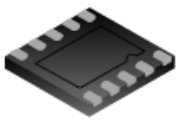
ESD3304 series

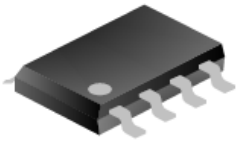
Description

The ESD3304 Series is designed to protect voltage sensitive components from ESD and transient voltage events. Excellent clamping capability, low leakage, and fast response time, make these parts ideal for ESD protection on designs where board space is at a premium.



DFN-10-2.5X2.5X0.6-0.5

ESD3304P



SOP-8-225-1.27

ESD3304S

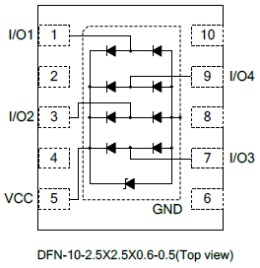
Features

- Protects four I/O lines
- IEC61000-4-2 (ESD) ±30kV (air), ±30kV (contact)
- Low capacitance: 3.0pF
- Low leakage current
- 450 Watts Peak Pulse Power
- Low working voltage: 3.3V

Applications

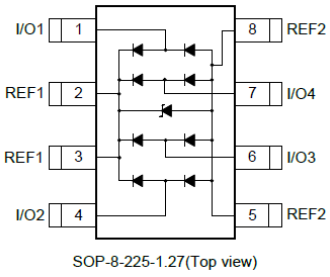
- T1/E1 Secondary Protection
- T3/E3 Secondary Protection
- 10/100/1000 Ethernet
- A/V Equipment
- DVI

Functional Diagram



DFN-10-2.5X2.5X0.6-0.5(Top view)

ESD3304P



SOP-8-225-1.27(Top view)

ESD3304S

Maximum Ratings (TA=25℃ unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak Pulse Power (tp =8/20μs)	PPP	450	Watts
Peak Current (tp =8/20μs)	IPP	25	A
IEC61000-4-2(contact)	VESD1	±30	KV
IEC61000-4-2(air)	VESD2	±30	KV
Operating Temperature Range	Topr	-55…+125	℃
Storage Temperature Range	Tstg	-55…+150	℃

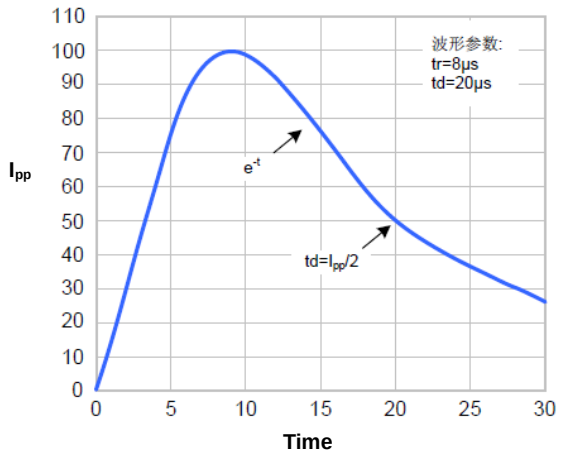
`

Electrical Characteristics (TA = 25 °C unless otherwise noted)

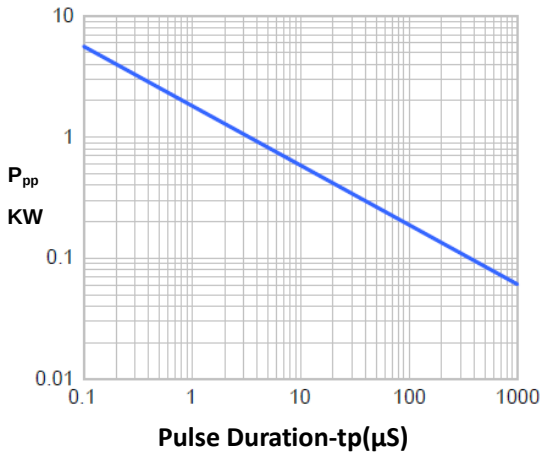
Parameter	Symbol	Test Conditions	Min	Typ	Max	Units
Reverse Standoff Voltage	V_{RWM}	I/O-GND			3.3	V
Reverse Breakdown Voltage	V_{BR}	I_T=1mA	3.8			V
Reverse Leakage Current	I_R	V_{RWM}=3.3V			1	uA
Clamping Voltage, Line-Ground positive pulse	V_{C1}	Ipp=5A tp =8/20μs		5	6	V
	V_{C1}	Ipp=25A tp =8/20μs		12	16	V
Clamping Voltage, Line-Ground Negative pulse	V_{C2}	Ipp=5A tp =8/20μs		1.4		V
	V_{C2}	Ipp=25A tp =8/20μs		4.6		V
Diode Capacitance(I/O-I/O)	C_{J1}	VR=0V f=1MHz		2	3	pF
Diode Capacitance(I/O-GND)	C_{J2}	VR=0V f=1MHz		3.5	5.0	pF

