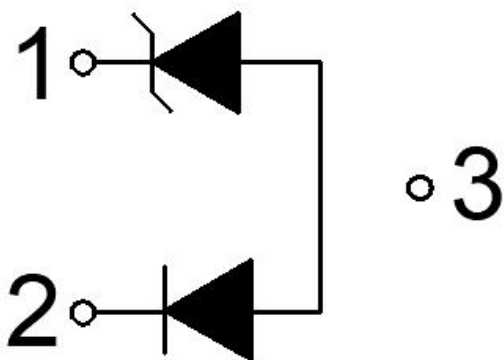
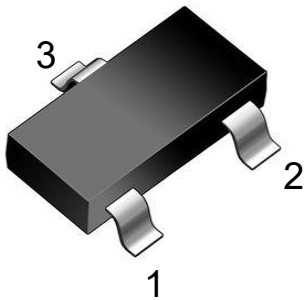


Features

- Up to 1 lines protects
- Junction capacitance (Max value:5pF)
- Peak Pulse Power (8/20 μ s) :300W
- IEC61000-4-2 (ESD) 20kV (air), 15kV (contact)
- Low leakage current
- RoHS Compliant

Appearance&Symbol



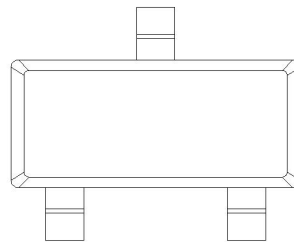
Mechanical Characteristics

- 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
- Tape Reel :3000pcs

Applications

- Cellular Handsets and Accessories
- Personal Digital Assistants
- Notebooks and Hadhelds
- Portable Instrumentation
- Set Top Box
- Industrial Controls
- Server and Desktop PC

Marking Information



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

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	P _{PP}	300	W
Peak Pulse Current (8/20μs)	I _{pp}	12	A
ESD per IEC 61000-4-2 (Air) 1)	V _{ESD}	20	kV
ESD per IEC 61000-4-2 (Contact) 1)		15	
Operating Temperature Range	T _J	-55 to +125	°C
Storage Temperature Range	T _{stg}	-55 to +150	°C

1) V_{ESD} test pin1 or pin2 to pin3

Electrical Characteristics (T_A=25°C)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V _{RWM}			12	V	
Breakdown Voltage	V _{BR}	13.3		16.5	V	I _T = 1mA
Reverse Leakage Current	I _R			0.5	uA	V _{RWM} = 12V
Clamping Voltage	V _C		19		V	I _{PP} = 1A (8 x 20uS pulse)
Clamping Voltage	V _C			26	V	I _{PP} = 12A (8 x 20uS pulse)
Junction Capacitance	C _J		1.5	5	pF	V _R = 0V, f = 1MHz, Pin 1 to Pin 2

