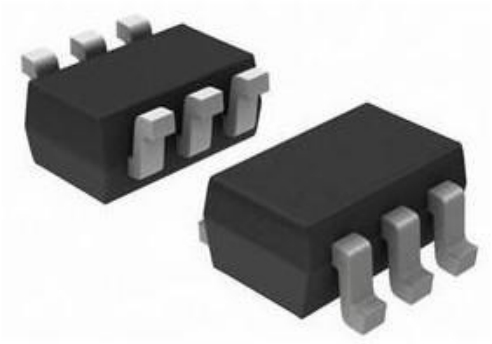
BORN 伯恩半导体 BORN SEMICONDUCTOR

NUP4202W1T2G-N

ESD Protection Diode Array

»Features

- 60Watts peak pulse power (tp = 8/20μs)
- SOT363 package
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Low capacitance (Cj=0.25pF typ.)
- Protection one data/power line
- IEC 61000-4-2 ±15kV contact ±20kV air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 3.5A (8/20μs)



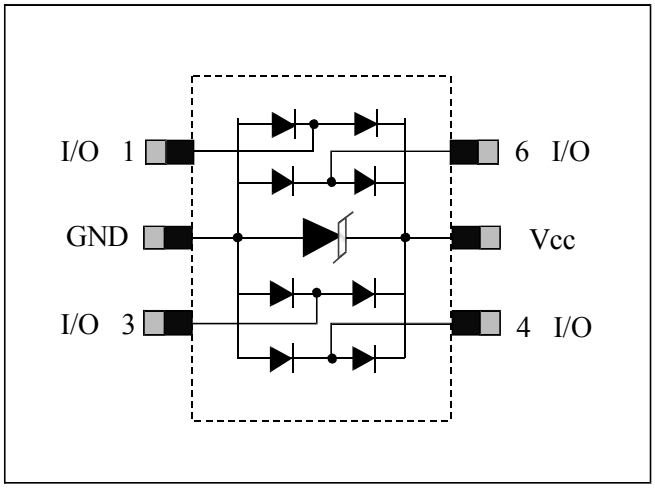
»Applications

- Ethernet
- Digital Visual Interface (DVI)
- USB2.0
- Notebook and PC Computers

»Mechanical Data

- SOT363 package
- Molding compound flammability rating: UL 94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

»Schematic & PIN Configuration



SOT363

»Absolute Maximum Rating

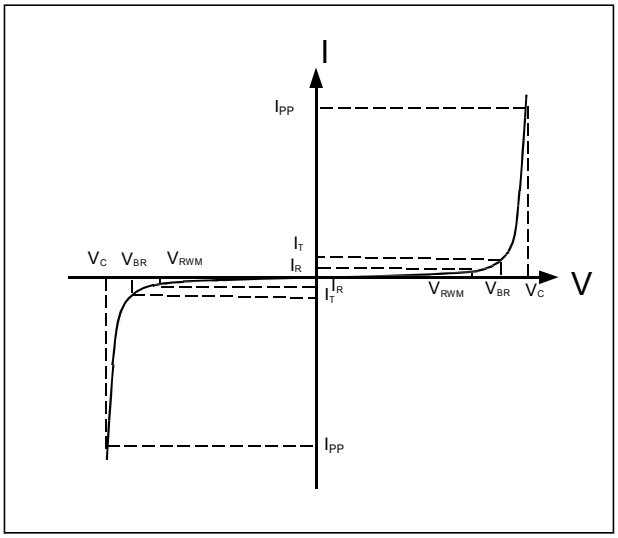
Rating	Symbol	Value	Units
Peak Pulse Power (t_p =8/20μs)	P_{PP}	60	Watts
Peak Pulse Current (t_p =8/20μs)(note1)	I_{pp}	3.5	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	20 15	kV
Lead Soldering Temperature	T_L	260(10seconds)	℃
Junction Temperature	T_J	-55 to + 125	℃
Storage Temperature	T_{stg}	-55 to + 125	℃

»Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				5.0	V
Reverse Breakdown Voltage	V_{BR}	I_T=1mA	6			V
Reverse Leakage Current	I_R	V_{RWM}=5V,T=25℃		50	500	nA
Peak Pulse Current	I_{PP}	tp =8/20μs			3	A
Clamping Voltage	V_C	I_{PP}=3.5A,t_p=8/20μs		15	18	V
Junction Capacitance	C_j	V_R = 0V, f = 1MHz IO to IO		0.2	0.25	pF
		V_R = 0V, f = 1MHz IO to GND		0.35	0.5	

»Electrical Parameters (TA = 25°C unless otherwise noted)

Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current



Note:. 8/20μs pulsewaveform.

