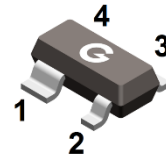
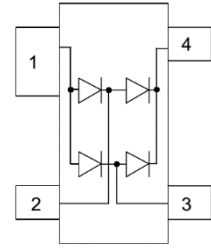


Features

- ESD / transient protection of high speed data lines
 - IEC 61000-4-2 (ESD): ± 15 kV (air), ± 8 kV (contact)
- Low leakage current
- Protects two I/O lines
- Ultra low capacitance
- RoHS compliant with Halogen-free

HF



SOT-143

Mechanical Data

- Case: SOT-143
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
SR70	SOT-143	3000 pcs / Tape & Reel	R70

Maximum Ratings (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
IEC 61000-4-2; ESD (Air) ^{*1}	$V_{\text{ESD-A}}$	± 15	kV
IEC 61000-4-2; ESD (Contact) ^{*1}	$V_{\text{ESD-C}}$	± 8	kV
Peak Pulse Current ($t_p = 8/20\mu\text{s}$)	I_{PP}	24	A

Note 1: Measured from pin 2 or pin 3 to pin 1 and 4 (pin 1 and 4 are connected). The test circuit see Fig. 6

Thermal Characteristics

Parameter	Symbol	Value	Unit
Junction Temperature Range	T_J	$-55 \sim +150$	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	$-55 \sim +150$	$^\circ\text{C}$

Electrical Characteristics (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Stand-off Voltage	V_{RWM}		-	-	70	V
Reverse Breakdown Voltage	$V_{(BR)}$	$I_T = 0.05\text{mA}$	85	-	-	V
Reverse Leakage Current	I_R	$V_{RWM} = 70\text{V}$	-	-	1	μA
Forward Clamping Voltage	V_{FC}	$I_{PP} = 1\text{A}$, $t_p = 8/20\mu\text{s}$	-	1.35	1.5	V
		$I_{PP} = 24\text{A}$, $t_p = 8/20\mu\text{s}$	-	13	15	V
Junction Capacitance	C_J	$V_R = 0\text{V}$, $f = 1\text{MHz}$ (I/O to I/O)	-	0.3		pF
		$V_R = 0\text{V}$, $f = 1\text{MHz}$ (I/O to GND)	-	0.5		pF

Ratings and Characteristic Curves (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

