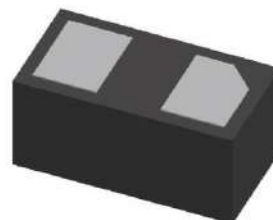


ESD Protection Diode

Features

- Ultra low leakage: nA level
- Operating voltage: 36V
- Low clamping voltage
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
 - Air discharge: $\pm 20\text{kV}$
 - Contact discharge: $\pm 15\text{kV}$
 - IEC61000-4-4 (EFT) 40A (5/50ns)
 - IEC61000-4-5 (Lightning) 7A (8/20 μs)
- RoHS Compliant

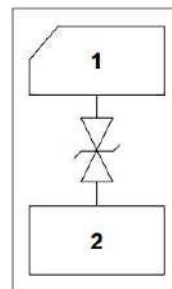
Dimensions DFN1006



Applications

- USB Ports
- SIM Ports
- Smart Phones
- Wireless Systems
- Set-top box and digital TV
- Digital video interface (DVI)
- Ethernet 10/100/1000 Base T

Pin Configuration



Mechanical Characteristics

- Package: DFN1006
- Lead Finish: Lead Free
- UL Flammability Classification Rating 94V-0
- Quantity Per Reel: 10,000pcs
- Reel Size: 7 inch
- Device Marking: TD

Absolute Maximum Ratings (T_{amb}=25°C unless otherwise specified)

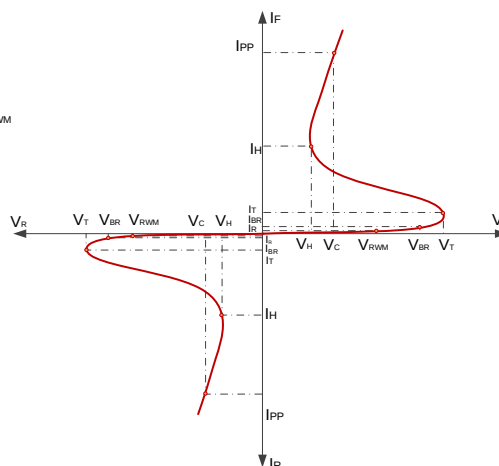
Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs)	P _{pp}	90	W
ESD per IEC 61000-4-2 (Air)	V _{ESD}	± 20	kV
ESD per IEC 61000-4-2 (Contact)		± 15	
Operating Temperature Range	T _J	-55 to +125	°C
Storage Temperature Range	T _{STJ}	-55 to +125	°C

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

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				36	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	40			
Holding Voltage	V_H	$I_H=100mA$	5.0			V
Reverse Leakage Current	I_R	$V_{RWM}=36V, T=25^\circ C$			1	μA
Clamping Voltage	V_C	$I_{PP}=7A, t_p=8/20\mu s$			12	V
ESD Clamping Voltage	V_C	$I_{TLP}=4A, t_p=0.2/100ns$		7.5		V
ESD Clamping Voltage	V_C	$I_{TLP}=16A, t_p=0.2/100ns$		18.1		V
Junction Capacitance	C_j	$V_R = 0V, f = 1MHz$		0.4	0.6	pF

