

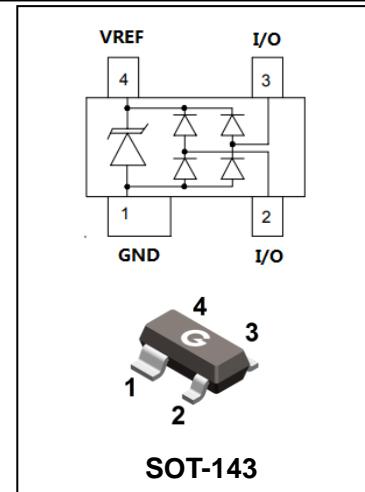
Ultra Low Capacitance TVS Array

SR05L

FEATURES

- Uni-directional ESD protection of two lines
- Low capacitance: 0.8pF(Max)
- Low reverse stand-off voltage: 5V
- Low reverse clamping voltage
- Low leakage current
- Fast response time
- IEC 61000-4-2 Level ESD protection

HF



APPLICATIONS

- High speed switching application.

ORDERING INFORMATION

Type No.	Marking	Package Code
SR05L	S5	SOT-143

MAXIMUM RATING @ Ta=25°C unless otherwise specified

Characteristic	Symbol	Limits	Unit
IEC 61000-4-2 ESD Voltage (I/O to GND & V _{CC} to GND) Air Model Contact Model	V _{ESD} ⁽¹⁾	±25	kV
Peak Pulse Power	P _{PP} ⁽²⁾	90	W
Peak Pulse Current	I _{PP} ⁽²⁾	3.5	A
Thermal Resistance Junction-to-Air	R _{θJA} ⁽³⁾	250	°C/W
Thermal Resistance Junction-to-Case	R _{θJC} ⁽³⁾	120	°C/W
Thermal Resistance Junction-to-Lead	R _{θJL} ⁽³⁾	150	°C/W
Operating Junction Temperature Range	T _J	-55 to +150	°C
Storage Temperature Range	T _{STG}	-55 to +150	°C

(1) Device stressed with ten non-repetitive ESD pulses

(2) Non-repetitive current pulse 8/20μs exponential decay waveform according to IEC61000-4-5

(3) The data tested by surface mounted on a 25.4mm * 25.4mm * 1mm FR4-epoxy P.C.B

Ultra Low Capacitance TVS Array

SR05L

ELECTRICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Min	Max	Unit	Test Condition
Reverse Stand-off Voltage	V_{RWM}		5	V	
Reverse Breakdown Voltage	$V_{BR}^{(2)}$ $V_{BR}^{(3)}$	6 5	10 12	V	$I_F = 100\mu\text{A}$
Forward Voltage	$V_C^{(1)(2)(3)}$	-	10 25	V	$I_{PP} = 1\text{A}$ $I_{PP} = 3.5\text{A}$
Reverse Leakage Current	I_R	-	1.0	μA	$V_R = 5\text{V}$
Junction Capacitance	$C_J^{(2)}$ $C_J^{(3)}$	-	0.8 0.4	pF	$V_R = 0\text{V}, f = 1.0\text{MHz}$

(1) Non-repetitive current pulse 8/20 μs exponential decay waveform according to IEC61000-4-5

