

MSKSEMI 美森科

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

NUP4202W1T2G-MS

Product specification

Features

- 100Watts peak pulse power ($t_p = 8/20\mu s$)
- SOT363 package
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low capacitance ($C_j = 0.30pF$ typ.)
- Protection one data/power line to:
- IEC 61000-4-2 $\pm 12kV$ contact $\pm 15kV$ air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 5A (8/20 μs)

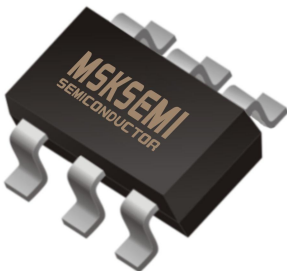

Mechanical Data

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

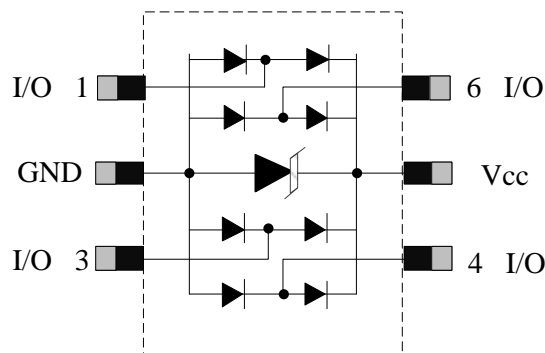
Applications

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

Reference News

SOT-363	Marking
	

Schematic & PIN Configuration



Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power ($t_p = 8/20\mu s$)	P_{PP}	100	Watts
Peak Pulse Current ($t_p = 8/20\mu s$) (note1)	I_{pp}	5.0	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	15 12	kV
Lead Soldering Temperature	T_L	260(10seconds)	°C
Junction Temperature	T_J	-55 to + 125	°C
Storage Temperature	T_{stg}	-55 to + 125	°C

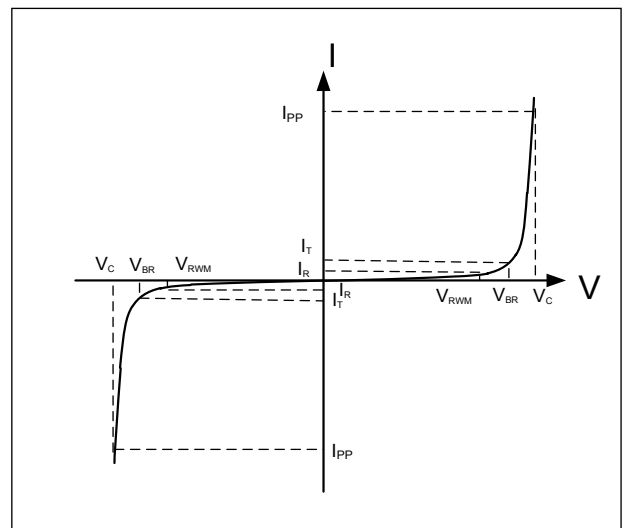
Electrical Characteristics

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	$V_{RWM} = 5V, T = 25^\circ C$			1	μA
Peak Pulse Current	I_{PP}	$t_p = 8/20\mu s$			5	A
Clamping Voltage	V_C	$I_{PP} = 5.0A, t_p = 8/20\mu s$		12	18	V
Junction Capacitance	C_j	$V_R = 0V, f = 1MHz$ IO to IO		0.3	0.45	pF
		$V_R = 0V, f = 1MHz$ IO to GND			0.9	

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: 8/20 μs pulse waveform.



