



# YEA SHIN TECHNOLOGY CO. , LTD

## ESD Protection Diodes

YST0P5005TM



### APPLICATIONS

- ◆ Audio and Video Equipment
- ◆ Cellular Handsets and Accessories
- ◆ Computers and Peripherals
- ◆ Portable Electronics
- ◆ Communication Systems

### IEC COMPATIBILITY

- ◆ IEC 61000-4-2 (ESD)  $\pm 24\text{kV}$  (Air),  $\pm 24\text{kV}$  (Contact)
- ◆ IEC 61000-4-5 (Surge) 3.5A (8/20 us)

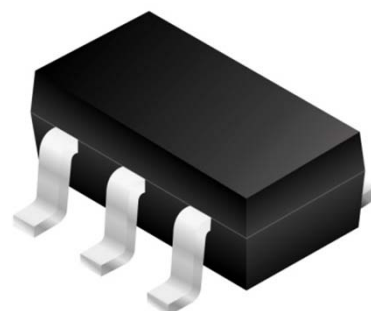
### FEATURES

- ◆ Reverse Working Voltage : 5V
- ◆ Ultra-Low Capacitance : 0.5pF (typ.)
- ◆ Marking : : V05

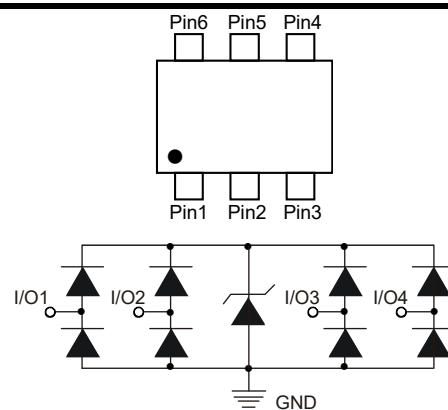
### Pinning Information

Pin	Symbol	Description
1	I/O 1	Channel 1 ESD Protection
2	GND	Ground
3	I/O 2	Channel 2 ESD Protection
4	I/O 3	Channel 3 ESD Protection
5	N.C	Not Connected
6	I/O 4	Channel 4 ESD Protection

SOT-23-6



PIN CONFIGURATION



# DEVICE CHARACTERISTICS

## YST0P5005TM

MAXIMUM RATING (TA=25°C UNLESS OTHERWISE NOTED)			
PARAMETER	SYMBOL	VALUE	UNITS
ESD per IEC 61000-4-2 (Air)	V <sub>ESD</sub>	±24	kV
ESD per IEC 61000-4-2 (Contact)		±24	
Peak Pulse Current (tp=8/20 μs)	I <sub>PP</sub>	3.5	A
Operating Temperature	T <sub>J</sub>	-55 ~ 150	°C
Storage Temperature	T <sub>STG</sub>	-55 ~ 150	°C

ELECTRICAL CHARACTERISTICS (TA=25°C UNLESS OTHERWISE NOTED)						
PARAMETER	TEST CONDITION	SYMBOL	Min.	Typ.	Max.	UNITS
Reverse Working Voltage		V <sub>RWM</sub>	-	-	5	V
Breakdown Voltage	I <sub>T</sub> =1mA, Any I/O to GND	V <sub>BR</sub>	6	-	8	V
Reverse Leakage Current	V <sub>RWM</sub> =5V, Any I/O to GND	I <sub>R</sub>	-	-	100	nA
Clamping Voltage (tp=8/20us)	I <sub>PP</sub> =1A, Any I/O Pin to GND	V <sub>C</sub>	-	8.3	-	V
	I <sub>PP</sub> =3A, Any I/O Pin to GND		-	10.1	-	
Junction Capacitance	V <sub>R</sub> =0V, f=1MHz, I/O to GND	C <sub>J</sub>	-	0.5	-	pF
	V <sub>R</sub> =0V, f=1MHz, Between I/O Pins		-	0.25	-	

