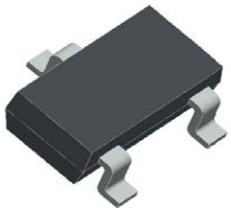
NUP2105L1TG-L

ESD PROTECTION DIODE

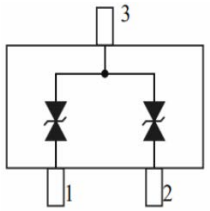
Features

- ★ Transient protection for high-speed data lines
  IEC 61000-4-2(ESD) ±8kV (Contact)
  ±15kV (Air)
  IEC 61000-4-4(EFT) 40A (5/50 ns)
- ★ Peak power dissipation: 350W (8/20us)
- ★ Working voltages : 24V
- ★ Protects one bidirectional line or two unidirectional lines
- ★ Low clamping voltage
- ★ Low leakage current

PACKAGE OUTLINE



SOT23



Circuit Diagram

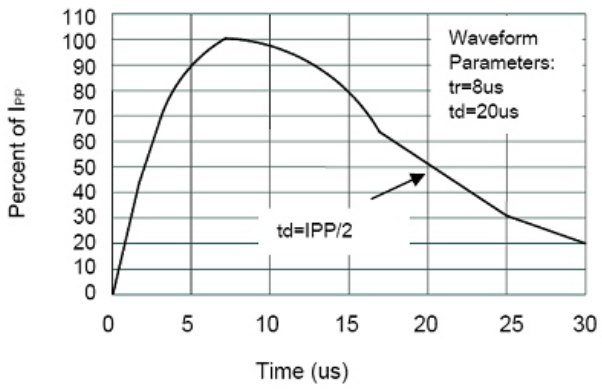
Absolute Maximum Ratings (Tamb=25°C unless otherwise specified)

Symbol	Parameter	Value	Units
P_{PP}	Peak Pulse Power (t_p = 8/20 μ s)	350	W
T_L	Maximum lead temperature for soldering during 10s	260	°C
T_{stg}	Storage Temperature Range	-55 to +155	°C
T_{op}	Operating Temperature Range	-40 to +125	°C
T_j	Maximum junction temperature	150	°C
	IEC61000-4-2 (ESD) air discharge contact discharge	±15 ±8	KV
	IEC61000-4-4 (EFT)	40	A

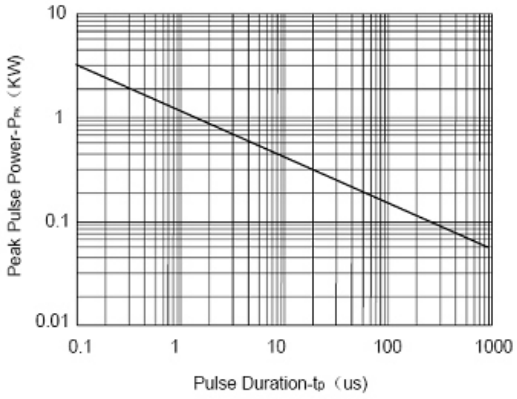
Electrical Characteristics (TA=25°C unless otherwise specified)

Symbol	Parameter	Test Condition	Min	Typ	Max	Units
V_{RWM}	Reverse Working Voltage	Pin 1 or 2 to Pin3			24	V
V_{BR}	Reverse Breakdown Voltage	I_T = 1mA Pin 1 or 2 to Pin3	26.2		32	V
I_R	Reverse Leakage Current	V_{RWM} = 24V Pin 1 or 2 to Pin3		15	100	nA
V_C	Clamping Voltage	I_{RWM} = 1A, t_p = 8/20μs Pin 1 or 2 to Pin3			36	V
		I_{RWM} = 5A, t_p = 8/20μs Pin 1 or 2 to Pin3			46	V
C_J	Junction Capacitance	V_R = 0V, f = 1MHz Pin 1 or 2 to Pin3		25	30	pF

Typical Performance Characteristics (T_A=25°C unless otherwise Specified)



Pulse Waveform



Non-Repetitive Peak Pulse Power vs. Pulse Time

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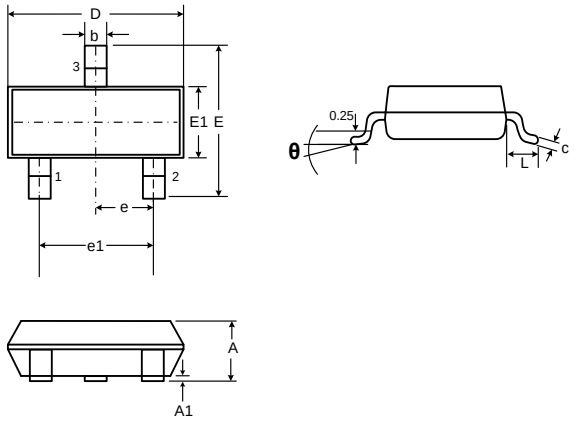
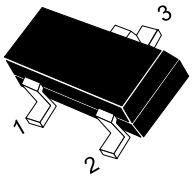
ESD PROTECTION DIODE

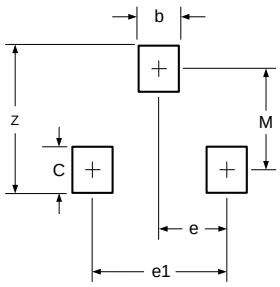
Outline Drawing – SOT23

PACKAGE OUTLINE





DIMENSIONS				
SYMBOL	MILLIMETER		INCHES	
	MIN	MAX	MIN	MAX
A	0.90	1.15	0.035	0.045
A1	0.00	0.10	0.000	0.004
b	0.30	0.50	0.012	0.020
c	0.08	0.15	0.003	0.006
D	2.80	3.00	0.110	0.118
E	2.25	2.55	0.089	0.100
E1	1.20	1.40	0.047	0.055
e	0.95 BSC		0.0374 BSC	
e1	1.80	2.00	0.071	0.079
L	0.45	0.65	0.018	0.026
θ	0	8°	0	8°



DIMENSIONS		
DIM	INCHES	MILLIMETERS
M	0.080	2.02
C	0.032	0.80
Z	0.111	2.82
e	0.037 BSC	0.95 BSC
e1	0.075 BSC	1.90 BSC
b	0.032	0.80

Notes

1. Dimensioning and tolerances per ANSI Y14.5M, 1985.
2. Controlling Dimension: Inches
3. Pin 3 is the cathode (Unidirectional Only).
4. Dimensions are exclusive of mold flash and metal burrs.