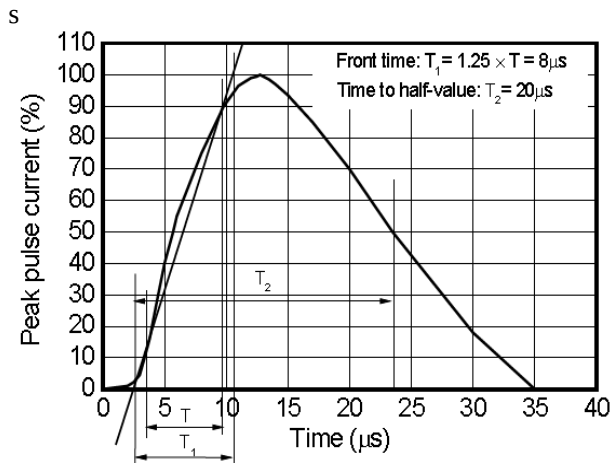


Fig 1 8/20 μs waveform per IEC61000-4-5

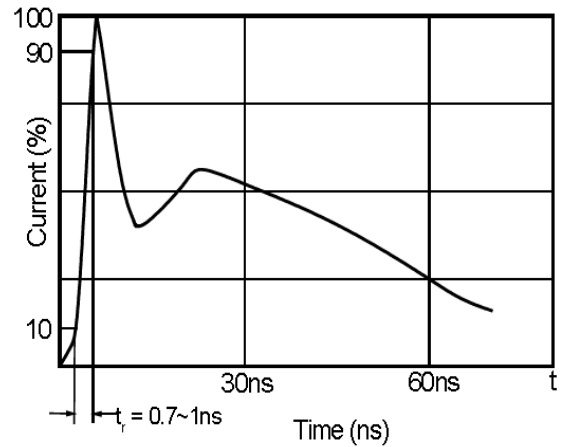


Fig 2 ESD pulse waveform according to IEC61000-4-2

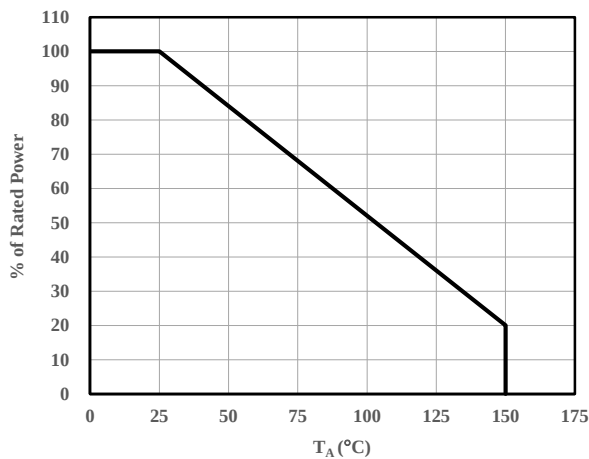


Fig 3 Power Derating Curve

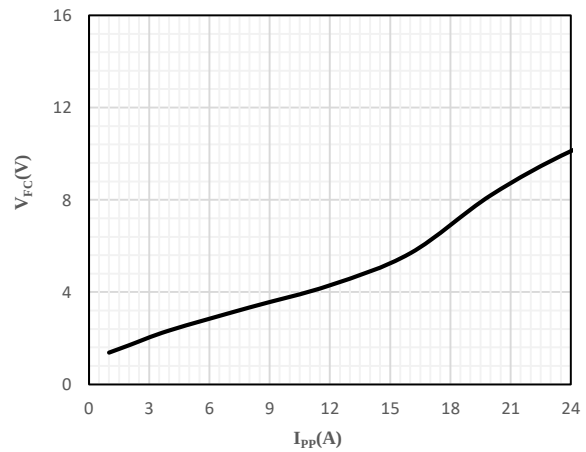


Fig 4 Clamping Voltage vs. Peak Pulse Current

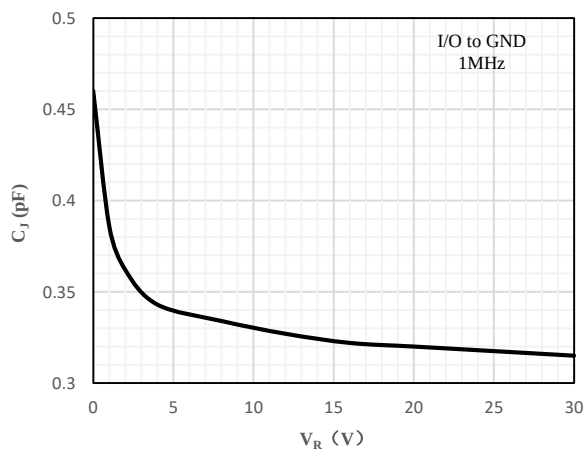


Fig 5 Junction Capacitance vs. Reverse Voltage

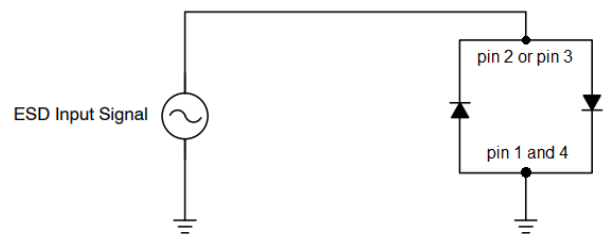
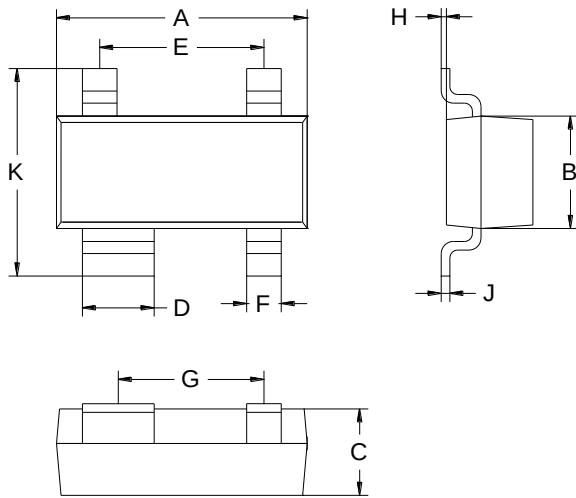


Fig 6 ESD Test Circuit

Package Outline Dimensions (Unit: mm)



SOT-143		
Dimension	Min.	Max.
A	2.70	3.10
B	1.10	1.50
C	0.90	1.10
D	0.78	0.88
E	1.80	2.00
F	0.37	0.43
G	1.59	1.79
H	0.02	0.10
J	0.05	0.15
K	2.20	2.60

Package Outline Dimensions (Unit: mm)

SOT-143

