

# ESD5V0AP Thru ESD12VAP

## Features

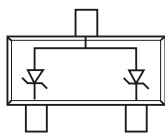
- For sensitive ESD protection
- Excellent clamping capability
- Low leakage
- ESD rating of class 3(>16KV)per Human Body Mode
- For space saving application
- Fast response ,response time less than 1ns.
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0 and MSL rating 1

## Maximum Ratings

- Operating Junction & Storage Temperature: -55°C to +150°C
- Maximum Thermal Resistance: 556°C/W Junction To Ambient

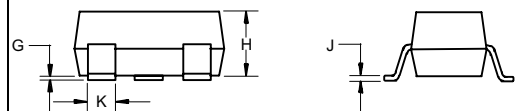
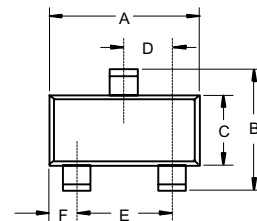
Parameter	Symbol	Limits	unit
IEC61000-4-2(ESD) Air Contact		$\pm 15$ $\pm 8$	KV
ESD Voltage per human body mode		16	KV
Power Dissipation	Pd	225	mw

## Pin Configuration-Top View

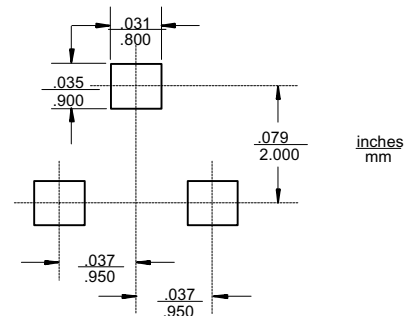


## 5V~12Volts ESD Protection Device

### SOT-23



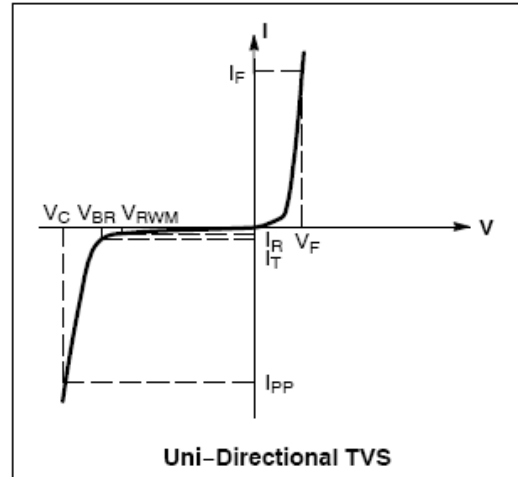
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.110	.120	2.80	3.04	
B	.083	.098	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	



**ELECTRICAL CHARACTERISTICS** ( $T_A = 25^\circ\text{C}$  unless otherwise noted)

**UNIDIRECTIONAL** (Circuit tied to Pins 1 and 3 or 2 and 3)

Symbol	Parameter
$I_{PP}$	Maximum Reverse Peak Pulse Current
$V_C$	Clamping Voltage @ $I_{PP}$
$V_{RWM}$	Working Peak Reverse Voltage
$I_R$	Maximum Reverse Leakage Current @ $V_{RWM}$
$V_{BR}$	Breakdown Voltage @ $I_T$
$I_T$	Test Current
$I_F$	Forward Current
$V_F$	Forward Voltage @ $I_F$
$P_{pk}$	Peak Power Dissipation
C	Capacitance @ $V_R=0$ and $f=1\text{MHz}$



**ELECTRICAL CHARACTERISTICS** ( $T_A = 25^\circ\text{C}$  unless otherwise noted,  $V_F = 0.9\text{ V Max.}$  @  $I_F = 10\text{mA}$  for all types)

Device	Device Marking	$V_{RWM}$ (V)	$I_R$ ( $\mu\text{A}$ ) @ $V_{RWM}$	$V_{BR}$ (V) @ $I_T$ (Note 2)		$I_T$	$V_C$ @ $I_{PP}=1\text{ A}$	Max $I_{PP}^+$	$P_{pk}^+$ (W)	C (pF) Pin 1 to 3
		Max	Max	Min	Max	mA	V	A	Max	Typ
ESD5V0AP	5M	5	10	6.2	7.3	1.0	9.8	12	300	225
ESD12VAP	12M	12	1.0	13.3	15.75	1.0	19	11.2	300	95

+Surge current waveform per Figure 3

2.  $V_{BR}$  is measured with a pulse test current  $I_T$  at an ambient temperature of  $25^\circ\text{C}$ .