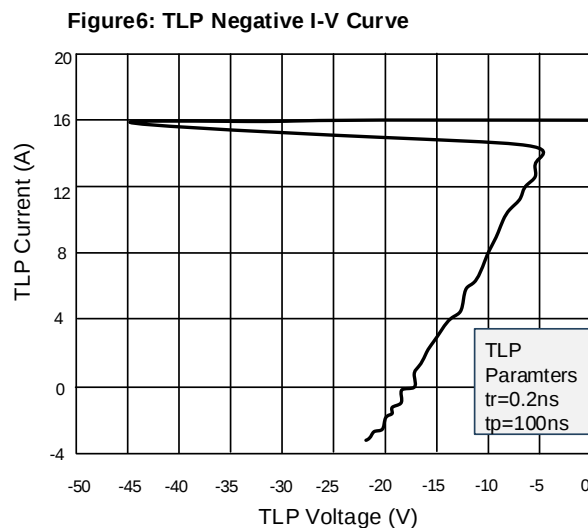
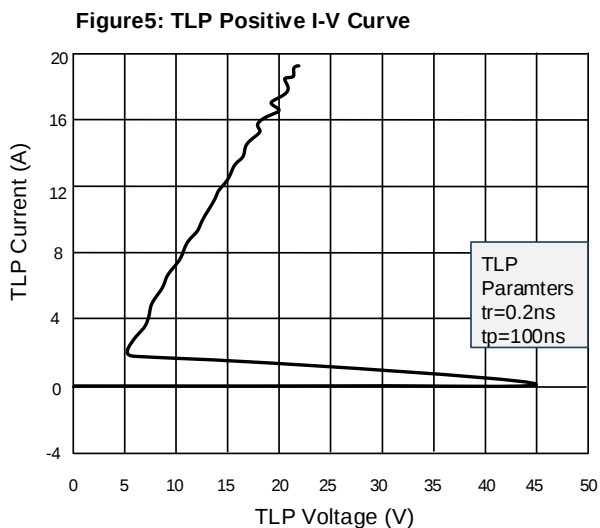
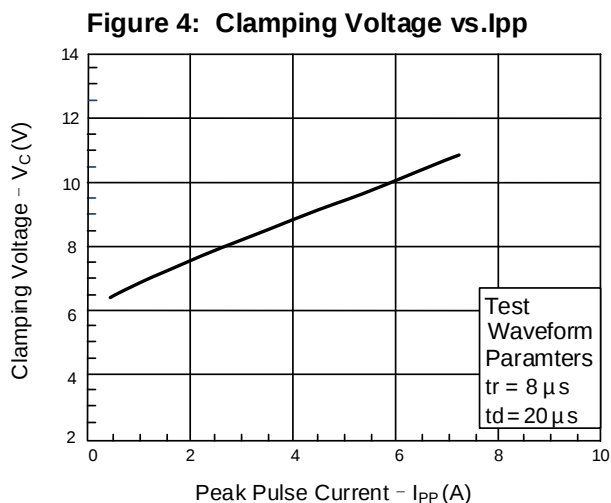
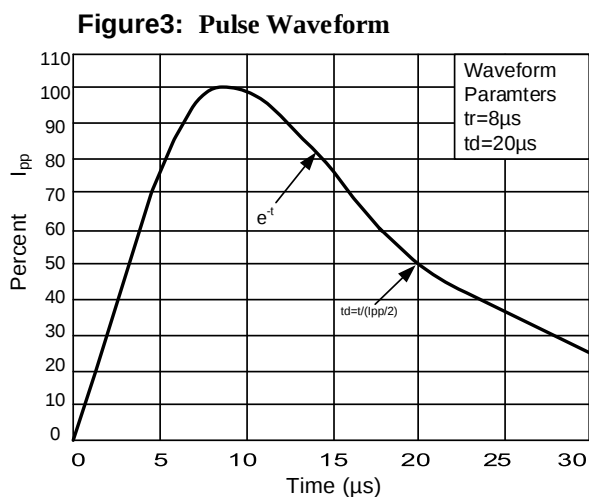
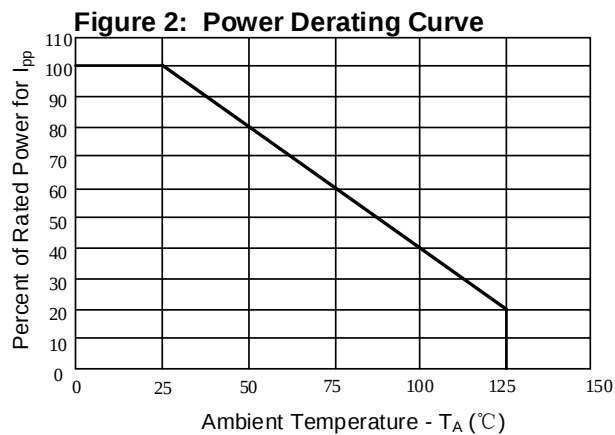
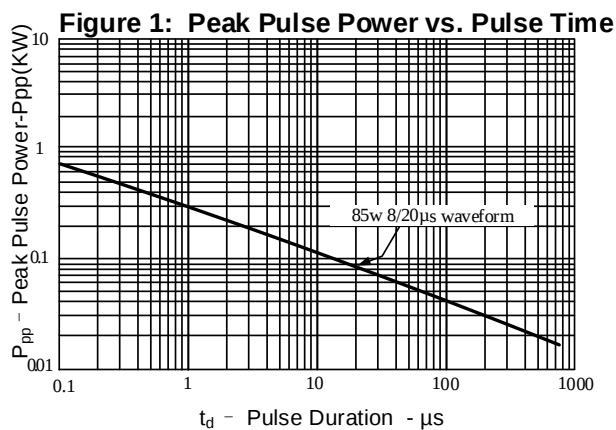
Electrical Parameters (TA=25°C unless otherwise specified)

