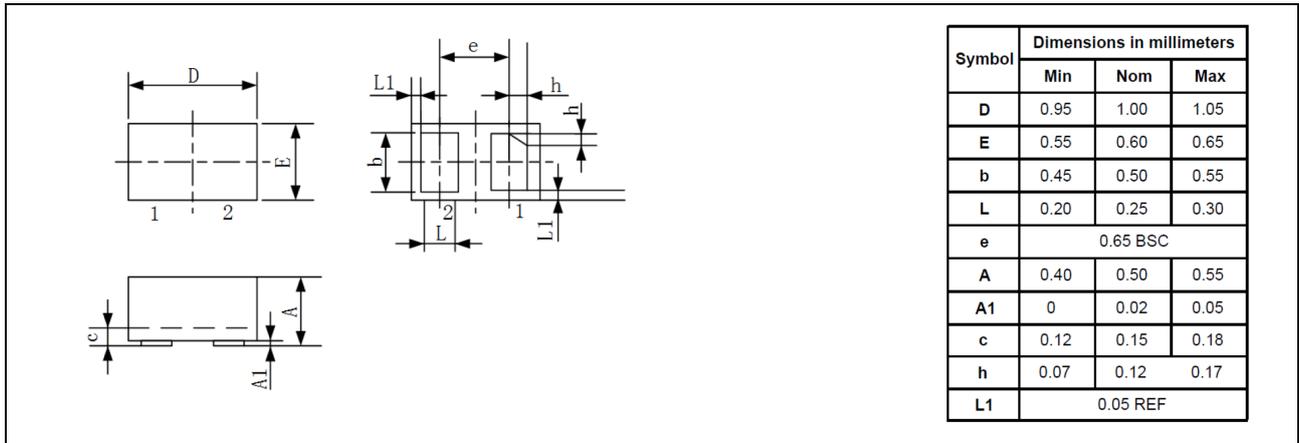
($T_A = 25\text{ °C}$ unless otherwise specified)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Reverse stand-off Voltage	V_{RWM}				5	V
Reverse Breakdown Voltage	V_{BR}	$I_T = 1mA$	6.5			V
Reverse Leakage Current	I_R	$V_{RWM} = 5V$		0.1	0.5	μA
Clamping Voltage (IEC 61000-4-5)	V_C	$I_{PP} = 42A$			12	V
Clamping Voltage (TLP)	V_C	$I_{TLP} = 8A$		8		V
Clamping Voltage (TLP)	V_C	$I_{TLP} = 16A$		9.5		V
Junction Capacitance	C_J	$V_R = 0V, f = 1MHz$		130		pF

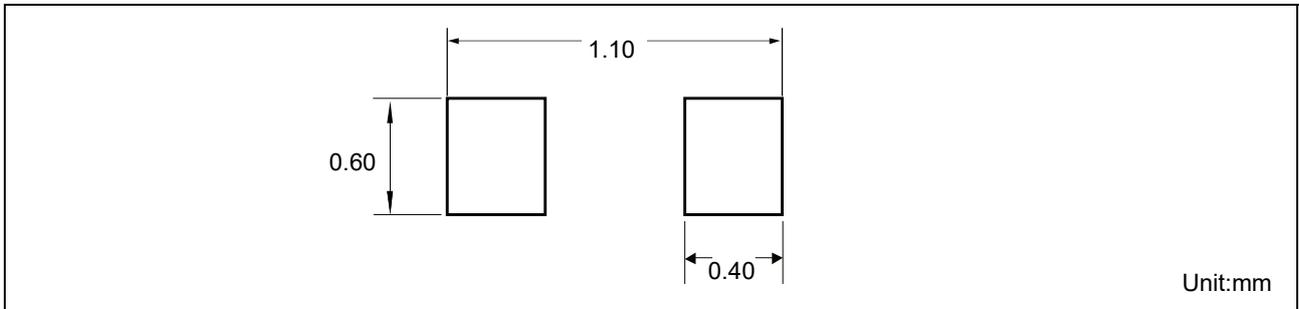
Typical Characteristics (T_{amb} = 25 °C unless otherwise specified)



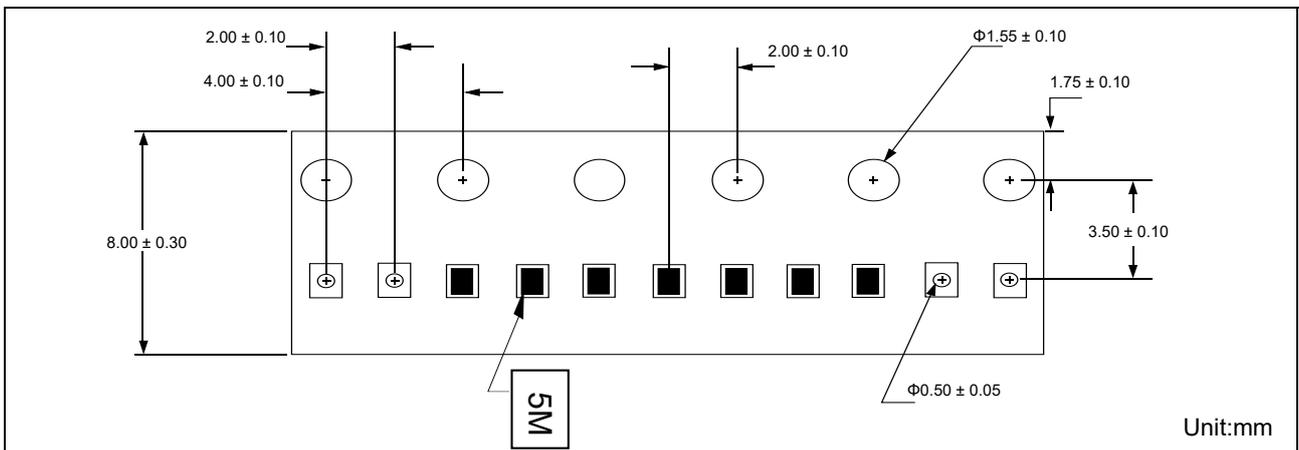
Package Dimensions



Pad Dimensions



Tape and Reel Specification



Ordering information

Order code	Marking	Package	Packaging option	Base quantity	Packaging specification
TESD1006 HC5VBH	5M	DFN1006	Tape and reel	10000pcs / reel	EIA STD RS-481