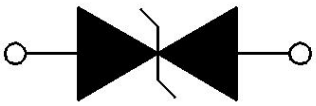
Features

- Low Junction capacitance (Max value: 450pF)
- Peak Pulse current (8/20μs) MAX : 160A
- IEC61000-4-2 (ESD) ±30kV (air), ±30kV (contact)
- Low leakage current
- Working voltages:4.5V
- RoHS Compliant

Mechanical Characteristics

- Package: SOD-323
- 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

Appearance & Symbol

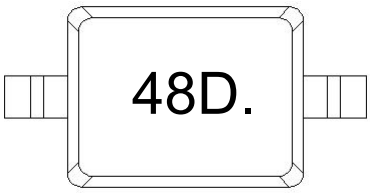


Bi-directional

Applications

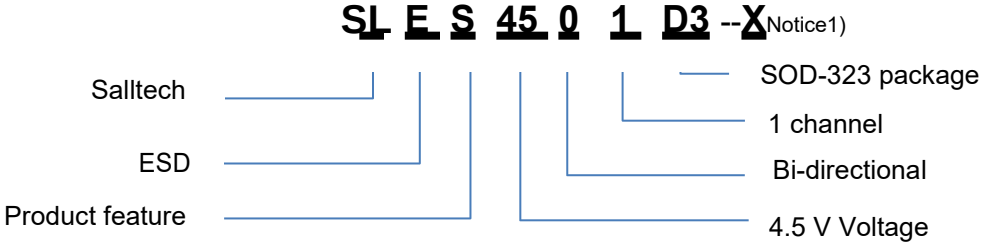
- LED Lighting Modules
- RS232/RS485
- CAN and LIN Bus
- Portable Instrumentation
- General Purpose I/O
- Automotive application

Marking Information



48D.=Marking Code

Part Number Information



Notice1: X is Customer special code, if there any questions, please contact with local sales

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

Parameters	Symbol	Value	Unit
Peak Pulse Power (tp=8/20μs waveform)	P_{PP}	3840	W
Peak Pulse Current (8/20μs)	I_{PP}	160	A
ESD per IEC 61000−4−2 (Air) ESD per IEC 61000−4−2 (Contact)	V_{ESD}	±30 ±30	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}				4.5	V
Reverse Breakdown Voltage	V_{BR}	I_R = 1mA	4.7		7	V
Reverse Leakage Current	I_R	V_R = 4.5V			0.2	uA
Clamping voltage	V_C	I_{PP} = 50A,T_P=8/20us		13		V
Clamping voltage	V_C	I_{PP} = 160A,T_P=8/20us			24	V
Junction capacitance	C_J	V_R =0V,f =1MHz			450	pF

