

EVVOSEMI[®]

THINK CHANGE DO



ESD



TVS



MOS



LDO



Diode



Sensor



DC-DC

Product Specification

▶ Domestic	Part Number	SR05.TCT
▶ Overseas	Part Number	SR05.TCT
▶ Equivalent	Part Number	SR05.TCT

EV is the abbreviation of name EVVO

Discription

The SR05.TCT is a 2-channel ultra low capacitance rail clamp ESD protection diodes array. Each channel consists of a pair of ESD diodes that steer positive or negative ESD current to either the positive or negative rail.A zener diode is integrated in to the array between the positive and negative supply rails.In the typical applications, the negative rail pin (assigned as GND) is connected with system ground. The Positive ESD current is steered to the ground through an ESD diode and Zener diode and the positive ESD voltage is clamped to the zener voltage.

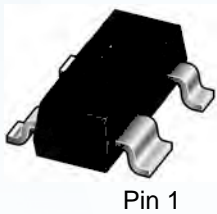
Features

- 350 W Peak Power per Line (tp = 8/20μs)
- SOT-143 package
- ESD Protection > 15 kV
- Unidirectional configurations
- Protects 2 I/O Ports & Power Supply
- Low Capacitance: 4 pF
- Low clamping voltage
- RoHS Compliant in Lead-Free Versions
- Transient protection for data lines to IEC 61000-4-2(ESD) ±15KV(air) ±8KV(contact); IEC 61000-4-4 (EFT) 40A (5/50ns)

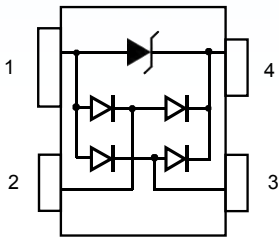
Absolute Ratings (Tamb=25°C)

Symbol	Parameter	Value	Units
P _{PP}	Peak Pulse Power (tp = 8/20μs)	350	W
T _L	Maximum lead temperature for soldering during 10s	260	°C
T _{stg}	Storage Temperature Range	-55 to +150	°C
T _{op}	Operating Temperature Range	-40 to +125	°C
T _j	Maximum junction temperature	150	°C
	IEC61000-4-2 (ESD)	air discharge contact discharge	± 15 ± 8 KV

ESD PROTECTION DIODE



Pin 1
SOT-143



Circuit Diagram

Electrical Characteristics

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Stand-off Voltage	V_{RWM}				5	V
Reverse Breakdown Voltage	V_{BR}	$I_t = 1mA$	6		8.5	V
Reverse Leakage Current	I_R	$V_{RWM} = 5.0V, T = 25^\circ C$			1	μA
Clamping Voltage	V_C	$I_{PP} = 1A, t_P = 8/20\mu s$			12.5	V
Clamping Voltage	V_C	$I_{PP} = 5A, t_P = 8/20\mu s$			24.0	V
Capacitance Between IO and GND	C_J	$V_R = 0V, f = 1MHz$		5.0		pF
Capacitance Between IO and I/O	C_J	$V_R = 0V, f = 1MHz$		1.5		pF

