

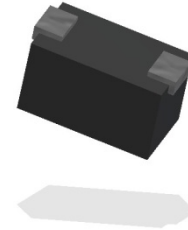


**Bidirectional Micro Packaged TVS for ESD Protection Diode**



**Features**

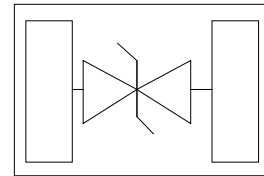
- Peak Power Dissipation – 50 W (8 x 20 us Waveform)
- Stand-off Voltage: 5.0 V
- Low capacitance for high-speed interfaces
- Replacement for MLV (0402)
- Protects I/O、 VCC Port
- Low Clamping Voltage
- Low Leakage
- Low Capacitance
- Response Time is < 1 ns
- Meets MSL 1 Requirements
- ROHS compliant



**DFN1006**

**Main applications**

- High Speed Line :USB1.0/2.0, VGA, DVI, SDI,
- Serial and Parallel Ports
- Notebooks, Desktops, Servers
- Projection TV
- Cellular handsets and accessories
- Portable instrumentation
- Peripherals



**Protection solution to meet**

- IEC61000-4-2 (ESD) ±15kV (air), ±8kV (contact)

**Ordering Information**

Device	Marking	Qty per Reel	Reel Size
YT0512CP	88	10000	7inch

# DEVICE CHARACTERISTICS

## YT0512CP

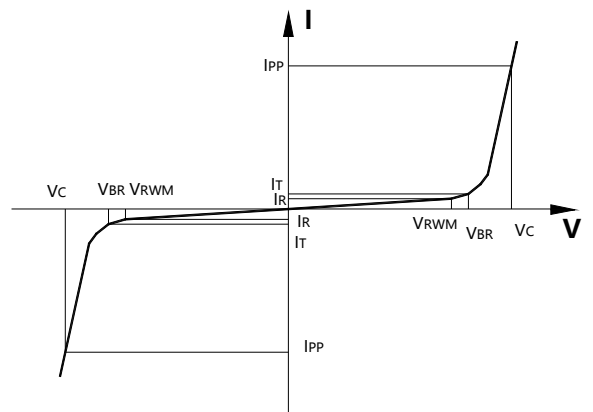
### Maximum ratings (Tamb=25°C Unless Otherwise Specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (tp=8/20µs waveform)	PPPP	50	Watts
Peak pulse current (tp=8/20µs waveform)	IPP	3	A
ESD Rating per IEC61000-4-2:	Contact	8	KV
	Air	15	
Lead Soldering Temperature	TL	260 (10 sec.)	°C
Operating Temperature Range	TJ	-55 ~ 150	°C
Storage Temperature Range	TSTG	-55 ~ 150	°C

### Electrical characteristics ( Tamb=25°C Unless Otherwise Specified)

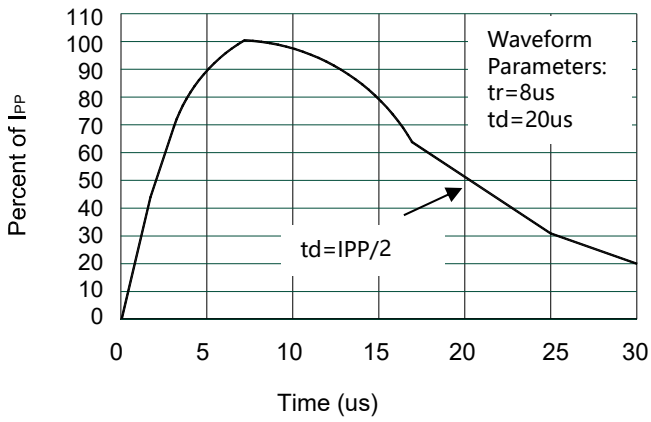
Device	VRWM	IR @ VRWM	VBR@1 mA		VC@3A		Capacitance	
		(uA)	(V)		(V)		@ VR = 0 V, 1 MHz (pF)	
	(V)	Max	Min	Max	Typ	Max	Typ	Max
YT0512CP	5	1	5.6	7.8	10.6	15	7	12

Symbol	Parameter
VRWM	Working Peak Reverse Voltage
VBR	Breakdown Voltage @ IT
VC	Clamping Voltage @ IPP
IT	Test Current
IRM	Leakage current at VRWM
IPP	Peak pulse current
CO	Off-state Capacitance
CJ	Junction Capacitance