Typical Characteristics

FIG1：Power rating derating curve

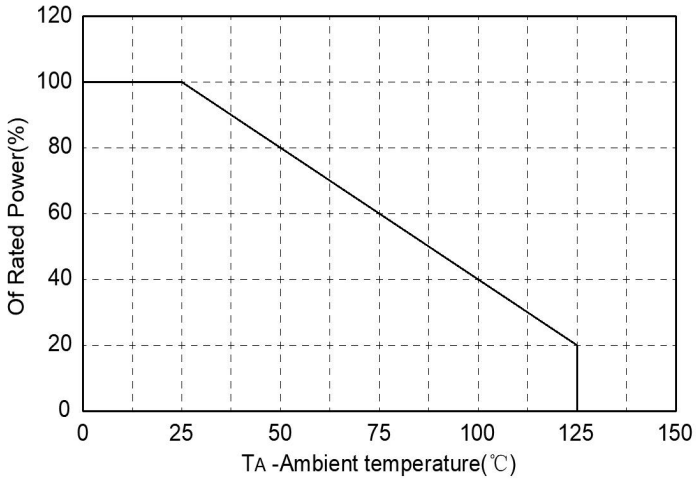


FIG2： pulse Waveform

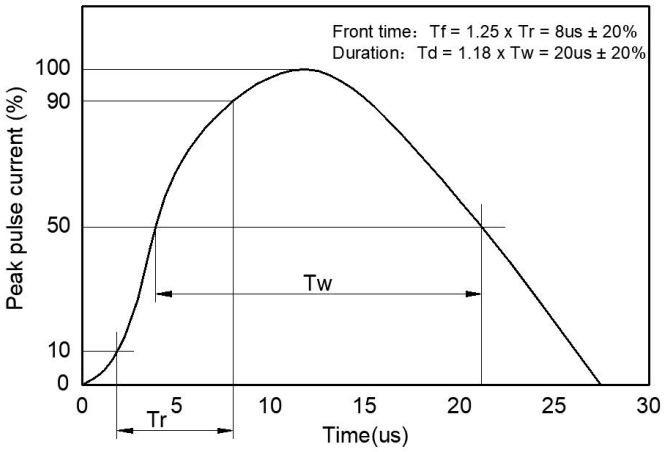