Typical Characteristics

FIG1: Power rating derating curve

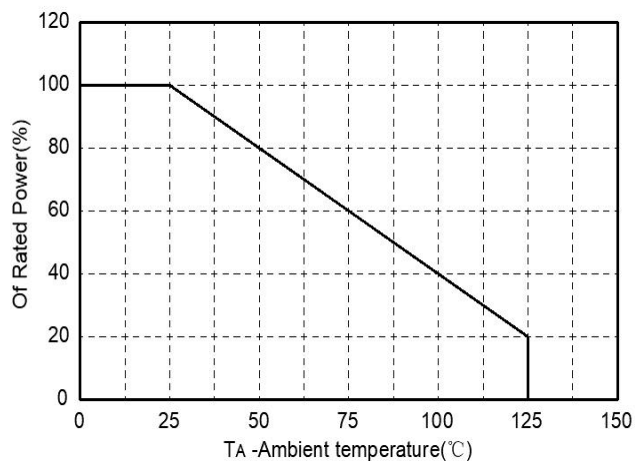


FIG2: pulse Waveform

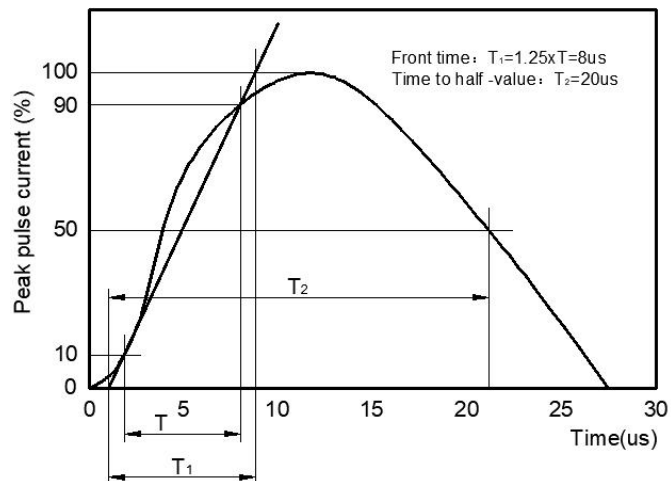


FIG3: Capacitance between terminals characteristics

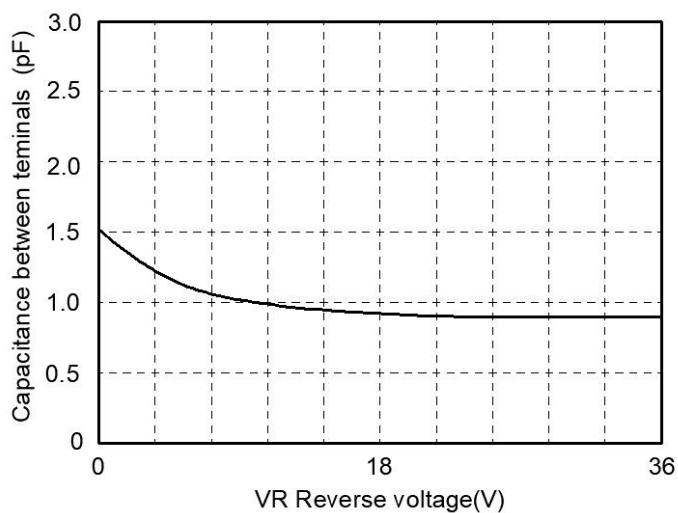
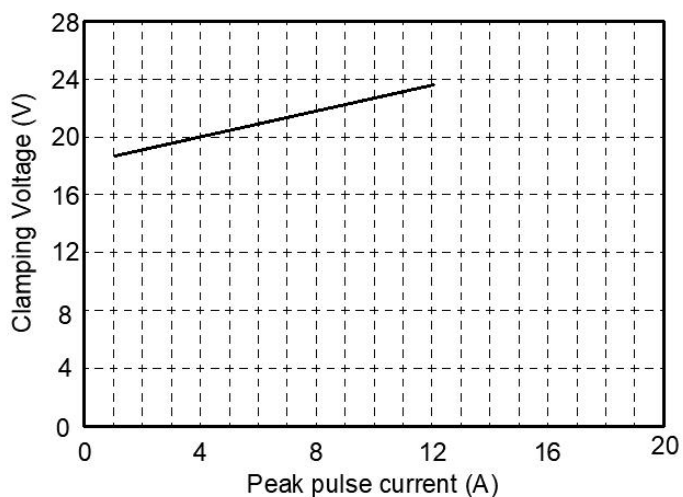
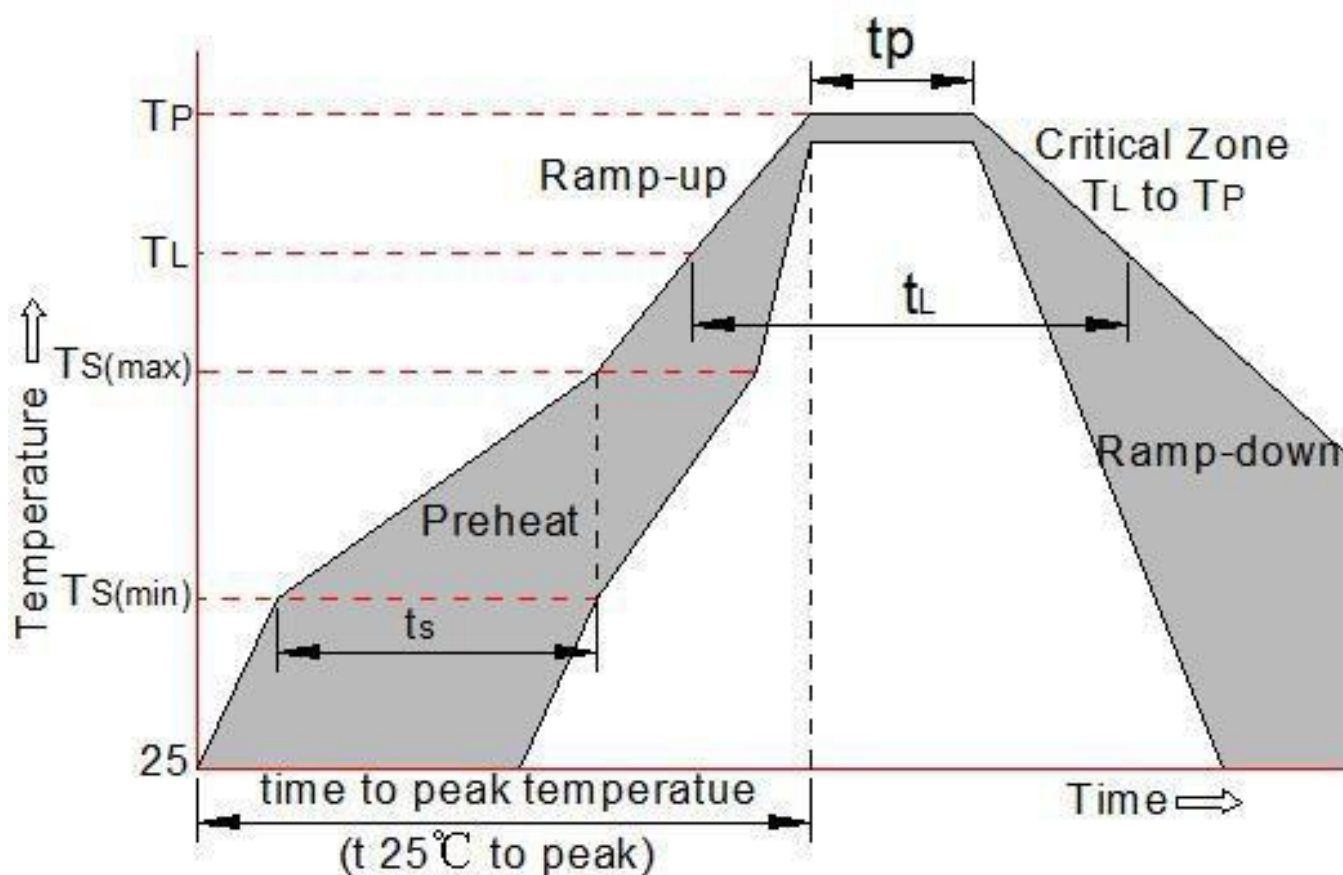