Characteristic Curves

FIG1: Pulse Waveform

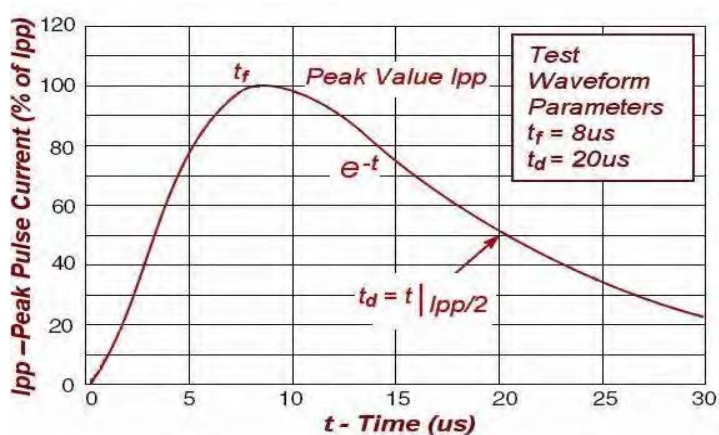
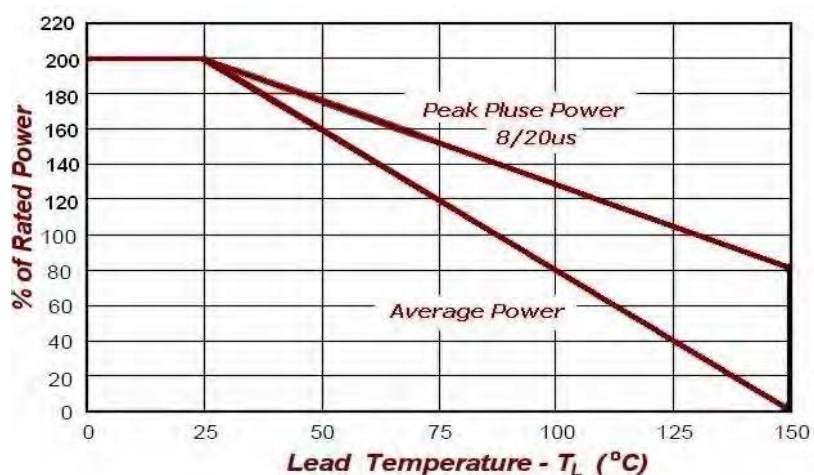
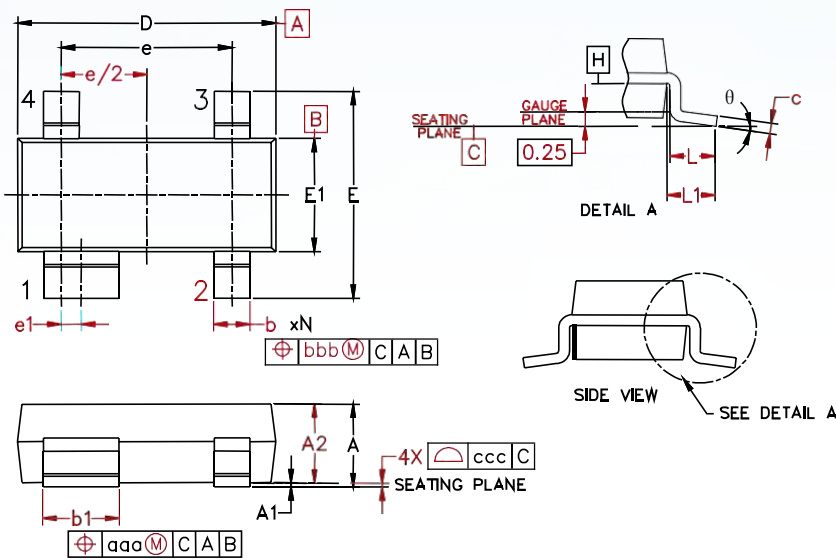


FIG2: Power Derating



Package Mechanical Data



Symbol	Inches			Millimeters		
	Min.	Nom.	Max.	Min.	Nom.	Max.
A	0.031	-	0.048	0.80	-	1.22
A1	0.000	-	0.008	0.013	-	0.15
A2	0.020	0.035	0.042	0.75	0.90	1.07
b	0.011	-	0.020	0.30	-	0.51
b1	0.029	-	0.037	0.76	-	0.94
c	0.003	-	0.008	0.08	-	0.20
D	0.110	0.114	0.120	2.80	2.90	3.04
E	0.082	0.093	0.104	2.10	2.37	2.64
E1	0.047	0.051	0.055	1.20	1.30	1.40
e	0.075			1.92 BSC		
e1	0.008			0.20 BSC		
L	0.015	0.020	0.024	0.40	0.50	0.60
L1	(0.021)			(0.54)		
N	4			4		
θ	0°	-	8°	0°	-	8°
aaa	0.006			0.15		
bbb	0.008			0.20		
ccc	0.004			0.10		

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