FIG3：Capacitance between teminals charateristics

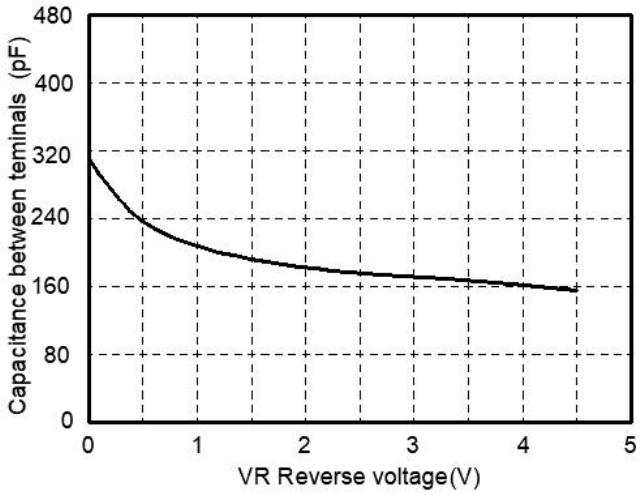
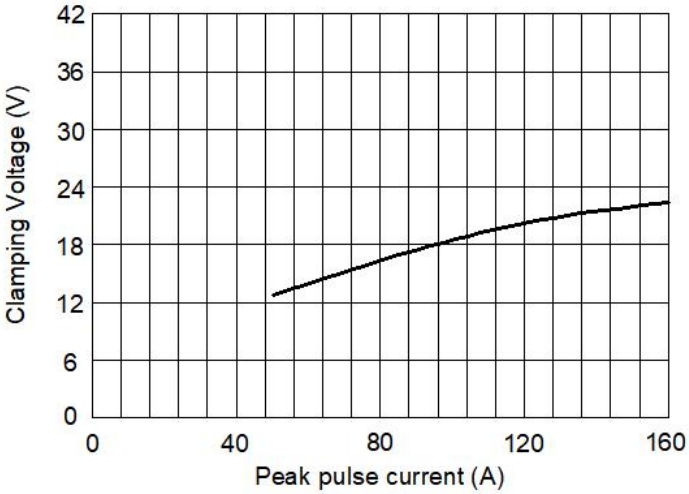
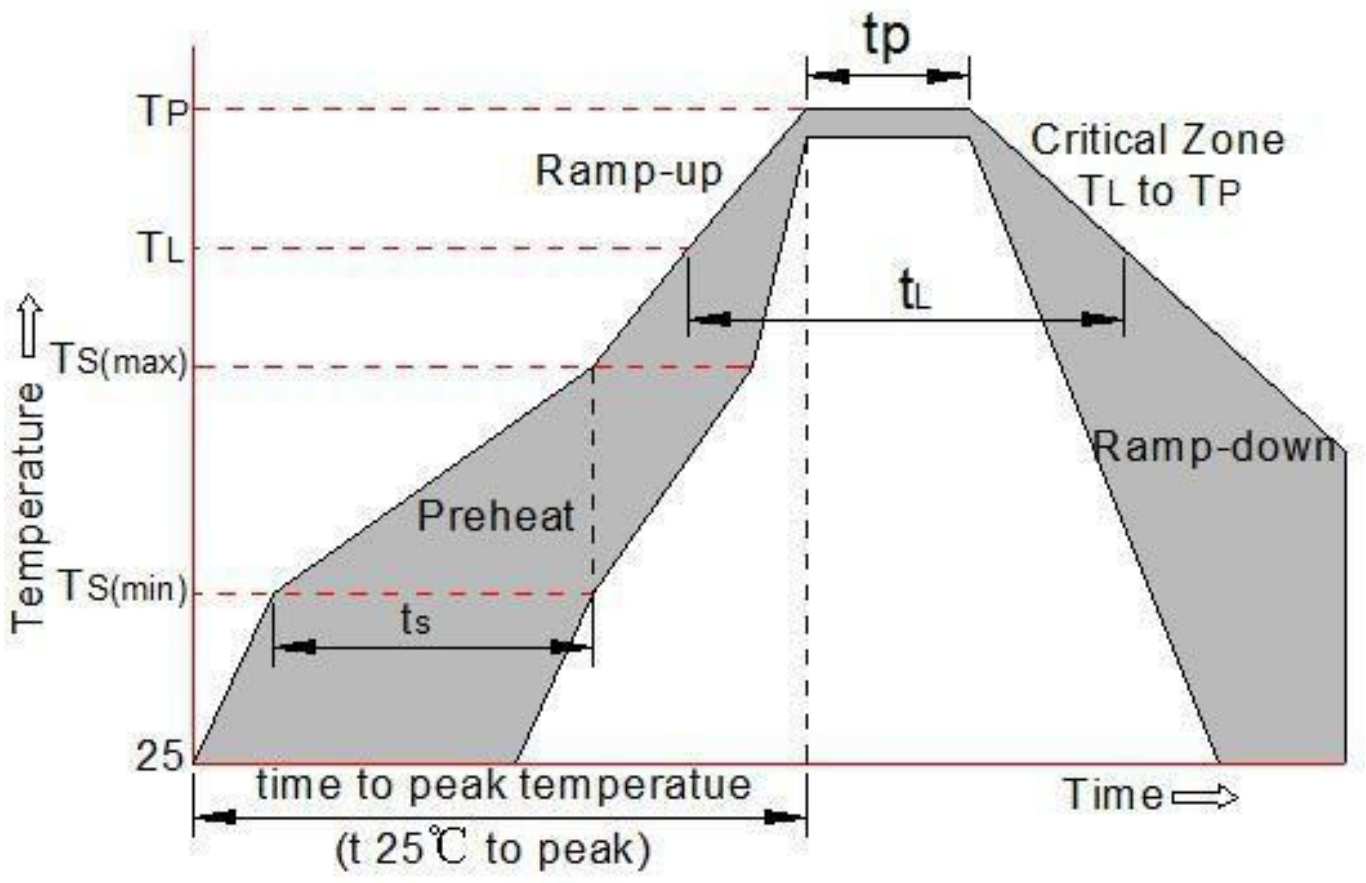


