

High Power Small Package ESD Protection

Applications

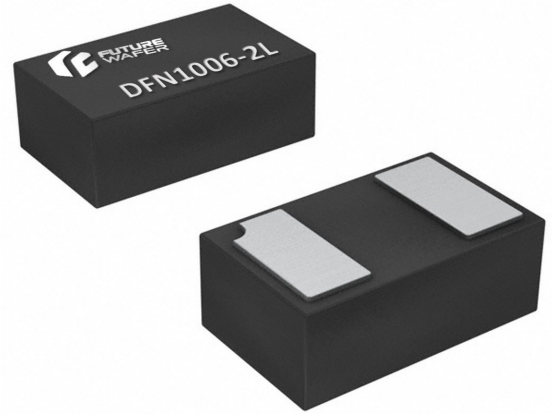
- Lan equipment
- Video
- DVI
- High Speed Data Line
- Ethernet
- USB 2.0 Power and Data line Protection

Feature

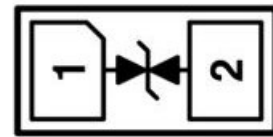
- With TVS Diode
- ESD Protection:Level 4
- Low clamping voltage
- 150Watts peak pulse power per line(tp=8/20uS)
- Ultra low capacitance:40pf max.(I/O to GND.)

IEC Compatibility

- EN61000-4
- 61000-4-2(ESD):LEVEL 4,Air:15kv,contact:8kv
- 61000-4-4(EFT):40A-5/50ns
- 61000-4-5(Surge):12A-8/20us



