

RoHS Compliant Product

A suffix of "-C" specifies halogen & lead-free

www.DataSheet4U.net

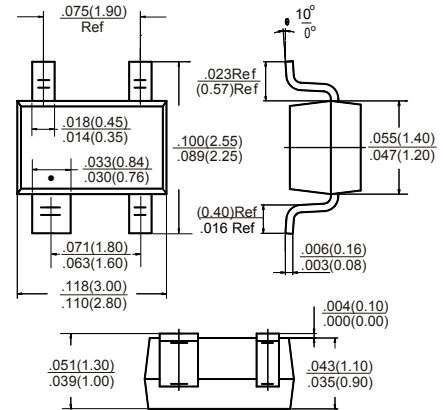
## DESCRIPTION

- . Designed to protect voltage sensitive components from ESD.
- . Excellent clamping capability, low leakage and fast response.
- . Cellular phones, MP3 players, digital cameras ... etc.
- . Suitable for electronics where board space is a major design consideration.

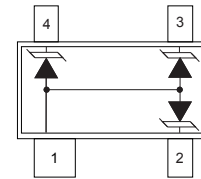
## FEATURES

- . Response time is typically < 1 ns
- . Low leakage
- . Stand-off voltage:5.0V
- . IEC61000-4-2 level 4 ESD protection
- . Ultra Low Capacitance : 22pF

### SOT-143



Dimensions in inches and (millimeters)



## MAXIMUM RATINGS

Rating 25°C ambient temperature unless otherwise specified.

TYPE NUMBER	SYMBOL	LIMITS	UNITS
IEC61000-4-2, Level 4(ESD) Air Contact		>30 >20	kV
Pack Pulse power $t_p=8/20\mu s$	P <sub>pp</sub>	40	W
Pack Pulse Current $t_p=8/20\mu s$	I <sub>pp</sub>	2.0	A
Lead Solder Temperature - Max. (10 sec duration)	T <sub>L</sub>	260	°C
Thermal Resistance Junction-to-ambient	R <sub>θJA</sub>	430	°C/W
Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 ~ +150	°C
Total Power Dissipation on FR-5 board (Note 2)	P <sub>D</sub>	150	mW

Stresses exceeding "Maximum Ratings" may damage the device. "Maximum Ratings" are stress ratings only. Functional operation above the recommended. Operating conditions is not implied. Extended exposure to stresses above the recommended operating conditions may affect device reliability.

1. FR-5 = 1.0 x 0.75 x 0.62 in.

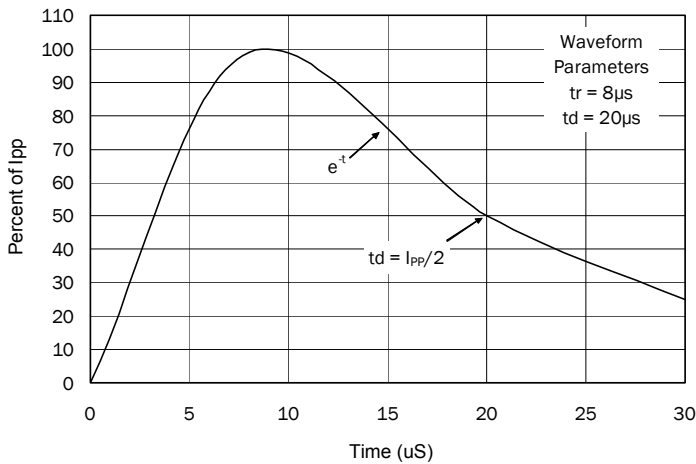
2. Only 1 diode under power. For all 4 diodes under power, P<sub>D</sub> will be 25%. Mounted on FR-4 board with min pad.

## ELECTRICAL CHARACTERISTICS (T = 25°C unless otherwise noted, Per Diode)

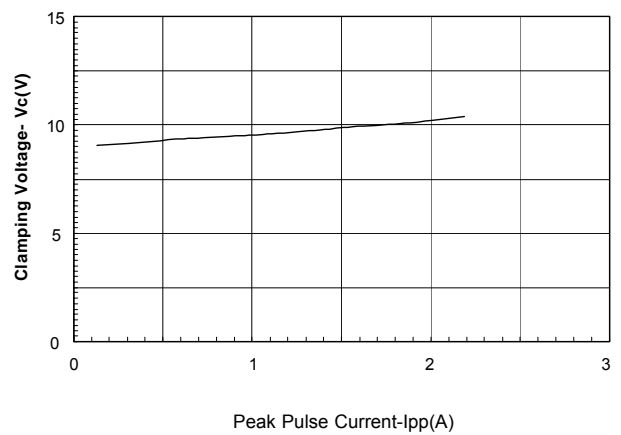
TYPE NUMBER	SYMBOL	Min.	Typ.	Max.	UNIT	TEST CONDITIONS
Reverse Stand-Off Voltage	V <sub>RWM</sub>	-	-	5.0	V	
Reverse Leakage Current	I <sub>R</sub>	-	10	35	nA	V <sub>RWM</sub> = 5V
Peak Pulse Current	I <sub>PP</sub>	-	-	2.0	A	
Clamping Voltage	V <sub>C</sub>	-	-	9.5	V	I <sub>PP</sub> = 1 A
Clamping Voltage	V <sub>C</sub>	-	-	11	V	I <sub>PP</sub> = 2 A
Reverse Breakdown Voltage	V <sub>BR</sub>	6.1	-	7.2	V	I <sub>T</sub> = 1mA,
Diode Capacitance	C <sub>d</sub>	-	22	28	pF	F = 1MHz, V <sub>R</sub> = 0V

## ELECTRICAL CHARACTERISTIC CURVES

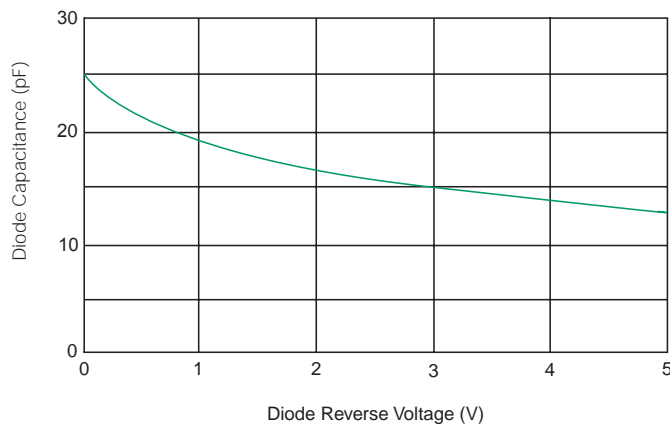
Pulse Waveform



Clamping Voltage vs. Peak Pulse Current



Typical Capacitance vs. Reverse Voltage



Recommended Pad Layout