»Typical Characteristic Curves

Fig.1 Peak Pulse Power Rating Curve

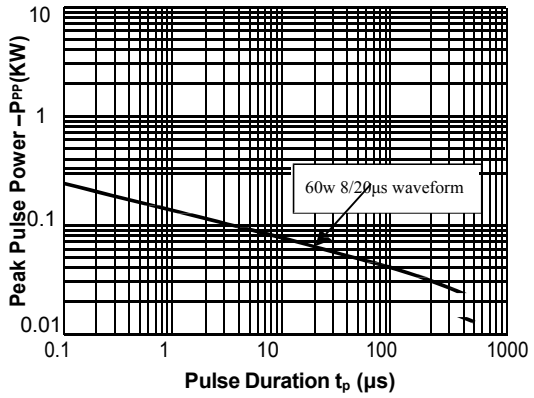


Fig.2 Pulse Derating Curve

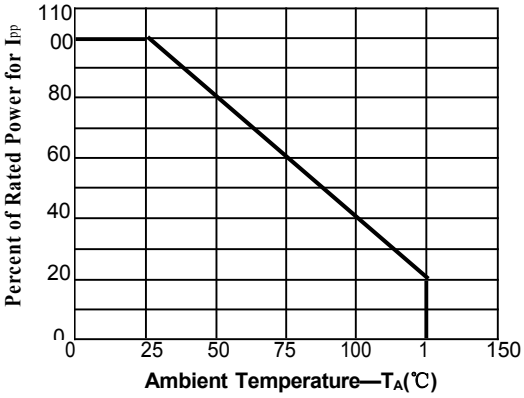


Fig.3 Pulse Waveform-8/20μs

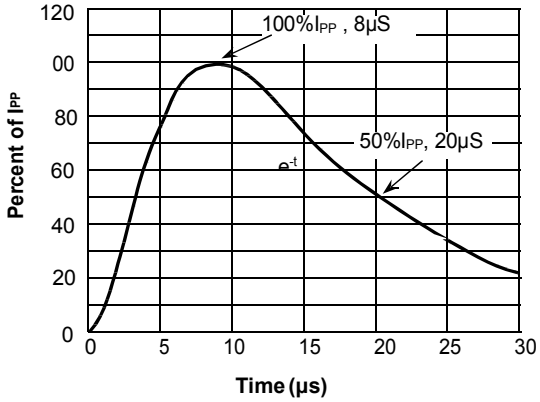


Fig.4 Pulse Waveform-ESD(IEC61000-4-2)

