

### Features

- Small body outline dimensions
- Protects one I/O or power line
- Low clamping voltage
- Working voltage: 15V
- Low leakage current

### Mechanical Characteristics

- DFN1006-2L package
- Marking: Marking Code
- Packaging: Tape and Reel per EIA 481
- RoHS Compliant & HF

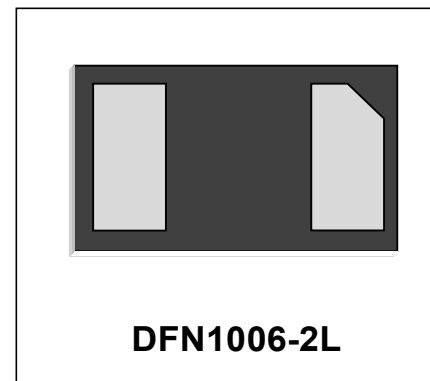
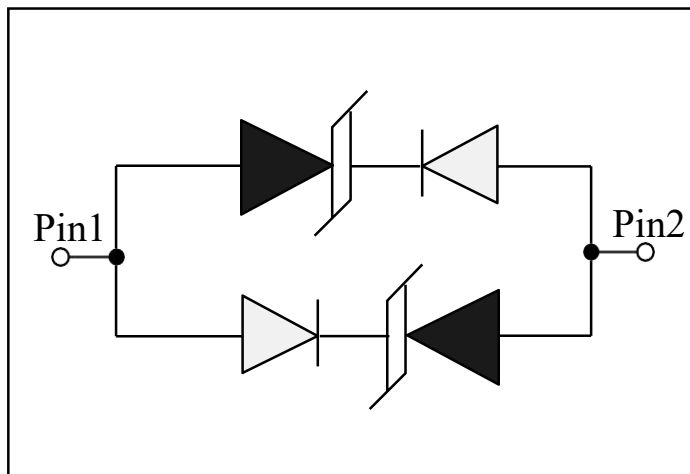
### Applications

- Laptop computers
- Cellular phones
- Digital cameras
- Personal digital assistants (PDAs)

### IEC COMPATIBILITY (EN61000-4)

- IEC 61000-4-2 (ESD)  $\pm 30\text{kV}$  (air),  $\pm 30\text{kV}$  (contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 200A (8/20 $\mu\text{s}$ )

### Pin Configuration

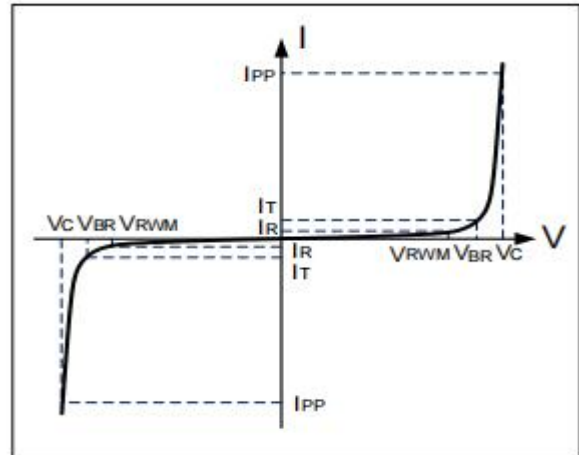


**Absolute Maximum Ratings (Ta=25°C)**

Rating	Symbol	Value	Units
Peak Pulse Power ( $t_p=8/20\mu s$ )	P <sub>PP</sub>	62.5	W
Peak Pulse Current ( $t_p=8/20\mu s$ )	I <sub>PP</sub>	2.5	A
Operating Temperature	T <sub>J</sub>	-55 to + 125	°C
Storage Temperature	T <sub>STG</sub>	-55 to +150	°C

**Electrical Parameters (Ta=25°C)**

Symbol	Parameter
I <sub>PP</sub>	Reverse Peak Pulse Current
V <sub>C</sub>	Clamping Voltage @ I <sub>PP</sub>
V <sub>RWM</sub>	Reverse Stand-Off Voltage
I <sub>R</sub>	Reverse Leakage Current @ V <sub>RWM</sub>
V <sub>BR</sub>	Breakdown Voltage @ I <sub>T</sub>
I <sub>T</sub>	Test Current