(2) I/O to GND

(3) I/O to I/O

TYPICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified

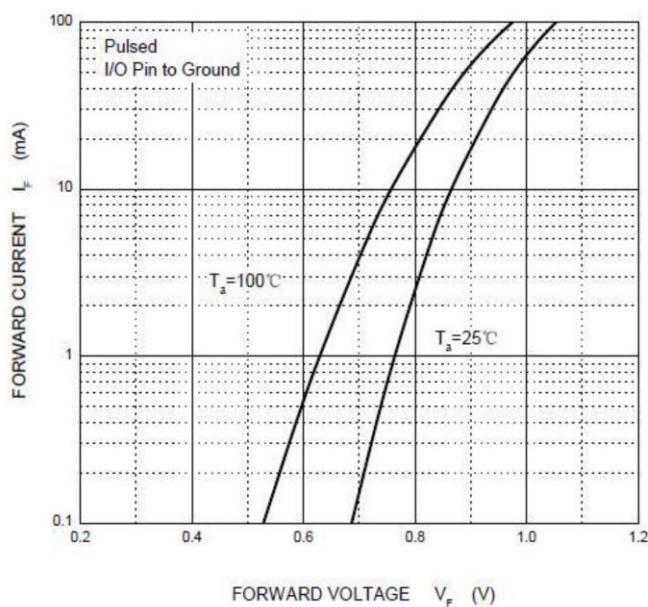


FIG.1 Forward Characteristics

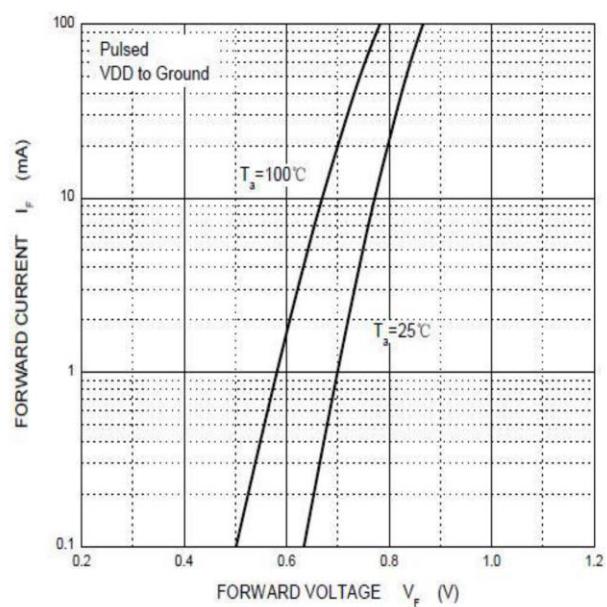


FIG.2 Forward Characteristics

Ultra Low Capacitance TVS Array

SR05L

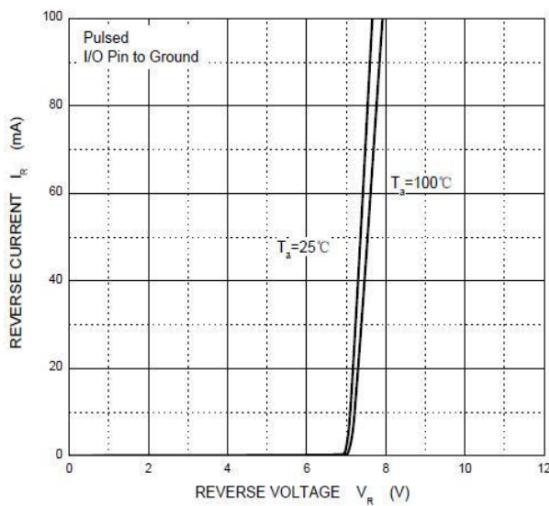


FIG.3 Reverse Characteristics

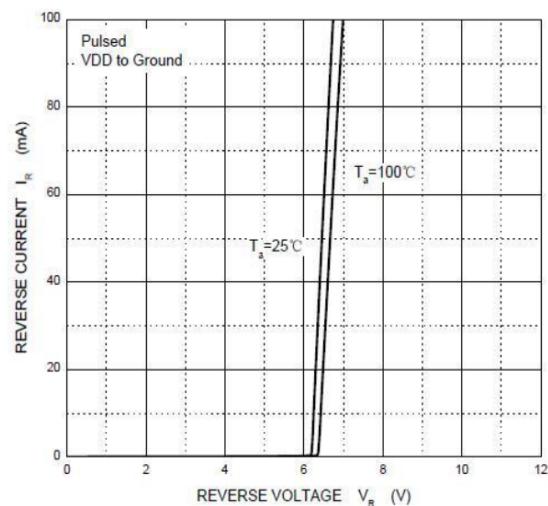


