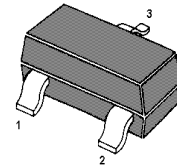
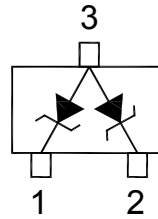


# ESD05CA

## ESD Protection Diodes

### Features

- Protects one bidirectional line or two unidirectional lines
- Low clamping voltage
- Low leakage current



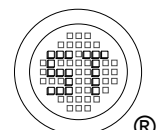
1. Cathode 2. Cathode 3. Anode  
Marking Code : 5HA  
SOT-23 Plastic Package

### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Peak Pulse Power ( $t_p = 8/20 \mu\text{s}$ )	$P_{PK}$	350	W
Peak Pulse Current ( $t_p = 8/20 \mu\text{s}$ )	$I_{PP}$	24	A
IEC61000-4-2 (ESD) Air Contact	$V_{ESD}$	$\pm 30$ $\pm 30$	KV
Operation Temperature	$T_j$	125	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 55 to + 150	$^\circ\text{C}$

### Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Min.	Max.	Unit
Reverse Stand-Off Voltage	$V_{RWM}$	-	5	V
Reverse Breakdown Voltage at $I_R = 1 \text{ mA}$	$V_{(BR)R}$	6	-	V
Reverse Current at $V_R = 5 \text{ V}$	$I_R$	-	20	$\mu\text{A}$
Clamping Voltage at $I_{PP} = 24 \text{ A}$ , $t_p = 8/20 \mu\text{s}$	$V_C$	-	14.5	V
Junction Capacitance at $V_R = 0 \text{ V}$ , $f = 1 \text{ MHz}$ (Pin 1 to 3 and Pin 2 to 3)	$C_J$	-	400	pF