## TYPICAL CHARACTERISTICS

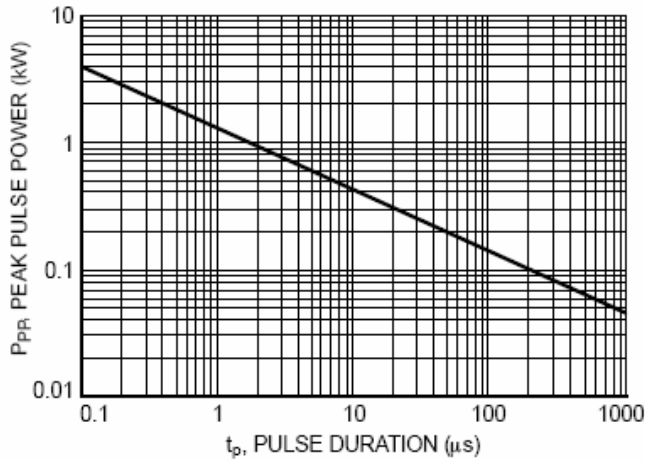


Figure 1. Non-Repetitive Peak Pulse Power versus Pulse Time

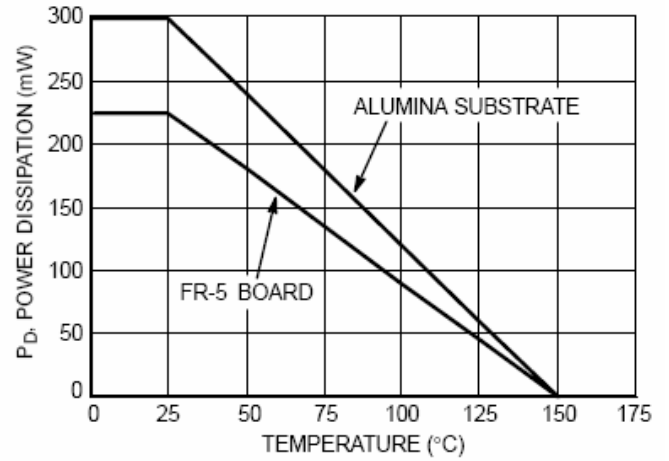


Figure 2. Steady State Power Derating Curve

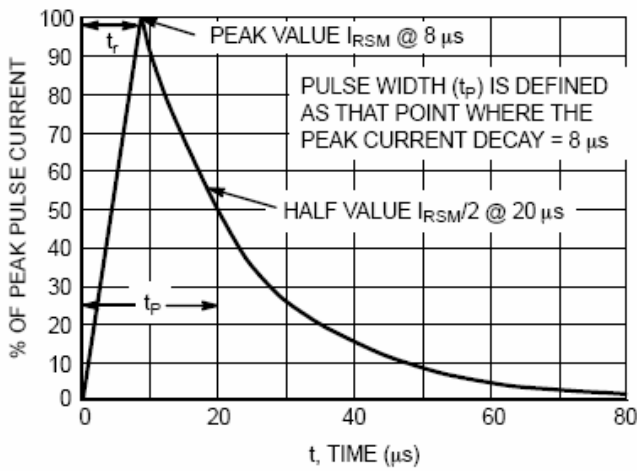


Figure 3. 8  $\times$  20  $\mu s$  Pulse Waveform

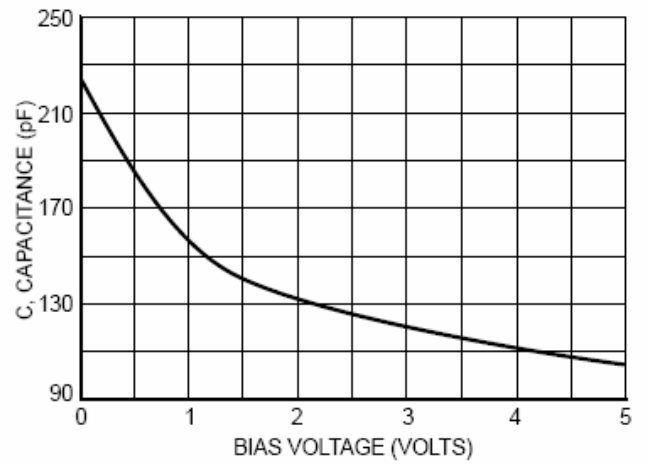


Figure 4. Typical Diode Capacitance

# Ordering Information

Device	Packing
(Part Number)-TP	Tape&Reel;3Kpcs/Reel