FIG4: Clamping Voltage vs. Peak Pulse Current

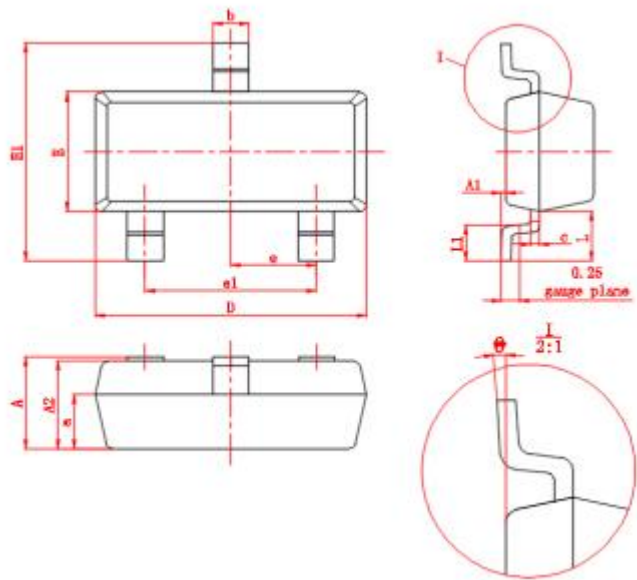


Soldering parameters

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

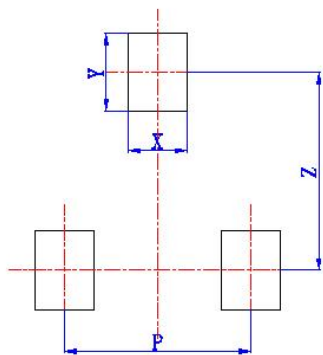


Package mechanical data



Symbol	Dimensional	
	Millimeters	
	min	max
A	0.9	1.15
A1	0	0.1
A2	0.9	1.05
a	(0.6)	
D	2.8	3.0
E	1.2	1.4
E1	2.25	2.55
e	(0.95)	
e1	1.8	2.0
b	0.3	0.5
c	0.08	0.15
L	(0.55)	
L1	0.3	0.5
θ	0°	8°

Suggested Land Pattern



Symbol	Dimensional
	Millimeters
X	(0.6)
Y	(0.8)
Z	(2.02)
P	(1.9)