



YEA SHIN TECHNOLOGY CO. , LTD

YSS0P15P5F2

Ultra Low Capacitance Bi-direction TVS Diode



APPLICATIONS

- ◆ Cellular Handsets and Accessories
- ◆ Display Ports
- ◆ MDDI Ports
- ◆ USB Ports
- ◆ Digital Visual Interface (DVI)
- ◆ PCI Express and Serial SATA Ports

IEC COMPATIBILITY

- ◆ IEC 61000-4-2 (ESD) $\pm 20\text{kV}$ (Air), $\pm 20\text{kV}$ (Contact)
- ◆ IEC 61000-4-4 (EFT) 40A (5/50 ns)
- ◆ IEC 61000-4-5 (Lightnig) 9A (8/20 us)

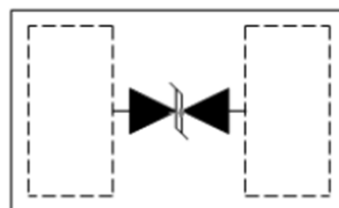
FEATURES

- ◆ Operating Voltage : 5V
- ◆ Ultra-Low Capacitance : 0.14pF (typ.)
- ◆ Marking : $\overline{\text{p}}$

DFN0603-2L



PIN CONFIGURATION

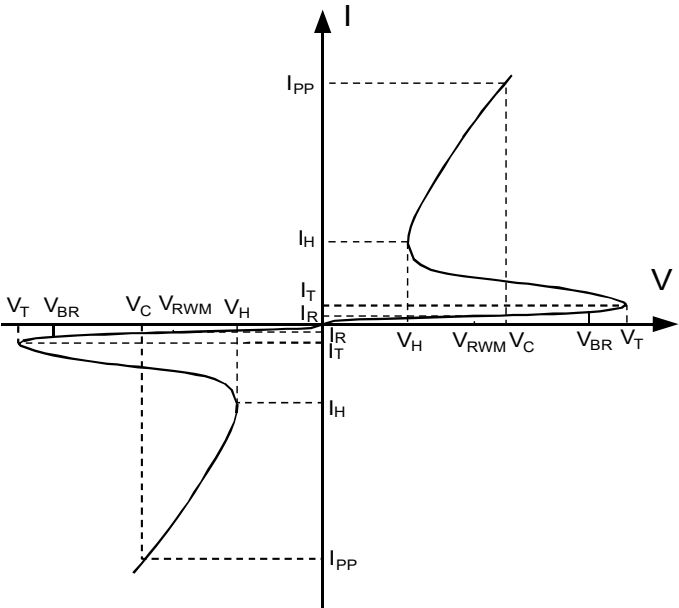


DEVICE CHARACTERISTICS

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MAXIMUM RATING (TA=25°C UNLESS OTHERWISE NOTED)			
PARAMETER	SYMBOL	VALUE	UNITS
ESD per IEC 61000-4-2 (Air)	V _{ESD}	±20	kV
ESD per IEC 61000-4-2 (Contact)		±20	
Peak Pulse Power (tp=8/20 μs)	P _{PP}	50	W
Peak Pulse Current (tp=8/20 μs)	I _{PP}	9	A
Operating Temperature Range	T _J	-55 ~ +125	°C
Storage Temperature Range	T _{STG}	-55 ~ +150	°C

ELECTRICAL CHARACTERISTICS (TA=25°C UNLESS OTHERWISE NOTED)						
PARAMETER	TEST CONDITION	SYMBOL	Min.	Typ.	Max.	UNITS
Reverse Working Voltage		V _{RWM}	-	5.0	5.5	V
Breakdown Voltage	I _T =1mA	V _{BR}	6.0	-	-	V
Reverse Leakage Current	V _{RWM} =5.5V	I _R	-	-	0.01	uA
Clamping Voltage (8/20us)	I _{PP} =1A	V _C	-	3.2	4.0	V
	I _{PP} =9A		-	5.5	8.0	
ESD Clamping Voltage (TLP=0.2/100ns)	I _{PP} =8A	V _C	-	4.5	-	V
	I _{PP} =16A		-	6.5	-	
Dynamic Resistance	TLP=0.2/100ns	R _{DYN}	-	0.23	-	Ω
Junction Capacitance	V _R =1.0V, f=1MHz	C _J	-	0.14	0.18	pF
	V _R =1.0V, f=1GHz		-	0.13	-	

ELECTRICAL PARAMETER (T=25°C)		
PARAMETER	SYMBOL	
Reverse Peak Pulse Current	I _{PP}	
Clamping Voltage @ I _{PP}	V _C	
Reverse Stand-Off Voltage	V _{RWM}	
Reverse Leakage Current @ V _{RWM}	I _R	
Breakdown Voltage @ I _T	V _{BR}	
Test Voltage	V _T	
Test Current	I _T	
Holding Voltage	V _H	
Holding Current	I _H	

