KESD7241N2T5G

ESD Protection Diode

Datasheet

Features

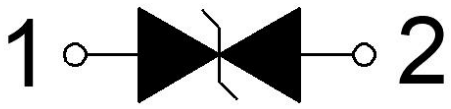
- 2-pin lead-less package
- Junction capacitance (Max value: 0.6pF)
- Peak Pulse Current (8/20μs): 1.5A
- IEC61000-4-2 (ESD) ±15kV (air), ±8kV (contact)
- Low clamping voltage
- Low leakage current
- Working voltages:24V
- Qualified to AEC-Q101 Standards for High Reliability
- RoHS Compliant

Mechanical Characteristics

- Package: DFN1006
- Lead Finish:Matte Tin
- Case Material: “Green” Molding Compound.
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Tape Reel :10000pcs

Appearance & Symbol



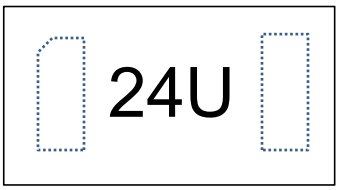


Bi-directional

Applications

- Cellular Handsets and Accessories
- Personal Digital Assistants
- Notebooks and Handhelds
- Portable Instrumentation,Digital Cameras
- Peripherals, Audio Players, Industrial Equipment

Marking Information



24U=Marking Code

Absolute Maximum Ratings (T=25ºC, RH=45%-75%, unless otherwise noted)

Parameters	Symbol	Value	Unit
Peak Pulse Power (tp=8/20μs waveform)	P_{PP}	80	W
Peak Pulse Current (8/20μs)	I_{PP}	1.5	A
ESD per IEC 61000−4−2 (Air) ESD per IEC 61000−4−2 (Contact)	V_{ESD}	±15 ±8	KV
Operating Temperature Range	T_J	−55 to +125	°C
Storage Temperature Range	Tstg	−55 to +150	°C

Electrical Characteristics (T=25ºC, RH=45%-75%, unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V_{RWM}				24	V
Reverse Breakdown Voltage	V_{BR}	I_R = 1mA	24.5		31	V
Reverse Leakage Current	I_R	V_R = 24V			0.2	uA
Clamping Voltage	V_C	I_{PP} = 1A,T_P=8/20us			40	V
Clamping Voltage	V_C	I_{PP} = 1.5A,T_P=8/20us			54	V
Junction Capacitance	C_J	V_R =0V,f =1MHz		0.4	0.6	pF

