

Features

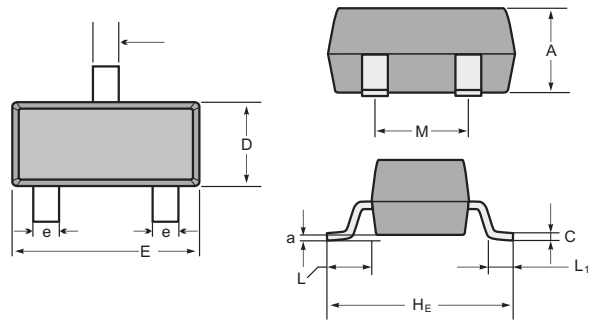
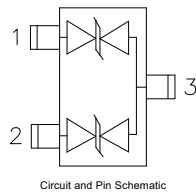
250W peak pulse power(8/20μs)
Protects two bi-directional lines
Ultra low leakage: nA level
Operating voltage: 24V
Low clamping voltage
Complies with following standards:
– IEC 61000-4-2 (ESD) immunity test
Air discharge: ±30kV
Contact discharge: ±30kV
– IEC61000-4-4 (EFT) 40A (5/50ns)
RoHS Compliant

Mechanical Characteristics

Package: SOT-23
Lead Finish: Matte Tin
Case Material: "Green" Molding Compound.
UL Flammability Classification Rating 94V-0
Moisture Sensitivity: Level 3 per J STD 020

Applications

Cellular Handsets and Accessories
Notebooks and Handhelds
Portable Instrumentation
Set Top Box
Industrial Controls



SOT-23 mechanical data

UNIT		A	C	D	E	H _E	e	M	L	L ₁	a
mm	max	1.1	0.15	1.4	3.0	2.6	0.5	1.95	0.55 (ref)	0.36 (ref)	0.0
	min	0.9	0.08	1.2	2.8	2.2	0.3	1.7			0.15
mil	max	43	6	55	118	102	20	77	22 (ref)	14 (ref)	0.0
	min	35	3	47	110	87	12	67			6

Ordering information

Order code	Package	Making
NUP2105LT1G	SOT-23	27E

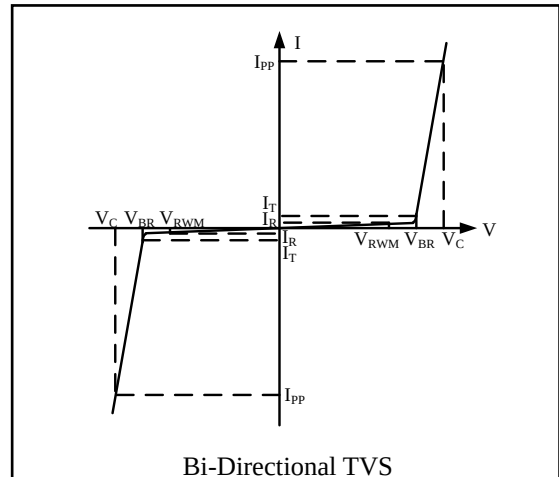
Absolute Maximum Ratings (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power(8/20μs)	Ppk	250	W
ESD per IEC 61000-4-2 (Air)	V _{ESD}	±30	kV
ESD per IEC 61000-4-2 (Contact)		±30	
Operating Temperature Range	T _J	-55 to +125	°C
Storage Temperature Range	T _{stg}	-55 to +150	°C

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

Symbol	Parameter
V_{RWM}	Nominal Reverse Working Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Reverse Breakdown Voltage @ I_T
I_T	Test Current for Reverse Breakdown
V_C	Clamping Voltage @ I_{PP}
I_{PP}	Maximum Peak Pulse Current
C_{ESD}	Parasitic Capacitance
V_R	Reverse Voltage
f	Small Signal Frequency



Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V_{RWM}			24	V	
Breakdown Voltage	V_{BR}	26.7			V	$I_T = 1mA$
Reverse Leakage Current	I_R		0.01	0.5	μA	$V_{RWM} = 24V$
Clamping Voltage	V_C		33		V	$I_{PP} = 1A$ (8 x 20 μs pulse)
Clamping Voltage	V_C		45		V	$I_{PP} = 3.5A$ (8 x 20 μs pulse)
Peak Pulse Current	I_{PP}			3.5	A	$t_P=8/20\mu s$
Junction Capacitance	C_J			13	pF	$V_R=0$, $f=1MHz$, Pin 1 to Pin 3 or Pin 2 to Pin 3

RATING AND CHARACTERISTIC CURVES (NUP2105LT1G)

Fig1. 8/20 μ s Pulse Waveform

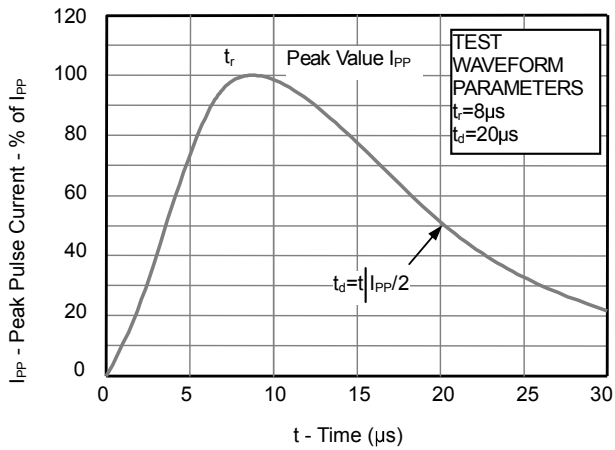


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

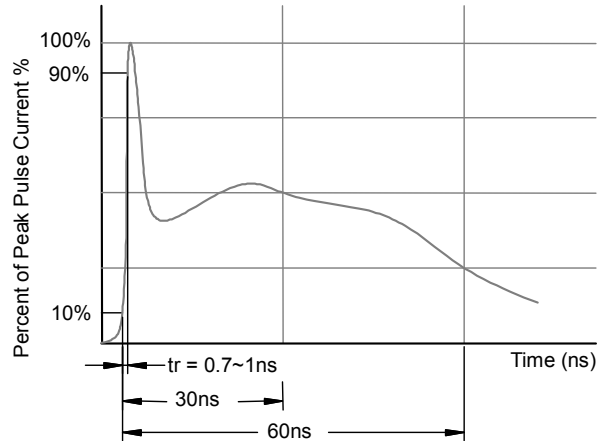


Fig3. Power Derating Curve