FIG4: Clamping Voltage vs. Peak Pulse Current

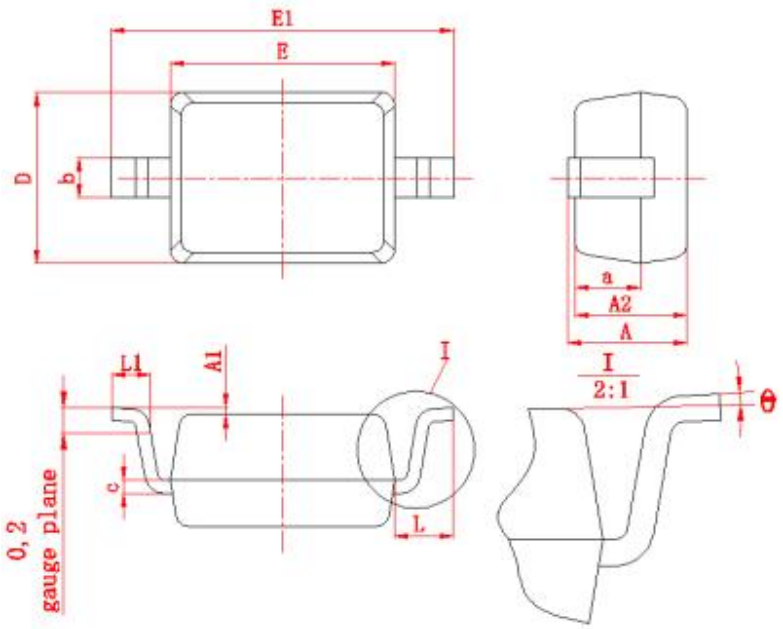


Soldering parameters

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℃

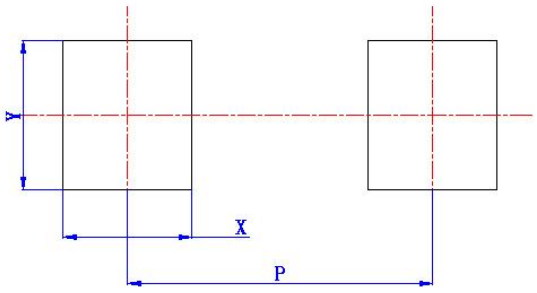


Package mechanical data



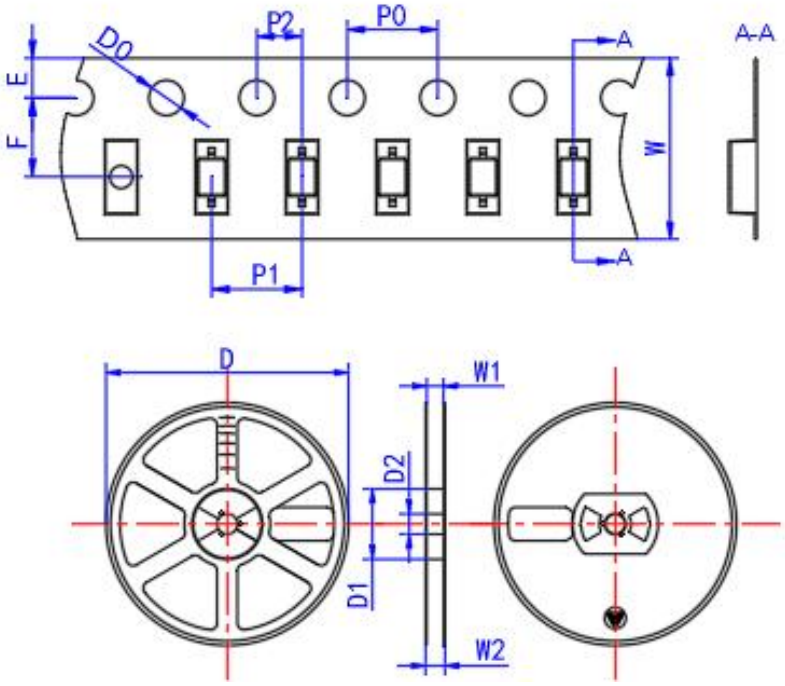
Symbol	Millimeters	
	Min.	Max.
A	0.80	1.05
A1	0	0.1
A2	0.8	0.95
a	(0.5)	
D	1.2	1.4
E	1.6	1.8
E1	2.5	2.75
b	0.25	0.35
c	0.08	0.15
L	(0.475)	
L1	0.25	0.45
θ	0°	8°

Suggested Land Pattern



Symbol	Dimension in Millimeters
	Typ.
X	(0.7)
Y	(0.7)
P	(2.3)

Tape & reel specification - SOD-323



Symbol	Dimension in Millimeters
Tape	
D0	1.50+0.10/-0.00
E	1.75±0.10
F	3.50±0.10
P0	4.00±0.10
P1	4.00±0.10
P2	2.00±0.10
W	8.00+0.3/-0.1
Reel	
D	178.0±2.00
D1	54.40±1.00
D2	13.00±1.00
W1	9.50±1.00
W2	12.30±1.00