# DEVICE CHARACTERISTICS

## YST0P5005TM

FIG. 1-Clamping Voltage vs Peak Pulse Current

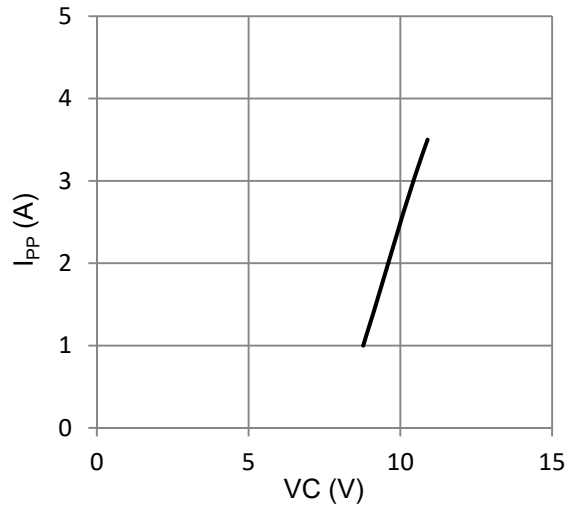
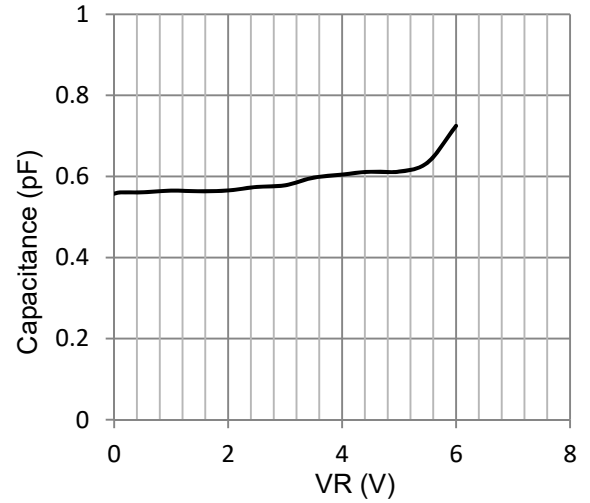


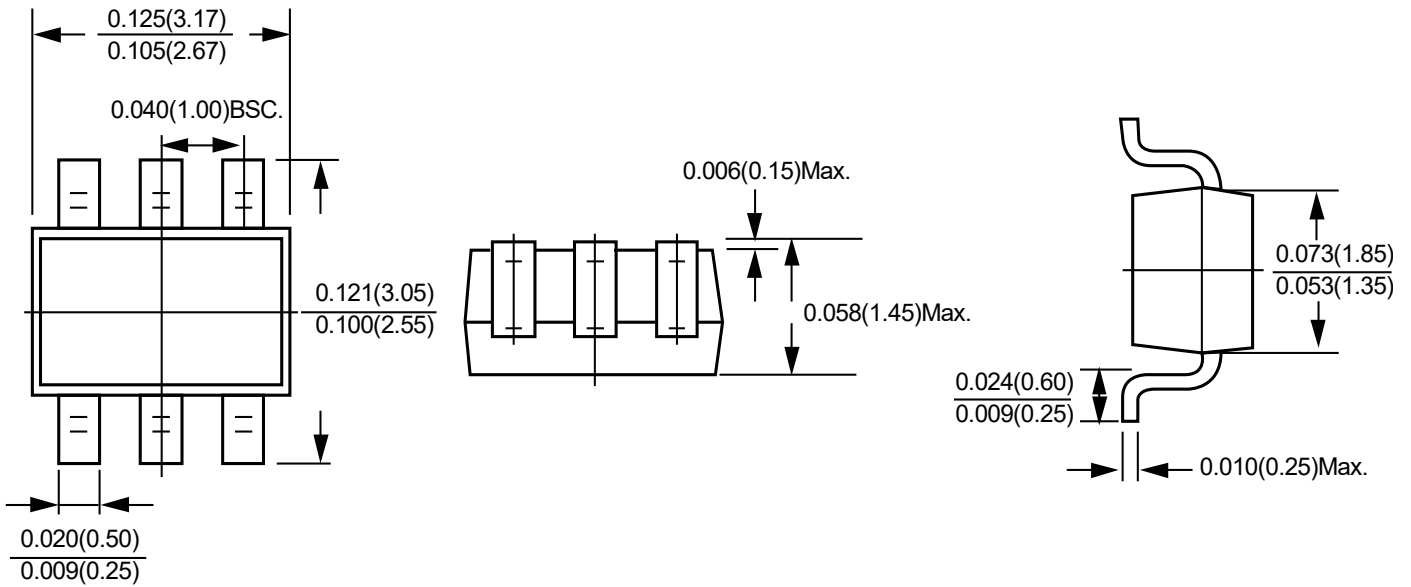
FIG. 2-Junction Capacitance



# PACKAGE OUTLINE & DIMENSIONS

YST0P5005TM

## Package Outline Dimensions



### SOT-23-6

Dimensions in inches and (millimeters)

## Suggested Pad Layout

Dimension \ Outline	SOT-23-6 (mm)
A	2.50
B	0.95
C	1.00
D	1.10

