



ESD Protection Diode



Features

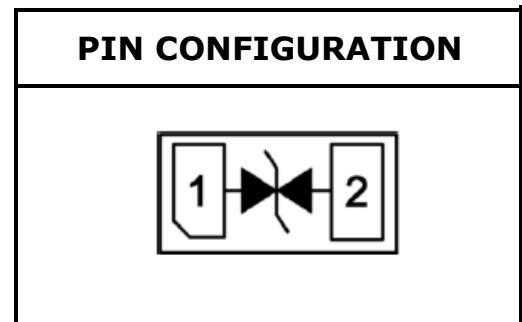
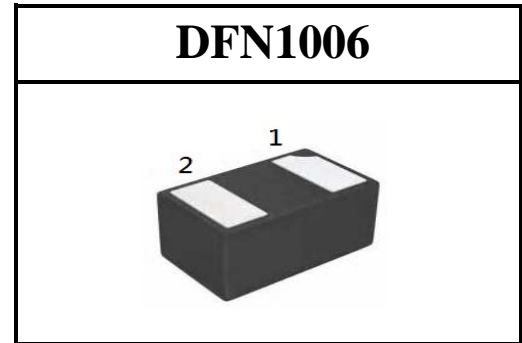
- Capacitance: 15pF (typ.)
- Reverse working voltage : 5V
- IEC61000-4-2 (ESD) : ± 30 kV (air)
- IEC61000-4-2 (ESD) : ± 16 kV (contact)
- IEC61000-4-5 (Surge) : 13A (8/20 μ s)
- Marking : 1

Main applications

- USB3.0/3.1
- SATA/SAS
- PCI Express
- Consumer applications
- Handhold portable applications
- Notebook computers

Ordering Information

Device	Qty per Reel	Reel Size
YS0515ACP	12000	7Inch



Maximum Ratings (TA=25°C unless otherwise noted)

Parameter	Symbol	Test conditions	Limit	Unit
ESD Rating per IEC61000-4-2	V_{ESD}	Contact	± 16	kV
		Air	± 30	
Peak Pulse Current	I_{PP}	tp = 8/20 μ s	13	A
Operating temperature Range	T_J		-55~+ 85	°C
Storage temperature Range	T_{STG}		-55~+ 150	°C

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

Parameter	Symbol	Test conditions	Min.	Typ.	Max.	Unit
Reverse working voltage	V_{RWM}	Pin 1 to Pin 2	-5.0	-	5.0	V
Breakdown voltage	V_{BR}	$I_T=1$ mA, Pin 1 to Pin 2	5.5	-	9.5	V
Reverse leakage current	I_R	$V_{RWM}=5$ V, Pin 1 to Pin 2	-	-	1	μ A
Surge clamping voltage (tp=8/20us)	V_C	$I_{PP}=5$ A, Pin 1 to Pin 2	-	5.7	-	V
		$I_{PP}=-5$ A, Pin 1 to Pin 2	-	5.6	-	
TLP clamping voltage (tp=100ns, tr=1ns)	V_C	$I_{TLP}=16$ A, Pin 1 to Pin 2	-	7.2	-	V
		$I_{TLP}=-16$ A, Pin 1 to Pin 2	-	7.2	-	
TLP dynamic resistance (tp=100ns, tr=1ns)	R_{DYN}	Pin 1 to Pin 2 (positive)	-	0.2	-	Ω
Junction Capacitance	C_J	$V_R=0$ V, f=1MHz, Pin 1 to Pin 2	-	15	-	pF

DEVICE CHARACTERISTICS

YS0515ACP

FIG. 1-Positive TLP Clamping Voltage (tp=100ns, tr=1ns)

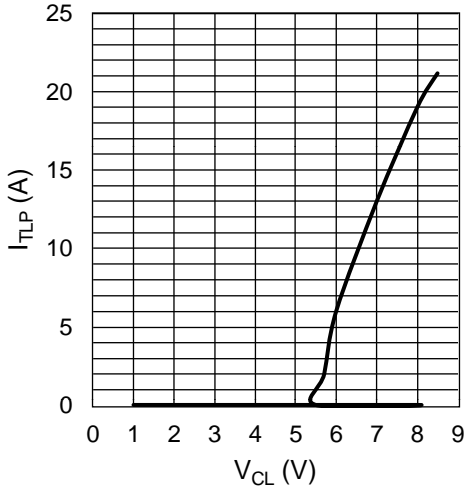


FIG. 2-Negative TLP Clamping Voltage (tp=100ns, tr=1ns)

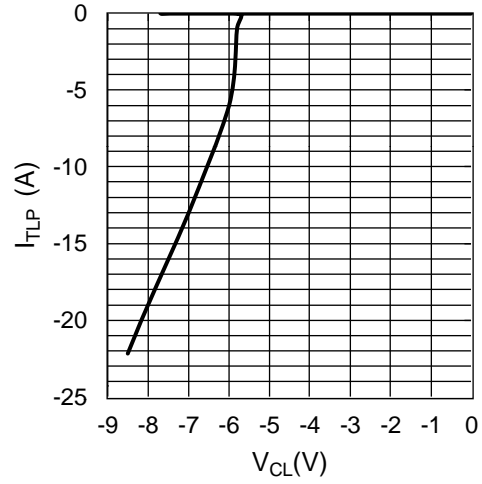


FIG. 3-Positive Surge Clamping Voltage (8/20us)

