

Features

- Protects Two Data Lines and One Power Line
- Low Clamping Voltage
- Low Capacitance
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free. "Green" Device (Note 1)
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

Maximum Ratings

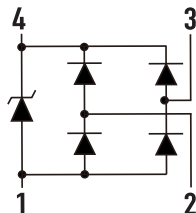
- Operating Junction Temperature Range: -55°C to +125°C
- Storage Temperature Range: -55°C to +150°C

MCC Part Number	Device Marking
SR05	ASR05

IEC61000-4-2(ESD)	Air Contact	±30KV ±30KV
IEC61000-4-4 (EFT) @5/50ns		40A
Peak Pulse Current(8/20µs)	I _{PP}	25A
Peak Pulse Power (8/20us)	P _{PK}	500W

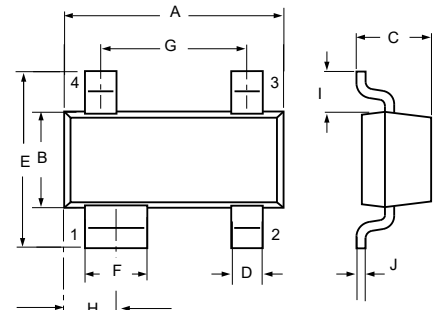
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Internal Structure



ESD Protection Device

SOT-143



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.110	0.120	2.80	3.04	
B	0.047	0.055	1.20	1.39	
C	0.031	0.048	0.80	1.22	
D	0.011	0.020	0.30	0.51	
E	0.082	0.104	2.10	2.64	
F	0.029	0.037	0.76	0.94	
G	0.070	0.080	1.78	2.03	
H	0.028	0.033	0.72	0.83	
I	0.015	0.024	0.40	0.60	
J	0.003	0.008	0.08	0.20	

Electrical Characteristics @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Working Voltage	V_{RWM}				5	V
Reverse Breakdown Voltage	V_{BR}	$I_T = 1\text{mA}$	6			V
Reverse Leakage Current	I_R	$V_{RWM} = 5\text{V}$			0.5	μA
Clamping Voltage	V_C	$I_{PP} = 1\text{A}, t_p = 8/20\mu\text{s}$			9	V
Clamping Voltage	V_C	$I_{PP} = 25\text{A}, t_p = 8/20\mu\text{s}$			20	V
Junction Capacitance	C_J	$V_R = 0\text{V}, f = 1\text{MHz},$ I/O Pin to GND			6	pF
Junction Capacitance	C_J	$V_R = 0\text{V}, f = 1\text{MHz},$ Between I/O Pins		3		pF

Curve Characteristics

Fig. 1 - 8 X 20 μ s Pulse Waveform

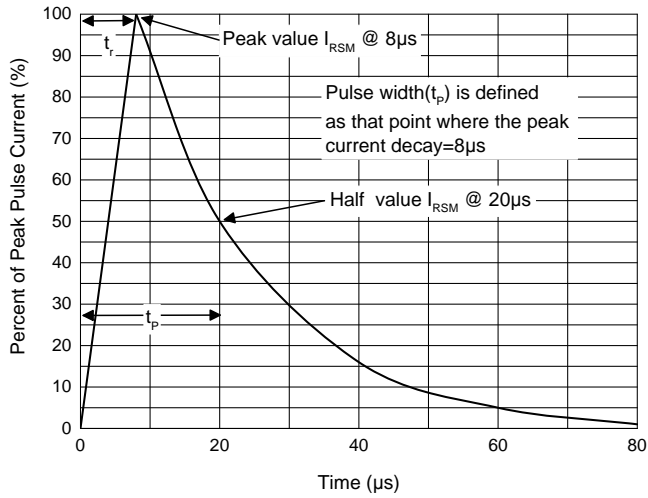


Fig. 2 - Pulse Derating Curve

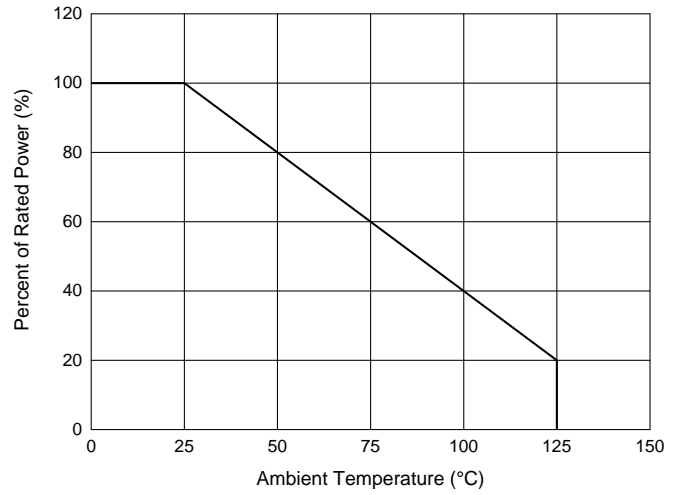


Fig. 3 - Capacitance Characteristics

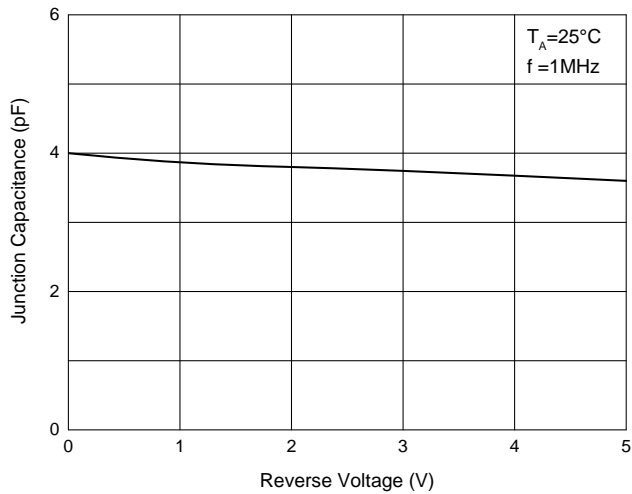


Fig. 4 - Clamping Voltage Characteristics