Characteristic Curves

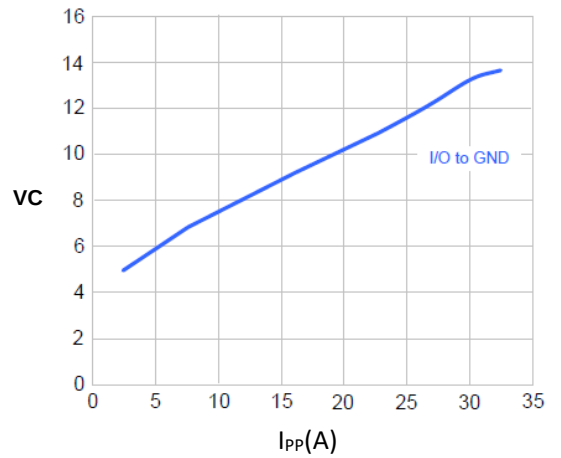
Pulse Waveform



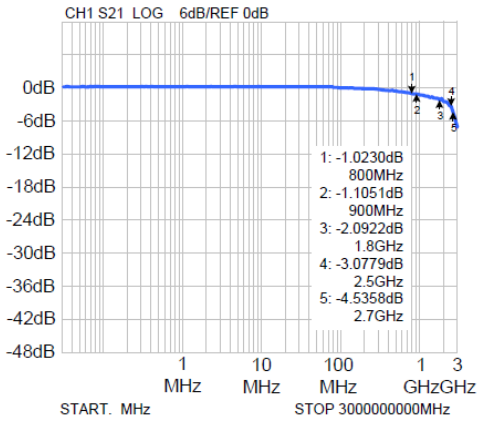
Non-Repetitive Peak Pulse Power vs. Pulse Time