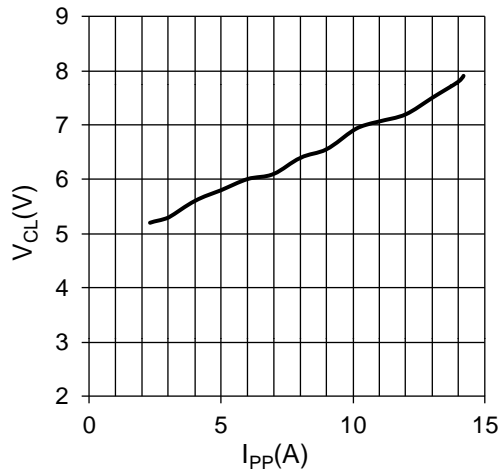


FIG. 4-Negative Surge Clamping Voltage (8/20us)

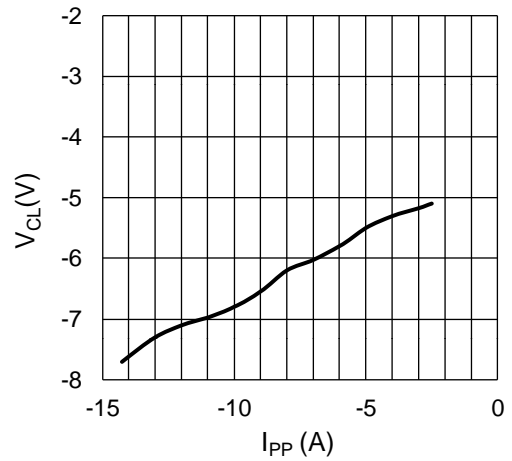
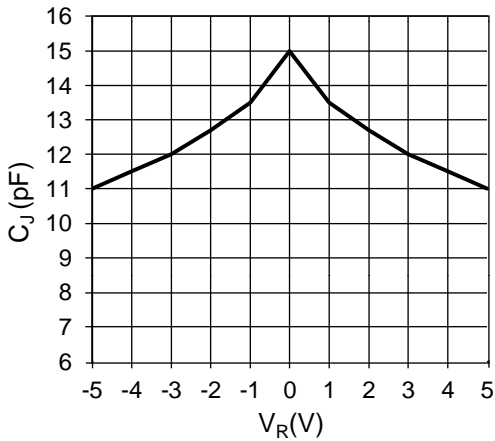


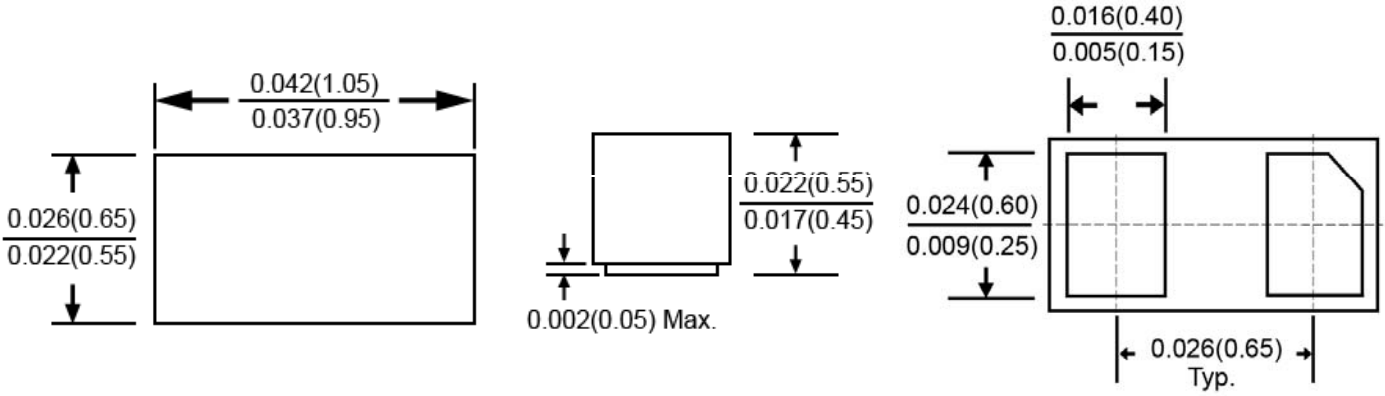
FIG. 5-Junction Capacitance



PACKAGE OUTLINE & DIMENSIONS

YS0515ACP

Package Outline Dimensions



DFN1006

Dimensions in inches and (millimeters)

Suggested Pad Layout

Dimension	Outline	DFN1006 (mm)
A		-
B		-
C		0.70
D		0.55
E		0.85