V_{RWM} Reverse Working Voltage Max
 I_R Maximum Reverse Leakage Current @ V_{RWM}
 V_T Trigger Voltage
 V_H Holding Voltage
 I_H Holding Current
 V_{BR} Reverse Breakdown Voltage
 I_{PP} Maximum Reverse Peak Pulse Current
 V_C Clamping Voltage @ I_{PP}

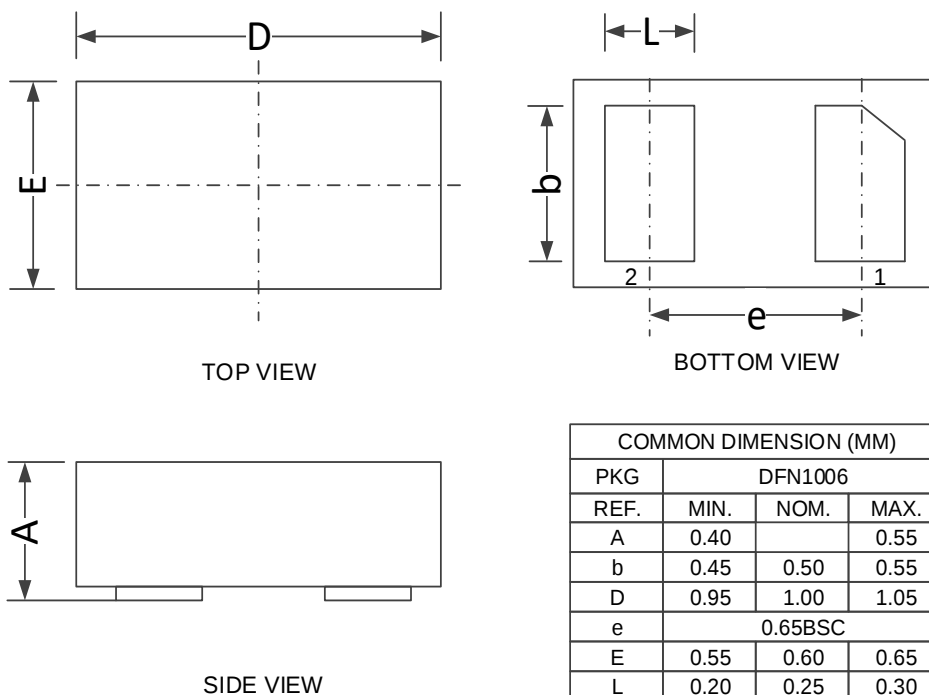


Note1: 8/20 μs pulse waveform.

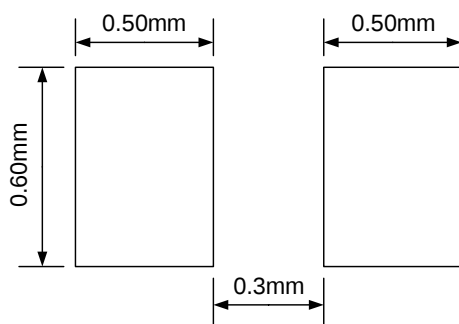
Typical Performance Characteristics (TA=25°C unless otherwise specified)



DFN1006 Package Outline Drawing



Suggested Land Pattern



Notes: This PCB Layout Is For Reference Purposes Only