DFN1006



Mechanical Characteristics

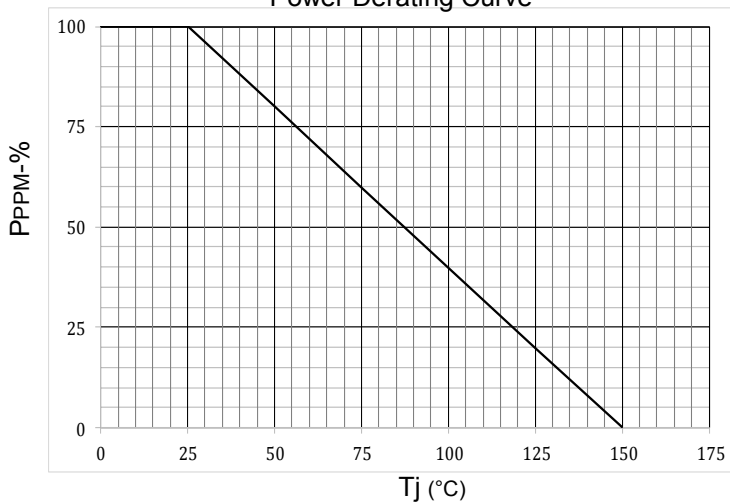
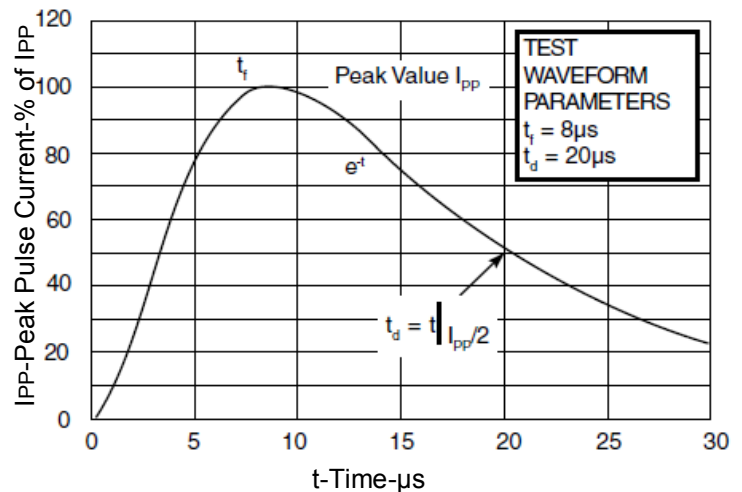
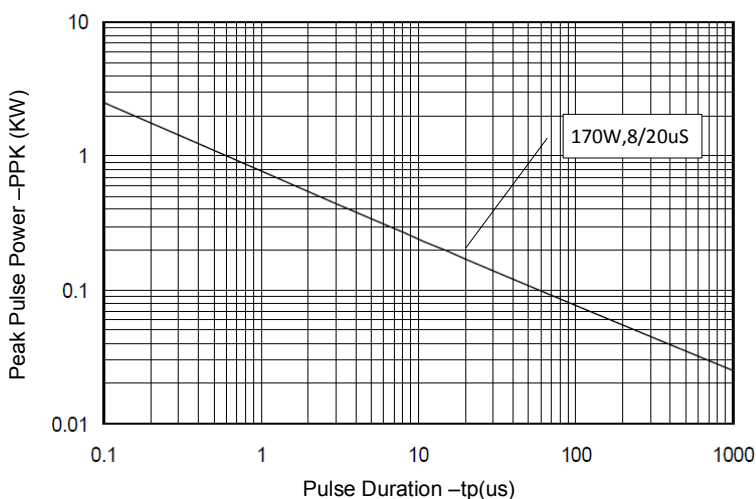
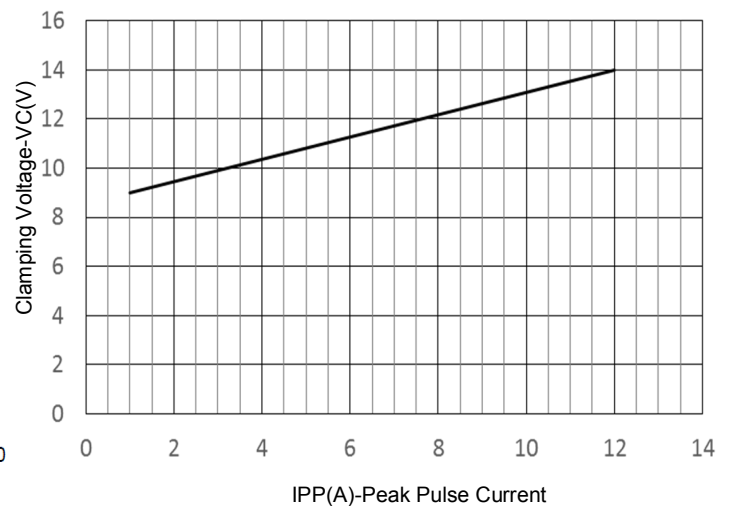
- Molded JEDEC DFN1006 package
- Packaging:Tape and Reel
- Flammability rating UL 94V-0
- Halogen Free

Device Characteristics

Maximum Ratings@25 unless otherwise specified			
Parameter	Symbol	Value	Units
Peak pulse power (tp=8/20us) (fig. 3)	PPP	170	Watts
Operating Temperature	TJ	-55~150	°C
Storage Temperature	TSTG	-55~150	°C

Electrical Characteristics

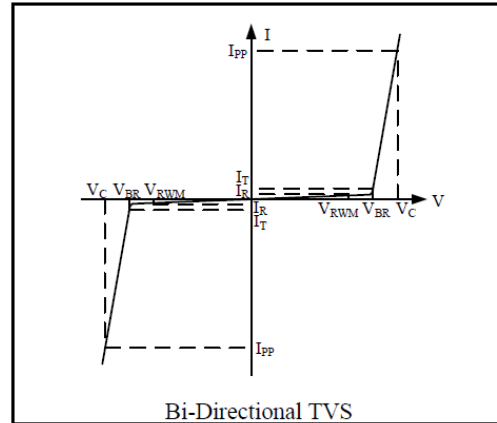
Parameter	Symbol	Condition	min	max	Units
Reverse Stand-off Voltage	VRWM	Pin 2-1/Pin 1-2		5	V
Reverse Breakdown Voltage	VBR	Iz=1mA, Pin 1-2/pin 2-1	5.6	9.4	V
Reverse Leakage Current	IR(max)	@VRWM		0.9	uA
Clamping Voltage	VC	I _{PP} =1A tp=8/20us		9	V
		I _{PP} =12A tp=8/20us		14	
Peak Pulse Current	I _{PP}	tp=8/20us		12	A
Junction Capacitance	C I/O	Pin capacitance to GND. Vdc=0V, f=1MHZ	30	40	pf