FIG.4 Reverse Characteristics

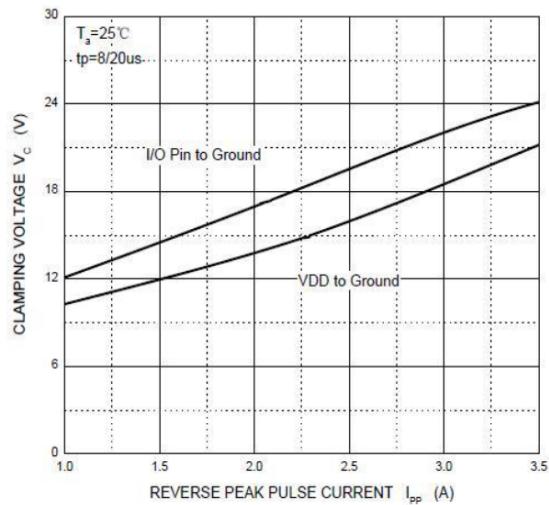


FIG.5 V_c vs. I_{pp}

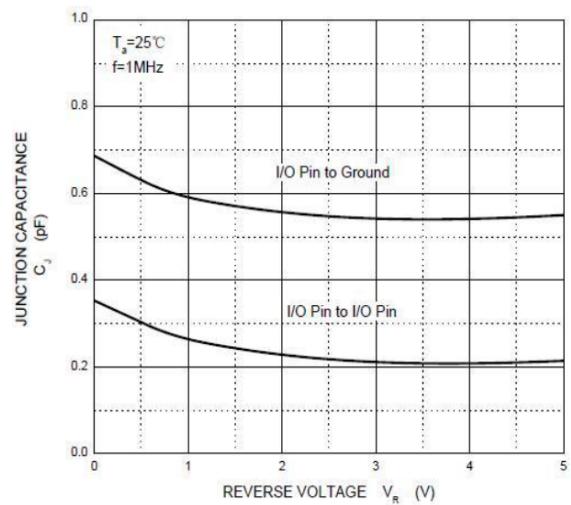
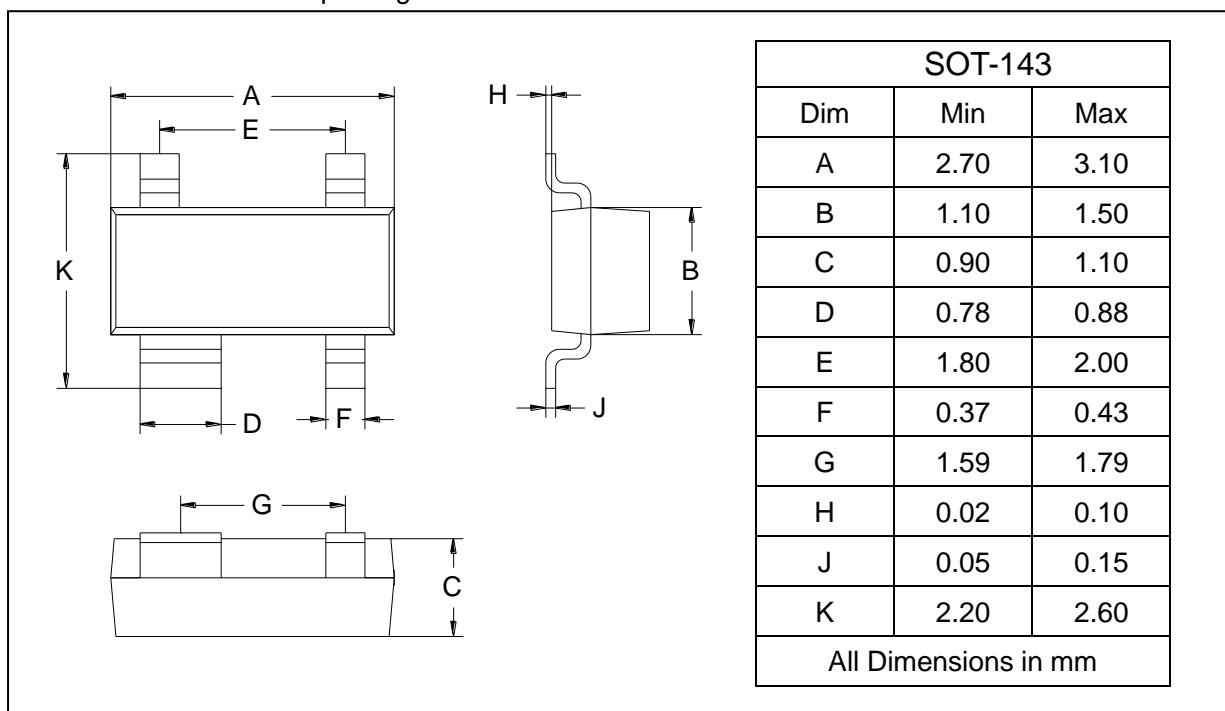


FIG.6 Capacitance Characteristics

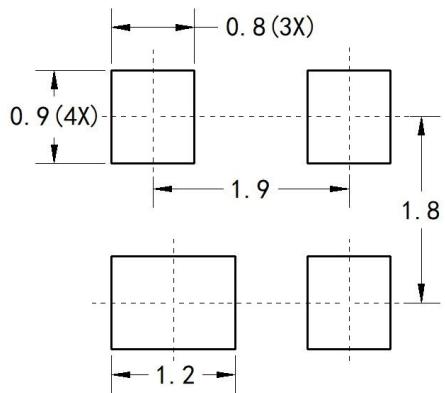
PACKAGE OUTLINE

Plastic surface mounted package

SOT-143



SOLDERING FOOTPRINT



Unit: mm

PACKAGE INFORMATION

Device	Package	Shipping
SR05L	SOT-143	3000 pcs / Tape & Reel