DEVICE CHARACTERISTICS

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FIG. 1-Power Derating Curve

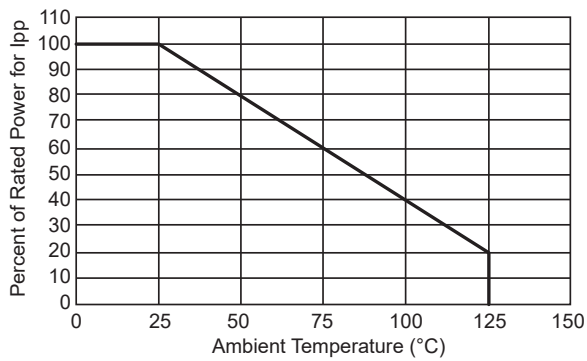


FIG. 2-Clamping Voltage vs. Peak Pulse Current

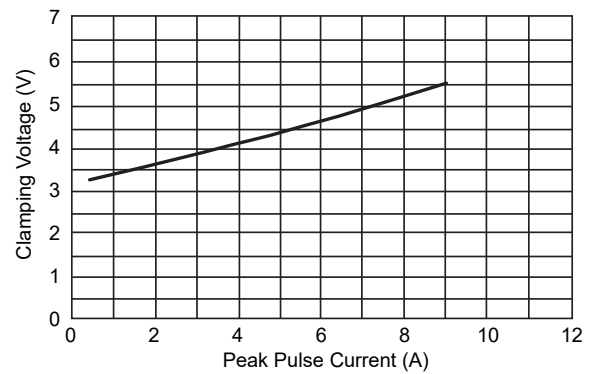


FIG. 3-Insertion Loss S21

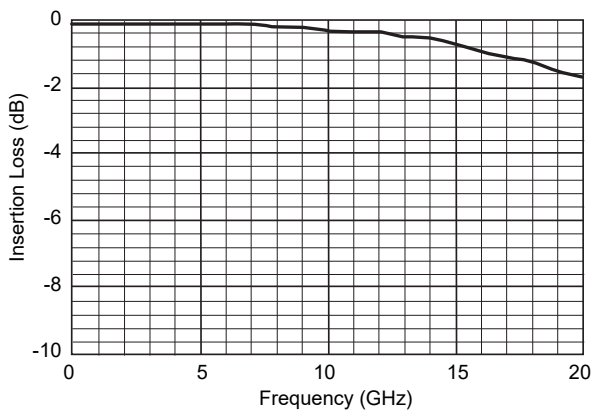


FIG. 4-8/20us Pulse Waveform

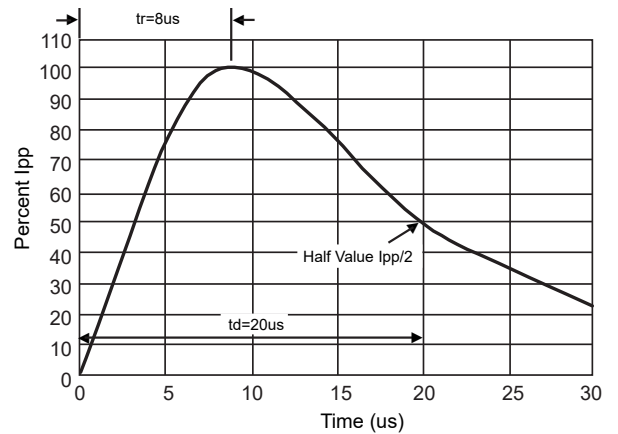
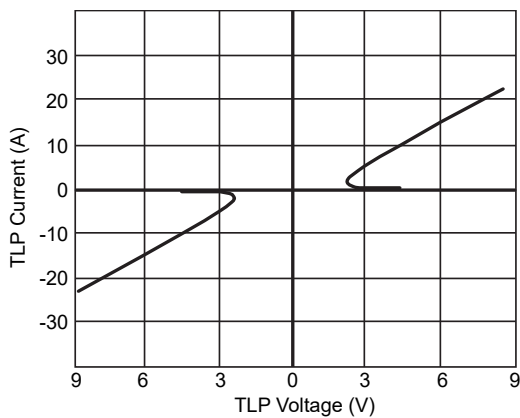


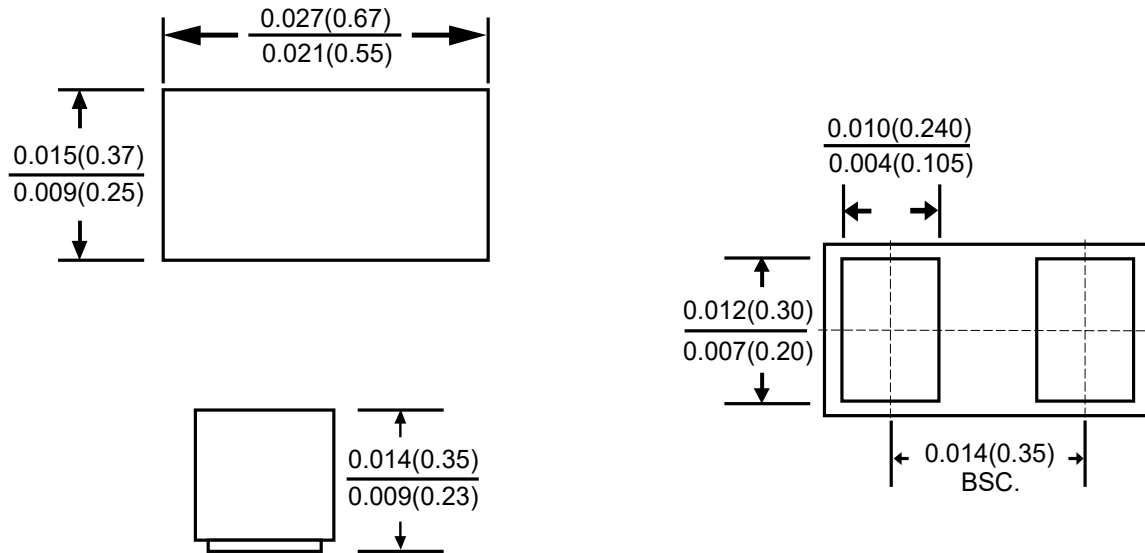
FIG. 5-TLP I-V Curve



PACKAGE OUTLINE & DIMENSIONS

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Package Outline Dimensions



DFN0603-2L

Dimensions in inches and (millimeters)

Suggested Pad Layout

Outline Dimension	DFN0603-2L (mm)
A	0.82
B	0.20
C	0.36
D	0.31
E	0.51