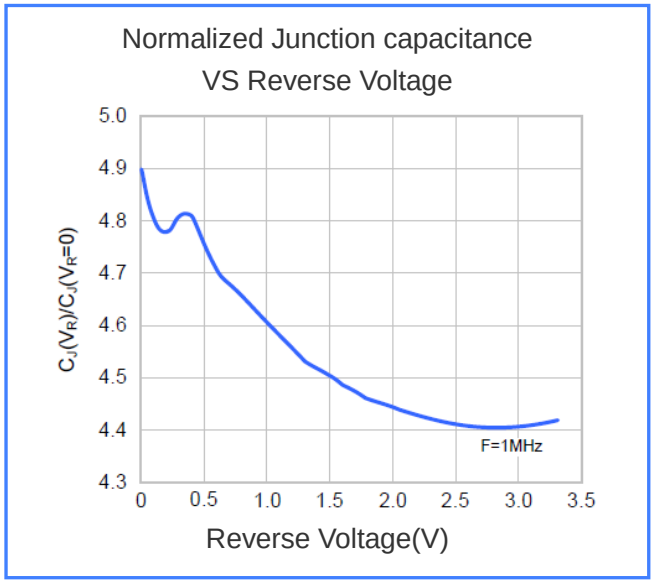


Clamping Voltage vs. IPP



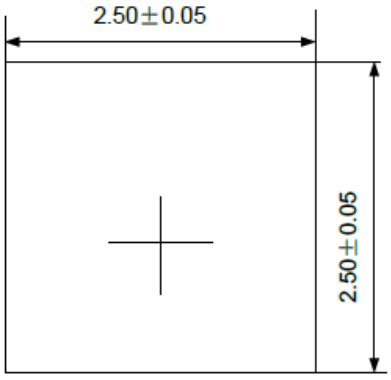
insertion loss（I/O-GND）



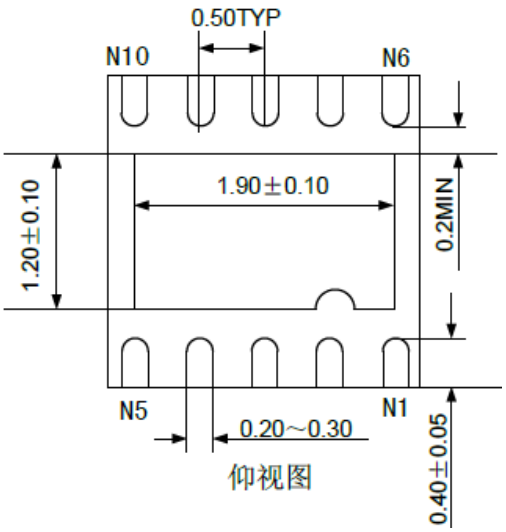


Package Dimensions

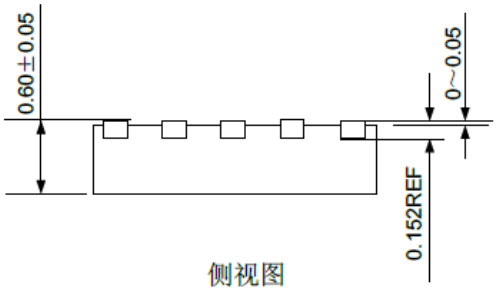
DFN-10-2.5×2.5×0.6-0.5



俯视图

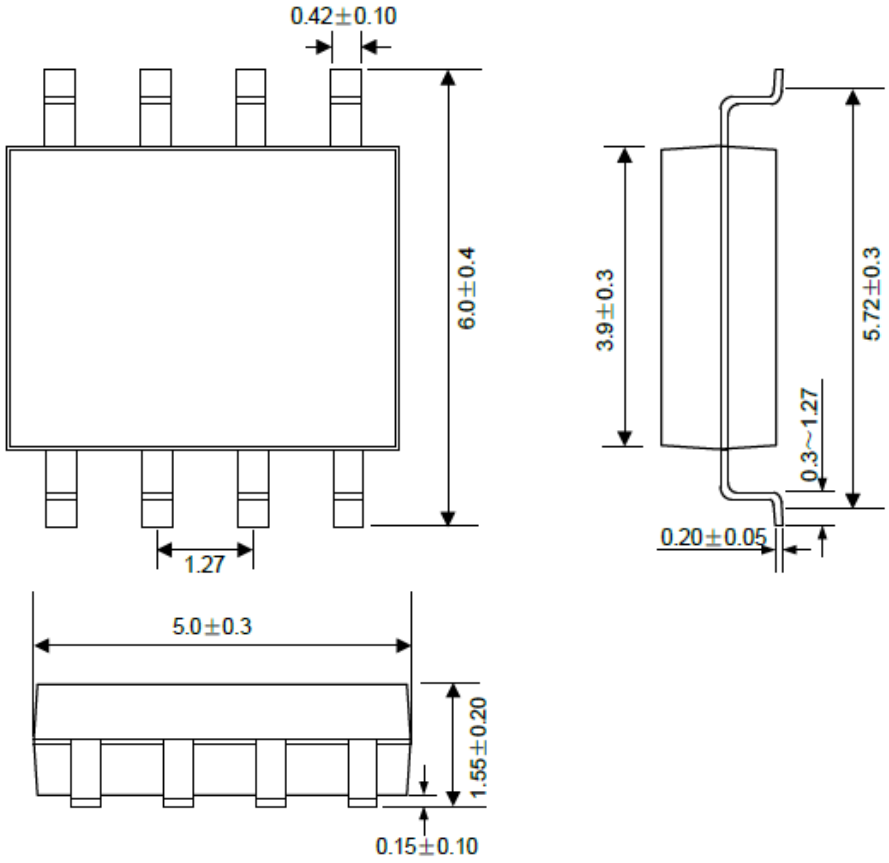


仰视图



侧视图

SOP-8-225-1.27



Disclaimer

Specifications are subject to change without notice.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.

Users should verify actual device performance in their specific applications.