

# MSKSEMI

SEMICONDUCTOR



ESD



TVS



TSS



MOV

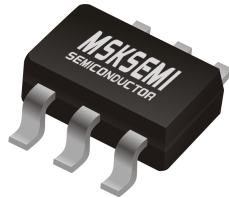


GDT



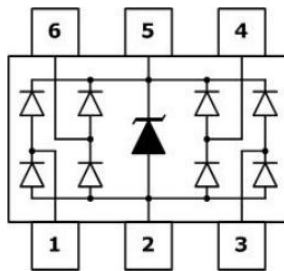
PLED

Product data sheet



SOT-23-6

Pin Configuration



**Features**

- Ultra low leakage: nA level
- Operating voltage: 5V
- Low clamping voltage
- Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test
    - Air discharge: ±15kV
    - Contact discharge: ±10kV
  - IEC61000-4-4 (EFT) 40A (5/50ns)
  - IEC61000-4-5 (Lightning) 5A (8/20 μs)
- RoHS Compliant

**Applications**

- USB 2.0 power and data line
- Set-top box and digital TV
- Digital video interface (DVI)
- Notebook Computers
- SIM Ports

**Mechanical Characteristics**

- Package: SOT-23-6
- Lead Finish: Lead Free
- UL Flammability Classification Rating 94V-0
- Quantity Per Reel:3,000pcs
- Reel Size:7inch

**Absolute Maximum Ratings**(Tamb=25°C unless otherwise specified)

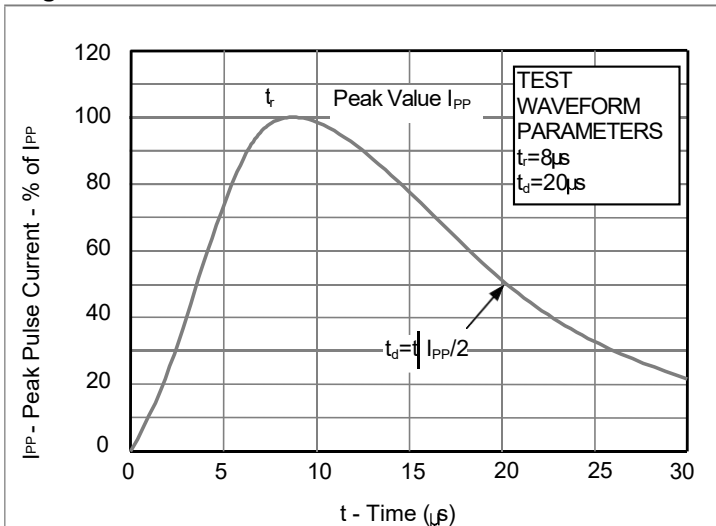
Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppp	80	W
ESD per IEC 61000-4-2 (Air)	V <sub>ESD</sub>	± 15	Kv
ESD per IEC 61000-4-2 (Contact)		± 10	
Operating Temperature Range	T <sub>J</sub>	-55 to +125	°C
Storage Temperature Range	T <sub>STJ</sub>	-55 to +150	°C

**Electrical Characteristics**(TA=25°C unless otherwise specified)

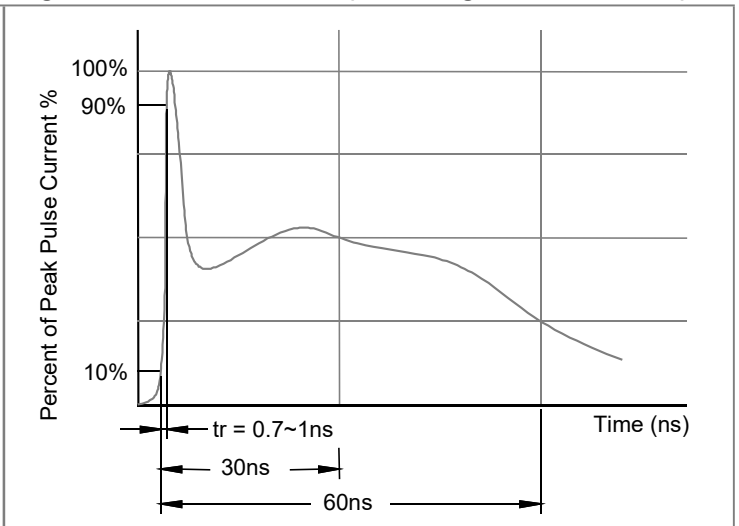
P/N	V <sub>RWM</sub> (V)	V <sub>BR</sub> (V)	I <sub>T</sub> (mA)	V <sub>C</sub> @1A	V <sub>C</sub>		I <sub>R</sub> μA (Max)	C (Pf) (Typ.)
					(Max)	(@A)		
MSNUP4201MR6T1G	5	6	1	12	16	5	1	0.6