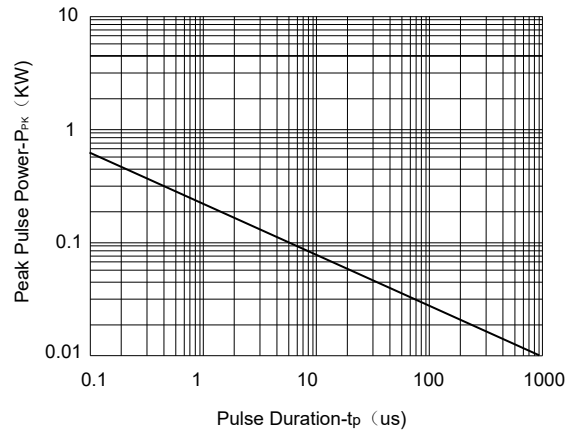


# DEVICE CHARACTERISTICS

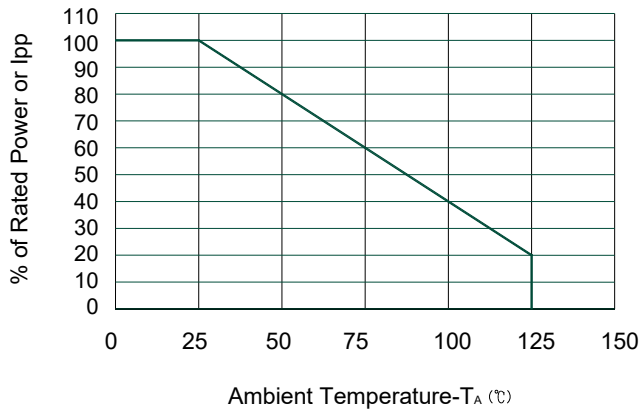
## YT0512CP



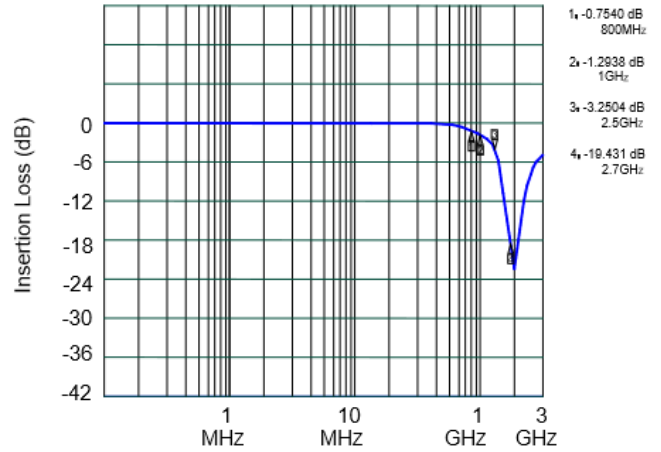
Pulse Waveform



Non-Repetitive Peak Pulse Power vs. Pulse Time



Power Derating Curve



Insertion Loss S21

# PACKAGE OUTLINE & DIMENSIONS

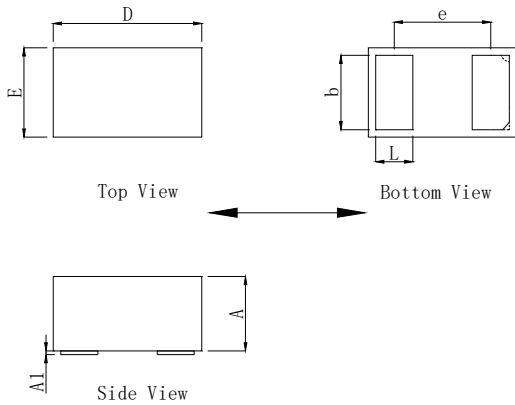
## YT0512CP

### DFN1006

#### Mechanical Data

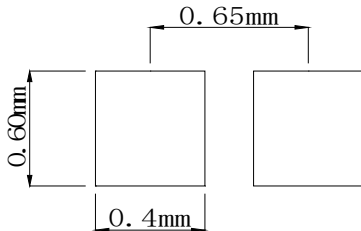
Case:DFN1006

Case Material: Molded Plastic. UL Flammability

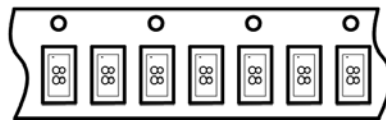


DIM	Millimeters	
	Min	Max
A	0.37	0.55
A1	0.00	0.05
D	0.95	1.05
E	0.48	0.65
b	0.35	0.55
e	0.65TYP	
L	0.15	0.35

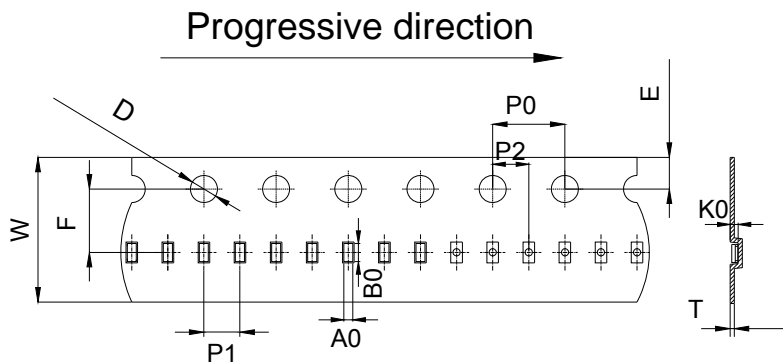
#### Recommended Pad outline



#### Device Orientation in Tape



#### DFN1006 Reel Dim



PACKAGE	W	E	F	P0	D	P2	P1	T	A0	B0	K0
<b>DFN1006</b>	8mm	1.75mm	3.5mm	4mm	1.5mm	2mm	2mm	0.23mm	0.67mm	1.2mm	0.55mm
	±0.1	±0.1	±0.05	±0.1	±0.1	±0.05	±0.1	±0.02	±0.05	±0.05	±0.05