2 Channel Low Capacitance ESD Protection Diode Array

HYESD1025QG is a 2-channel ultra low capacitance rail clamp ESD protection diode array which includes surge rated to protect high speed data lines. Each channel consists of a pair of ESD diodes that steer positive or negative rail. Typical application, the negative rail pin is connected with the ground of the circuit protected. The Positive ESD current is steered to the ground through internal zener diode to protect the power supply of the circuit protected.

FEATURES

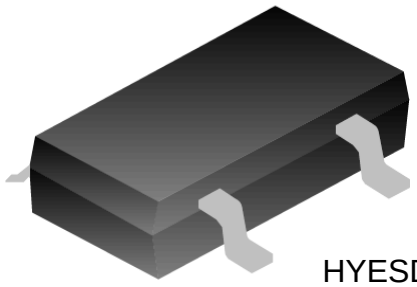
- 2 Channel ESD protection for high speed data line
- Provides ESD protection to IEC61000-4-2 level 4
  - ± 15KV Air Discharge
  - ± 10KV Contact Discharge
- Ultra low capacitance
  - I/O to GND : 1.4pF (Max)
  - I/O to I/O : 0.7pF (Max)
- Low clamping voltage & 5V operation voltage

APPLICATION

- HDMI / DVI ports
- Display port
- USB 2.0 interface protection
- Flat panel Monitors / TVs
- Set-top box
- PCI Express / Serial ATA

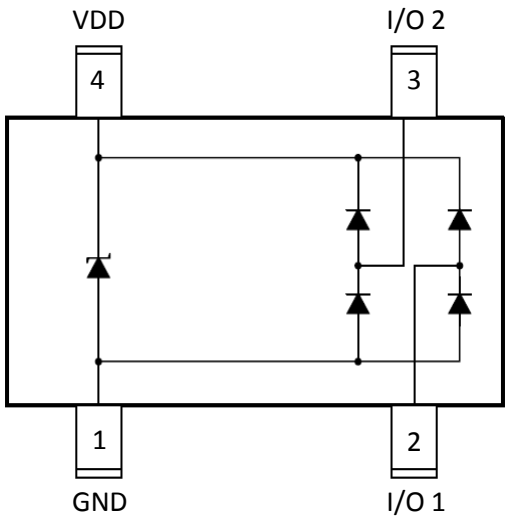
MECHANICAL INFORMATION

- Case : SOT-143 4L Package
- Pb-Free, Halogen Free, RoHS/WEEE Complian



HYESD1025QG
SOT-143 4L

PIN CONFIGURATION



Maximum Rating and Thermal Characteristics (T_C=25℃)

Parameter	Symbol	Value	Unit
Peak Pulse Power(8/20μs)	P_{PP}	150	W
Peak Pulse Current(8/20μs)	I_{PP}	5	A
ESD per IEC 61000-4-2(Air)	V_{ESD}	±15KV	V
ESD per IEC 61000-4-2(Contact)	V_{ESD}	±10KV	V
Operating Temperature Range	T_{op}	-55 to +125	℃
Storage Temperature Range	T_{stg}	-55 to +150	℃

Electrical Characteristics (T_C=25℃, unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V_{RWM}	Any I/O pin to GND	-	-	5	V
Reverse Breakdown Voltage	V_{BR}	I_{BR} =1mA; I/O pin to GND	6	-		V
Reverse Leakage Current	I_R	V_{RWM} =5V, T=25°C; I/O pin to GND	-	-	1	uA
Positive Clamping Voltage	V_C	I_{PP}=1A, t_P=8/20us; Positive pulse; Any I/O pin to GND	-	8.5	12	V
Negative Clamping Voltage	V_C	I_{PP}=1A, t_P=8/20us; Negative pulse; Any I/O pin to GND	-	1.8	-	V
Junction Capacitance Between Channel	C_J	V_R=0V, f=1MHz; Between I/O pins	-	0.6	0.7	pF
Junction Capacitance Between I/O And GND	C_J	V_R=0V, f=1MHz; Any I/O pin to GND	-	1.2	1.4	pF