**Electrical Characteristics**

Parameter	Symbol	Conditions	Minimum	Typical	Maximum	Units
Reverse Stand-Off Voltage	$V_{RWM}$				15	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T=1mA$	16.5			V
Reverse Leakage Current	$I_R$	$V_{RWM}=15V$			200	nA
Clamping Voltage	$V_C$	$I_{PP}=2.5A, t_p=8/20\mu s$		23	25	V
ESD Clamping Voltage <sup>1</sup>	$V_C$	$I_{PP} = 4A$ $t_p = 0.2/100ns$		23.3		V
ESD Clamping Voltage <sup>1</sup>	$V_C$	$I_{PP} = 16A$ $t_p = 0.2/100ns$		37.8		V
Dynamic Resistance <sup>1,2</sup>	$R_{DYN}$	TLP=0.2/100ns		1.3		$\Omega$
Junction Capacitance	$C_j$	$V_R = 0V, f = 1MHz$		0.7	1.2	pF

**Note:** 1、TLP Setting:  $t_p=100ns, t_r=0.2ns, I_{TLP}$  and  $V_{TLP}$  sample window:  $t_1=70ns$  to  $t_2=90ns$ .  
 2、Dynamic resistance calculated from  $I_{PP}=4A$  to  $I_{PP}=16A$  using 'Best Fit'

Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

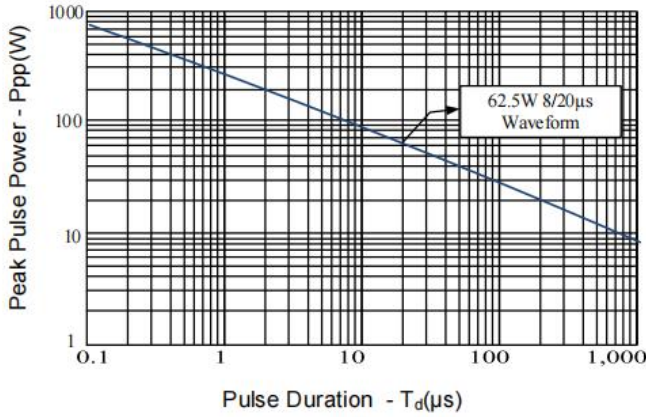


Figure 2: Power Derating Curve

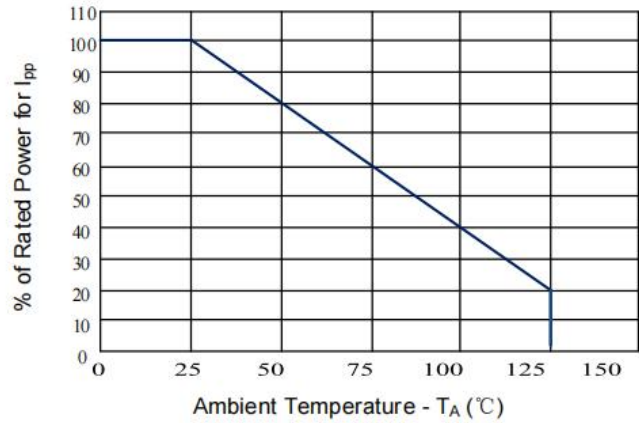


Figure 3: Clamping Voltage vs. Peak Pulse Current

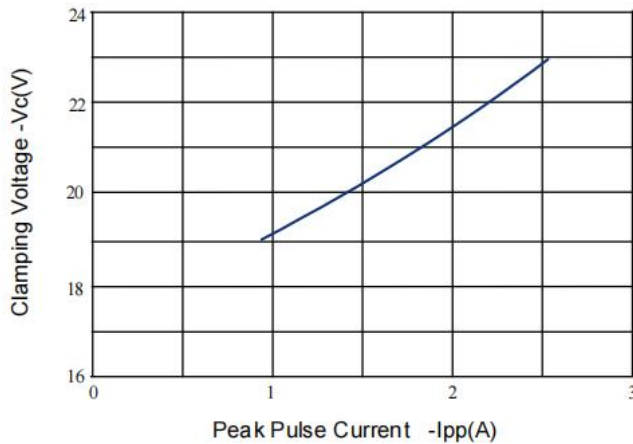


Figure 4: Normalized Junction Capacitance

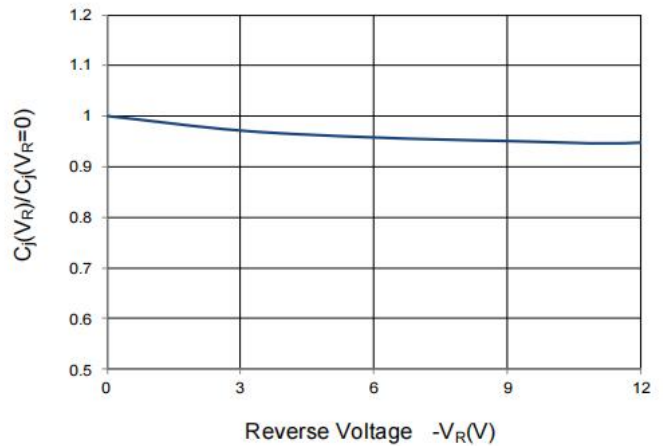


Figure 5: TLP Positive I-V Curve

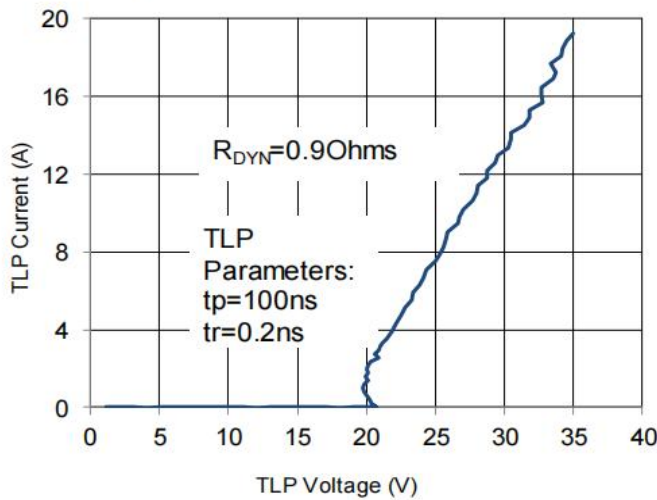
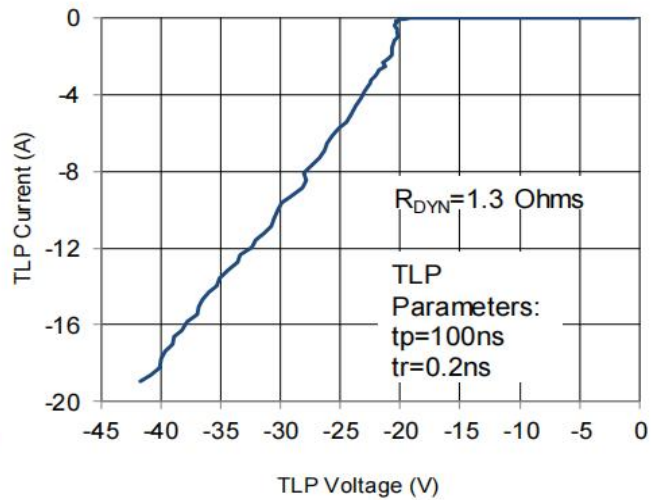



Figure 6: TLP Negative I-V Curve



Marking Codes

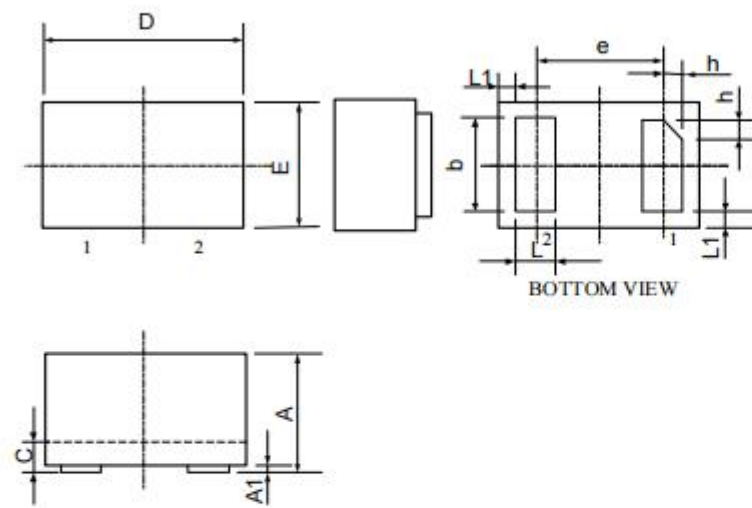
Part Number	Marking Code
CTSY15V0P1B2ZP	 QT=Specific Device Code X=Month Code

Package Information


Qty: 10k/Reel

Outline Drawing –DFN1006-2L

**PACKAGE OUTLINE**



BOTTOM VIEW



**DFN1006-2L**

SYMBOL	MILLIMETERS		
	MIN	NOM	MAX
A	0.45	0.50	0.55
A1	0	0.02	0.05
b	0.45	0.50	0.55
C	0.12	0.15	0.18
D	0.95	1.00	1.05
e	0.65BSC		
E	0.55	0.60	0.65
L	0.20	0.25	0.30
L1	0.05REF		
h	0.07	0.12	0.17

**Land Pattern**