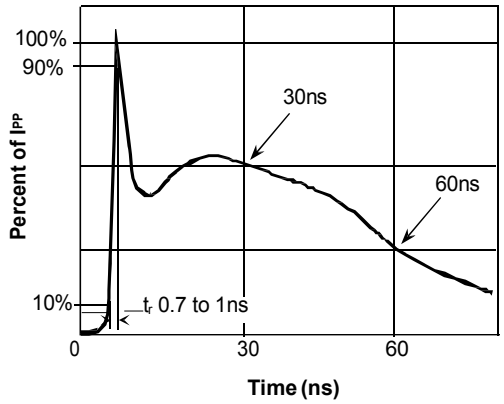


Fig.5 Eye Diagram - HDMI mask at 5.0Gbpsper channel

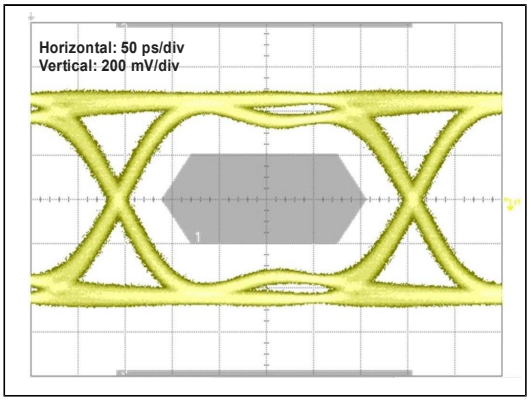
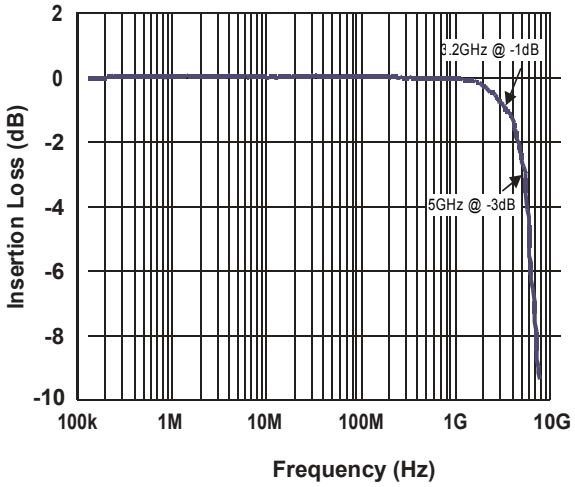
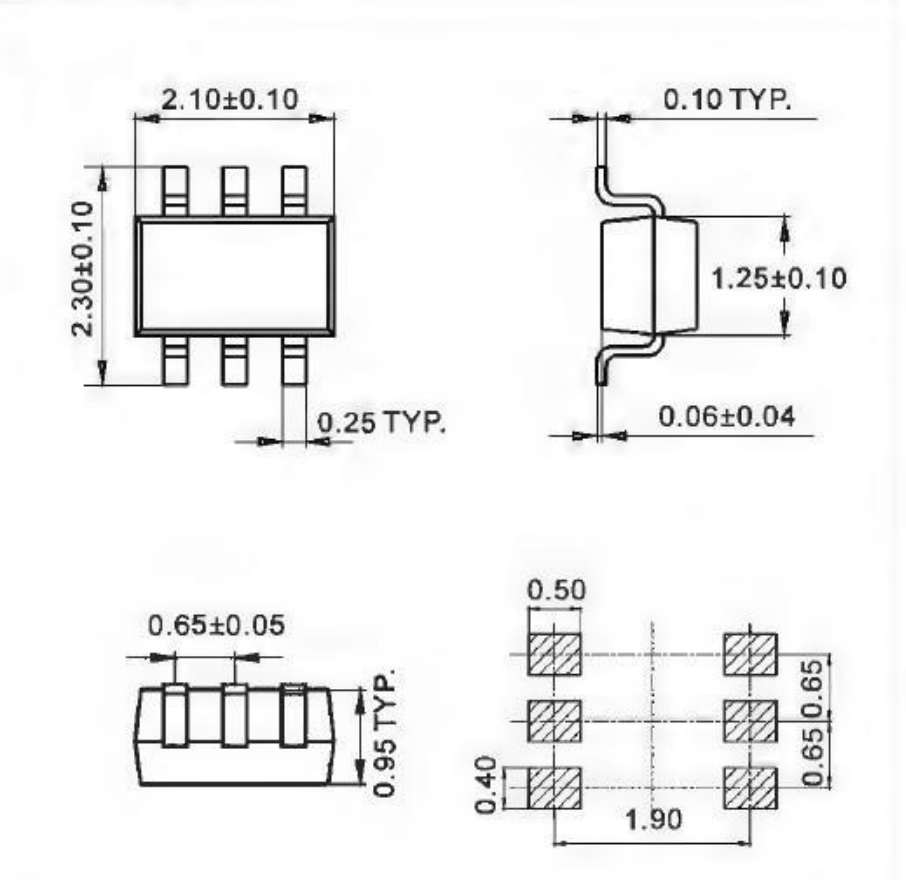


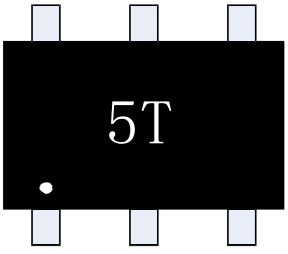
Fig.6 Insertion Loss S21 - I/O to GND



»Outline Drawing – SOT363



»Marking



Ordering information

Order code	Package	Base qty	Delivery mode
NUP4202W1T2G-N	SOT363	3k	Tape and reel

Unikeyic Electronics

Global Electronic Components Distributor

Click to view pricing, inventory, delivery, and lifecycle information:

BORN:

ESDA14V2L MMBZ27VCLT1G-N SMD2920-400/30N SMFJ170A BC858B P4SMA6.8CA SM24CANB-02HTG-N BSD3A031V BM3134E MMBZ39VCLT1G-N PESD15VL1BA-N 1.5SMBJ18CA 1N4148WT BSD3A241V BWF102N S8550 BDFN1C031V BST23A052U GBJ1510 BAT46X BML6401 BN5A181V45 PSD24-N 5.0SMDJ15CA BSD9C051V GBLC03C-N 1.0SMBJ6.5A 1.5SMBJ40CA BDFN2C031V BSD3C031LX