Typical Characteristics

FIG1：Power rating derating curve

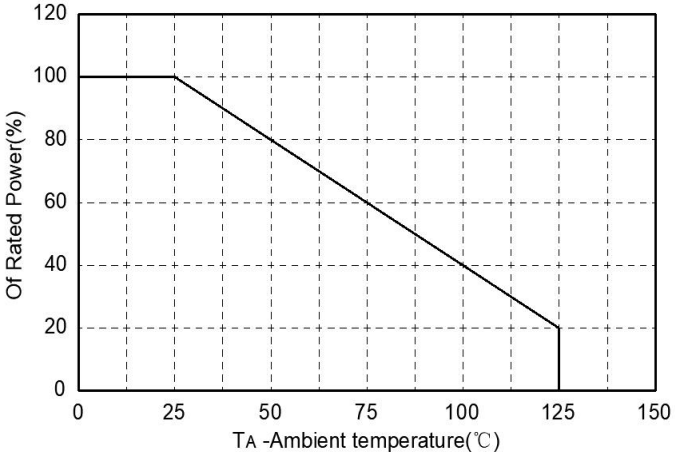


FIG2： pulse Waveform

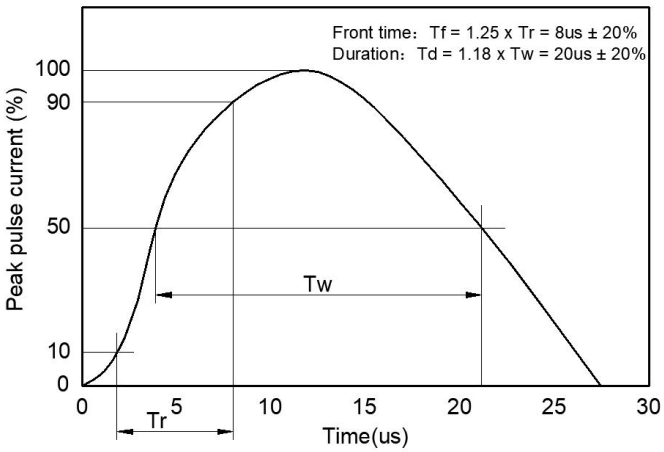


FIG3：Capacitance between terminals characteristics

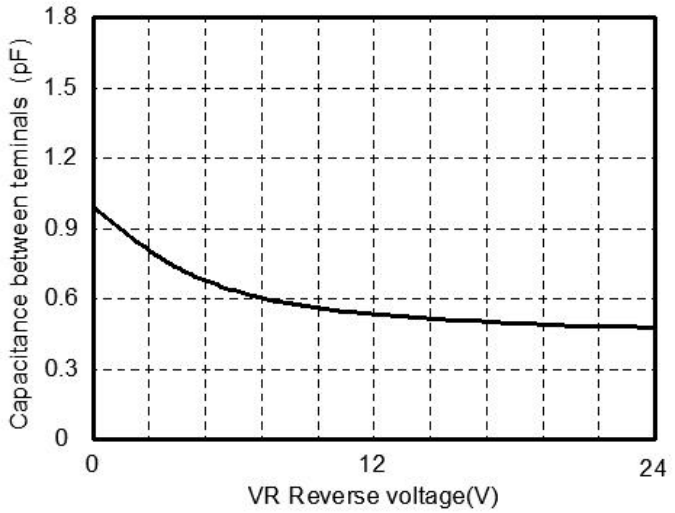
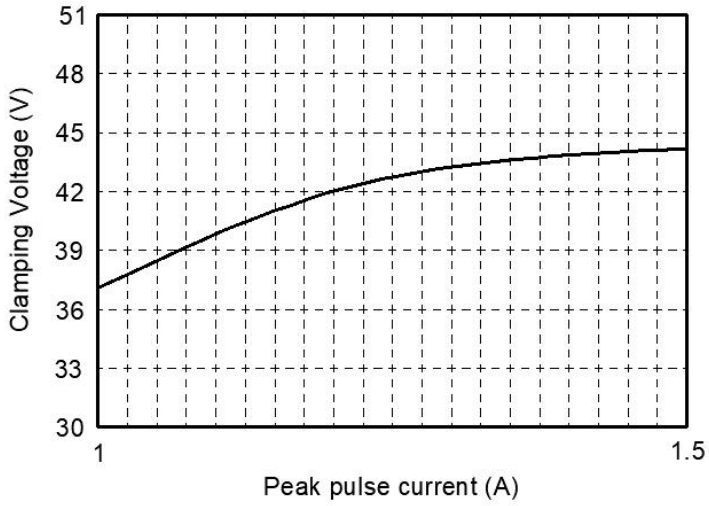
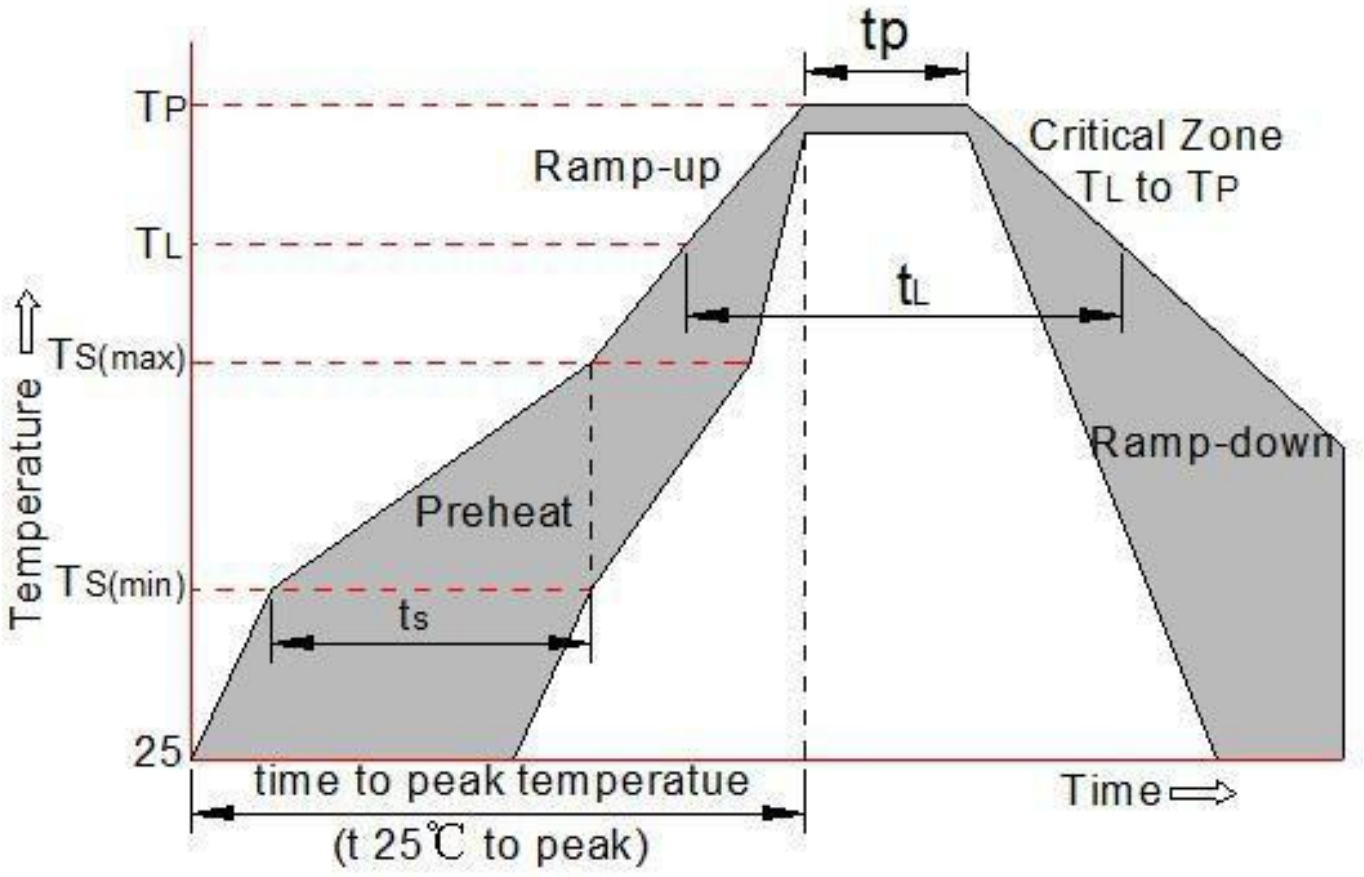