**Characteristic Curves**

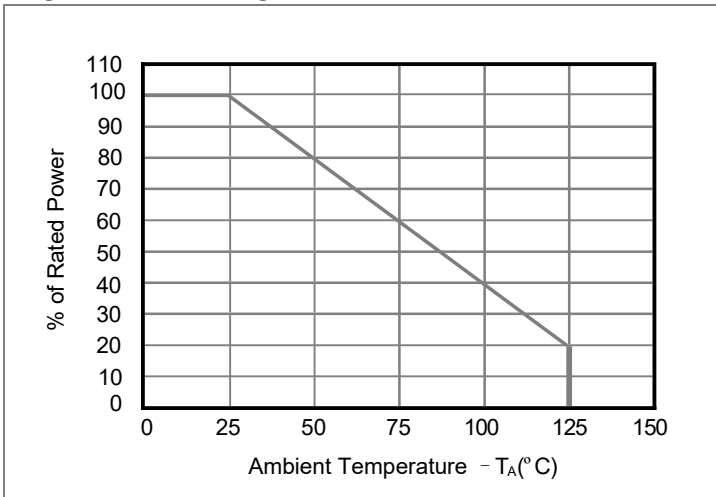
**Fig1. 8/20μ s Pulse Waveform**



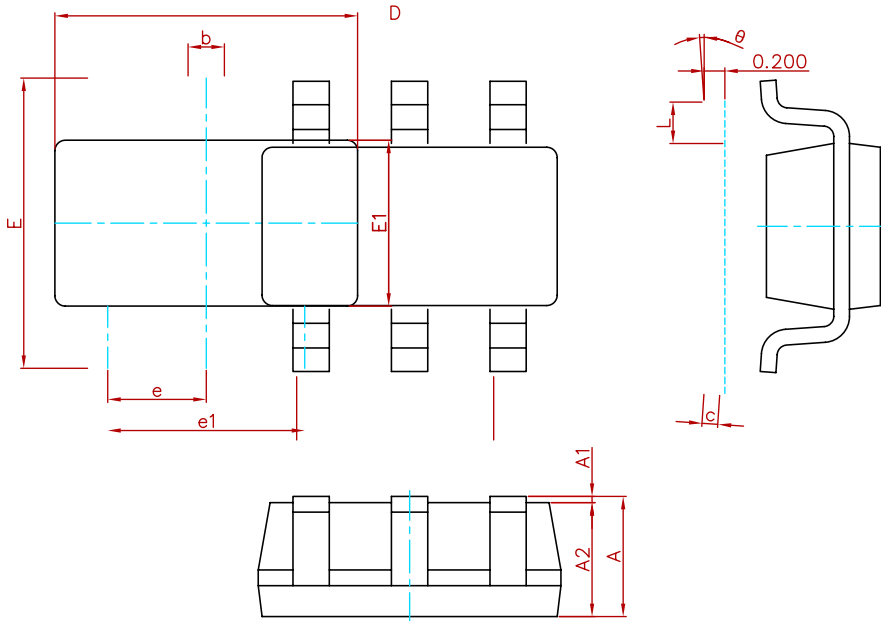
**Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)**



**Fig3. Power Derating Curve**

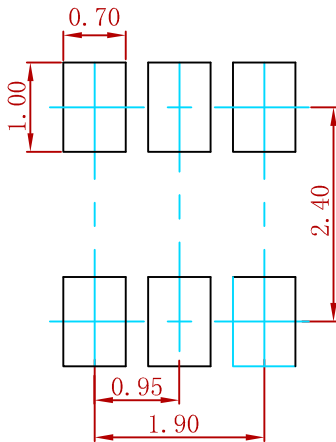


**PACKAGE MECHANICAL DATA**



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E1	1.500	1.700	0.059	0.067
E	2.650	2.950	0.104	0.116
e	0.950(BSC)		0.037(BSC)	
e1	1.800	2.000	0.071	0.079
L	0.300	0.600	0.012	0.024
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.

**REEL SPECIFICATION**

P/N	PKG	QTY
MSNUP4201MR6T1G	SOT-23-6	3000

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