# ESD05CA

## Electrical characteristic curves

Fig 1. Pulse Waveform

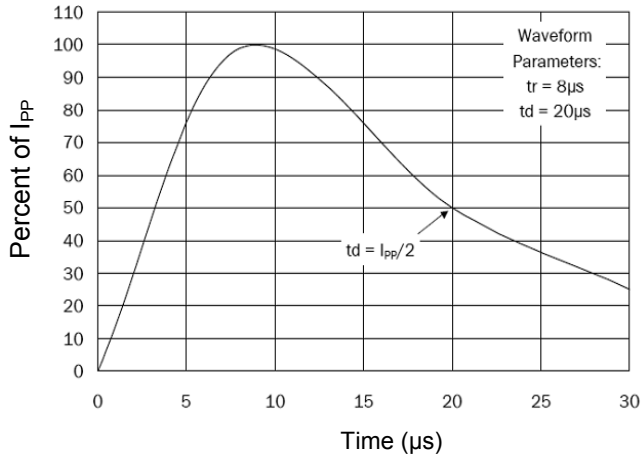


Fig 2. Power Derating Curve

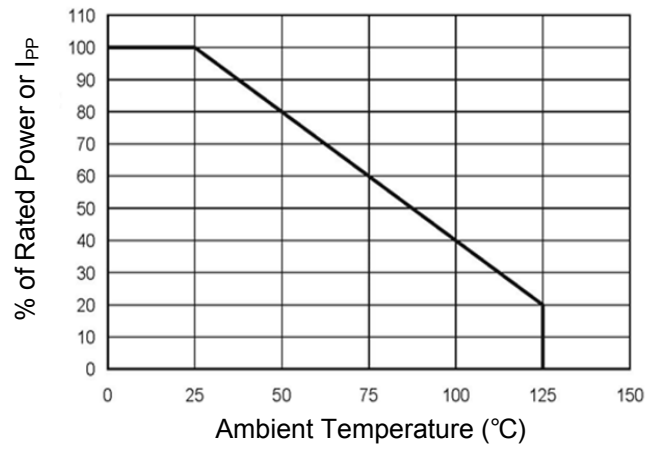


Fig 3. Clamping Voltage Curve

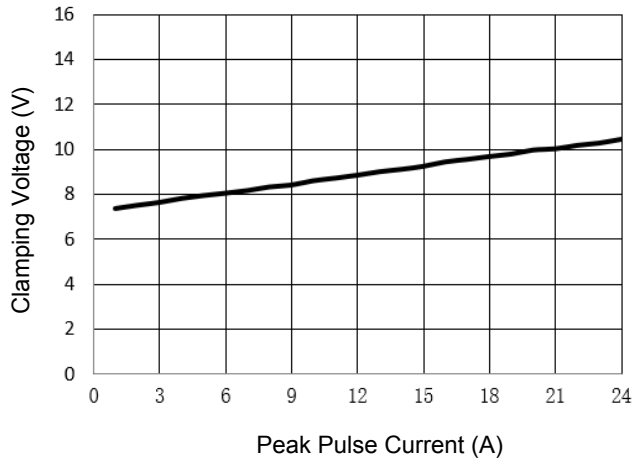


Fig 4. Junction Capacitance

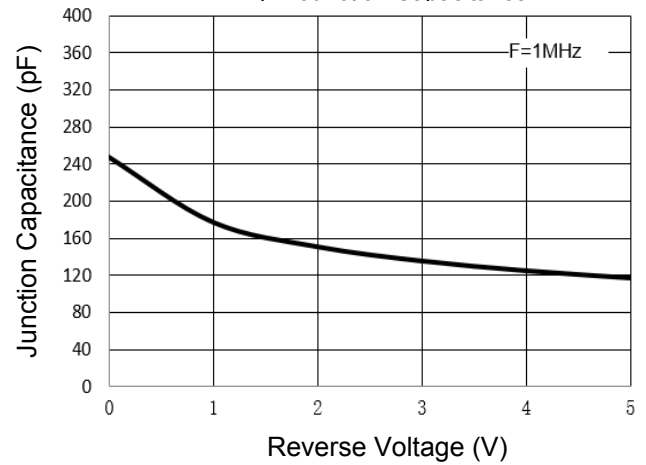
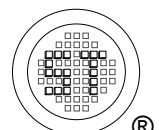
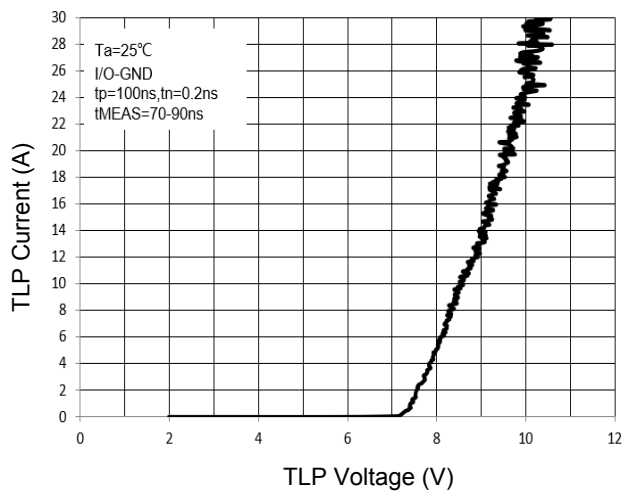


Fig 5 TLP Curve

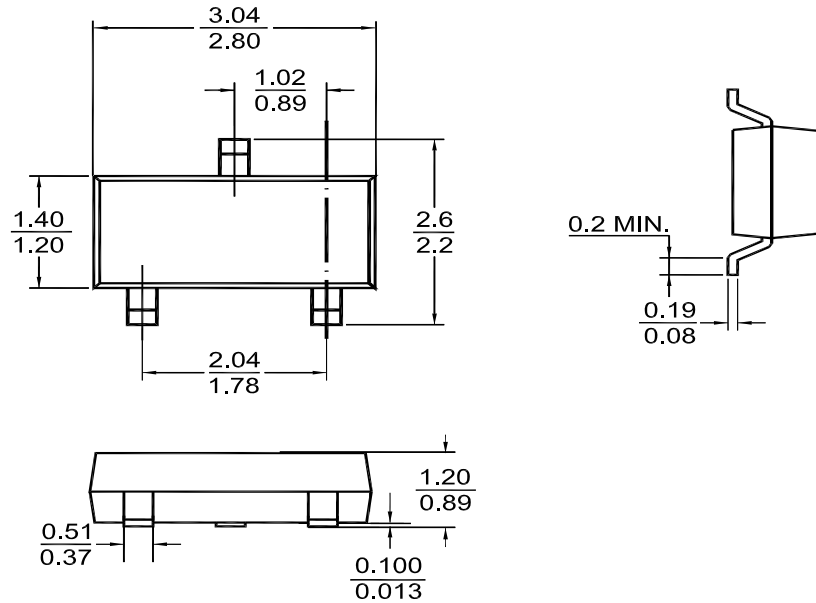


# ESD05CA

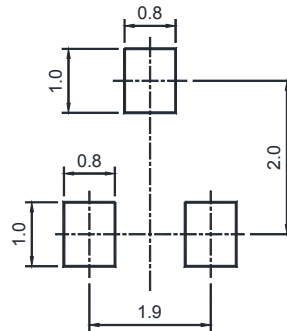
## PACKAGE OUTLINE

Plastic surface mounted package (Dimensions in mm)

SOT-23



## Recommended Soldering Footprint



## Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOT-23	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

## Marking information

"5HA" = Part No.  
 "YM" = Date Code Marking  
 "Y" = Year  
 "M" = Month  
 Font type: Arial