FIG4: Clamping Voltage vs. Peak Pulse Current

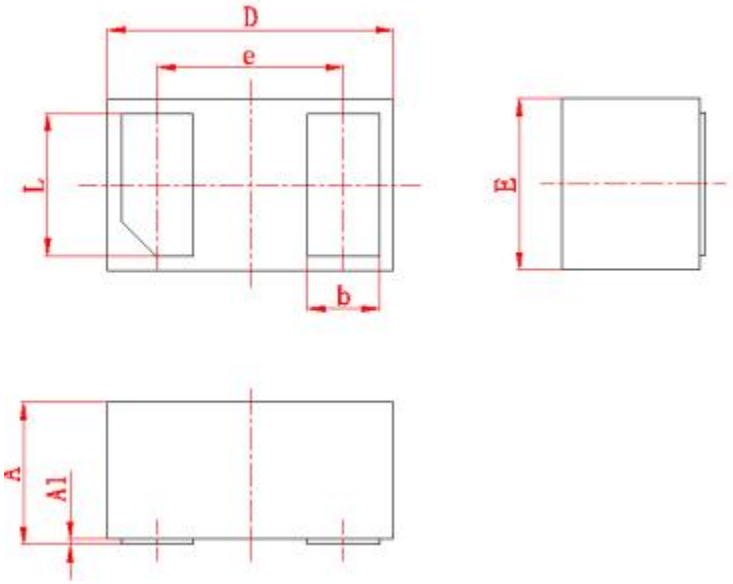


Soldering parameters

Reflow Condition		Pb-Free assembly (see as bellow)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150℃
	-Temperature Max($T_{s(max)}$)	+200℃
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3℃/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3℃/sec. Max
Reflow	-Temperature(T_L) (Liquid us)	+217℃
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_p)		+260(+0/-5)℃
Time within 5℃ of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6℃/sec. Max
Time 25℃ to Peak Temp (T_P)		8 min. Max
Do not exceed		+260℃

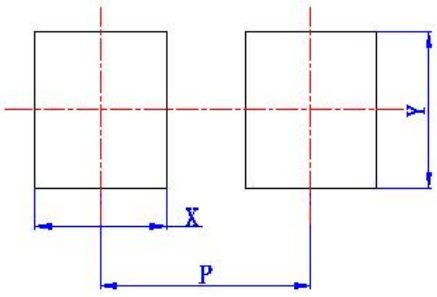


Package mechanical data



Symbol	Dimension in Millimeters	
	min	max
A	0.4	0.5
A1	0	0.05
D	0.9	1.1
E	0.55	0.65
e	(0.65)	
b	0.2	0.3
L	0.34	0.55

Suggested Land Pattern



Symbol	Dimension in Millimeters
	typ
X	(0.5)
Y	(0.7)
P	(0.8)