Rating and characteristic curve
Figure 1
Power Derating Curve

Figure 2

Figure 3
Non-repetitive Peak pulse power V.S pulse time

Figure 4
Peak Pulse Current vs. Clamping Voltage


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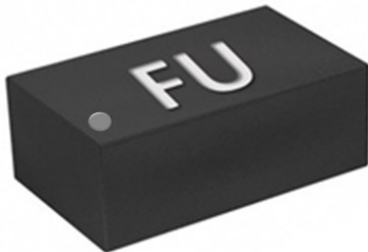
I-V Characteristics for a unidirectional Protection Device

Symbol	Parameter
V_{RWM}	Nominal Reverse Working Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Reverse Breakdown Voltage @ I_T
I_T	Test Current for Reverse Breakdown
V_C	Clamping Voltage @ I_{PP}
I_{PP}	Maximum Peak Pulse Current
C_{ESD}	Parasitic Capacitance
V_R	Reverse Voltage
f	Small Signal Frequency

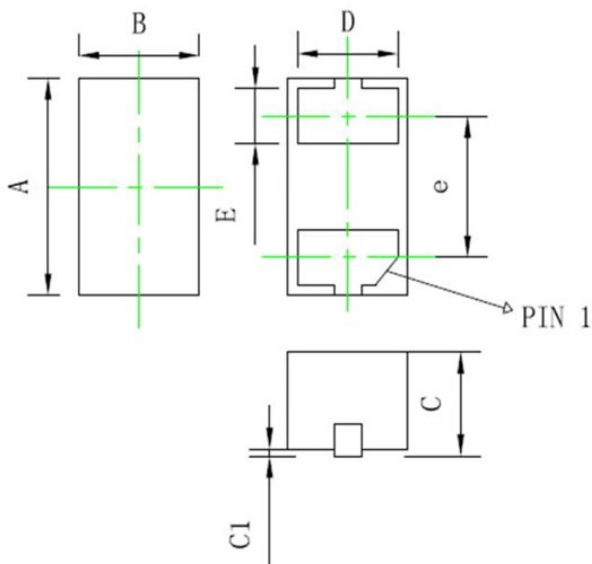


Ordering information

Marking codes

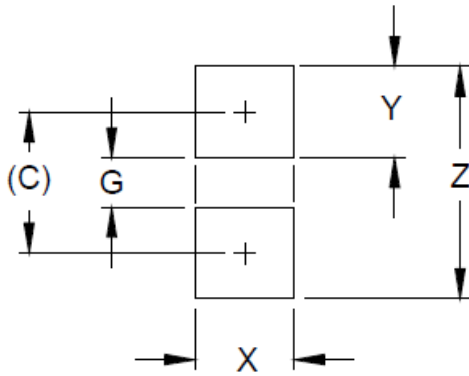


Part No.	Marking
FESD05HD	FU
Quantity	10,000pcs



SYMBOL	MILLIMETER		
	MIN	NOM	MAX
A	0.95	1.00	1.05
B	0.55	0.60	0.65
C	0.40	0.45	0.50
C1			0.05
D	0.45	0.50	0.55
e	0.65 BSC		
E	0.20	0.25	0.30

單位: mm

Pad Layout


DIMENSIONS		
DIM	INCHES	MILLIMETERS
C	(.033)	(0.85)
G	.012	0.30
X	.024	0.60
Y	.022	0.55
Z	.055	1.40



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