Typical Characteristic Curves

Fig.1 Peak Pulse Power Rating Curve

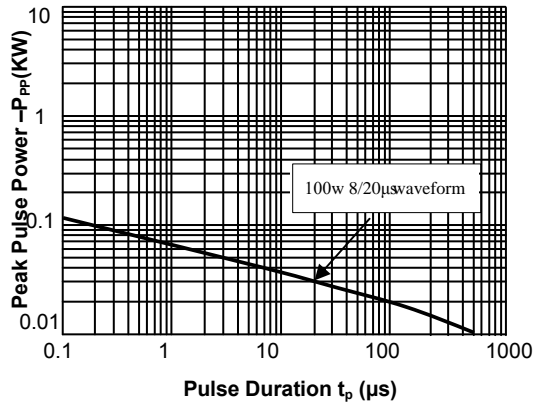


Fig.2 Pulse Derating Curve

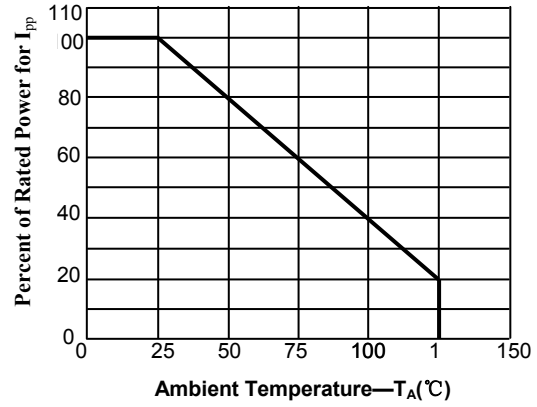


Fig.3 Pulse Waveform-8/20 μ s

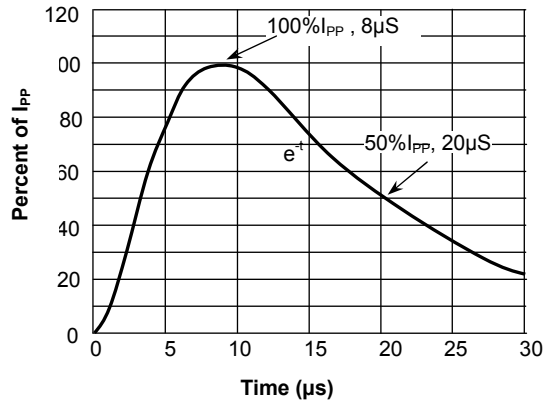
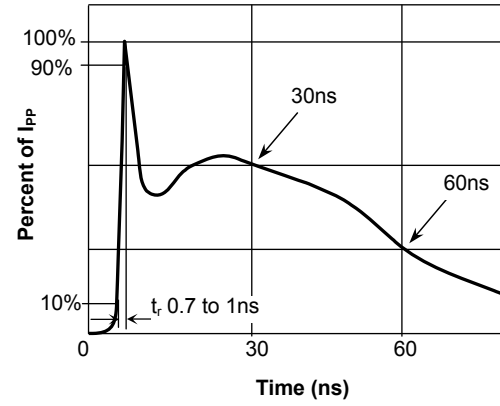
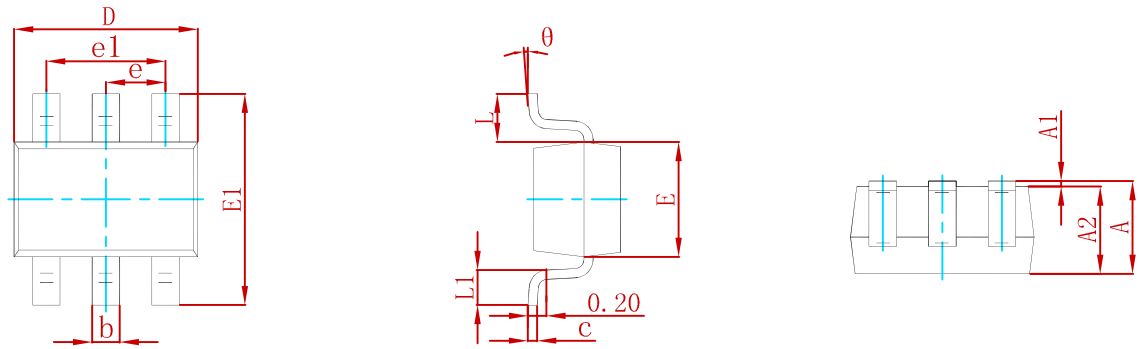


Fig.4 Pulse Waveform-ESD(IEC61000-4-2)

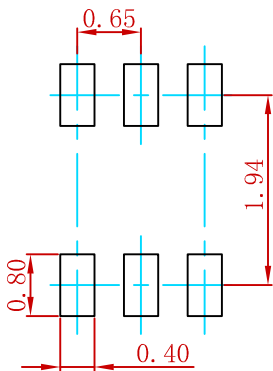


PACKAGE MECHANICAL DATA



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.150	0.350	0.006	0.014
c	0.100	0.150	0.004	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.400	0.085	0.094
e	0.650 TYP		0.026 TYP	
e1	1.200	1.400	0.047	0.055
L	0.525 REF		0.021 REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°

Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.

Order information

Orderable Device	Package	Packing Option
NUP4202W1T2G-MS	SOT-363	3000PCS

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