



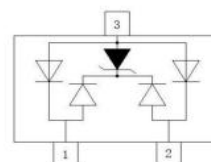
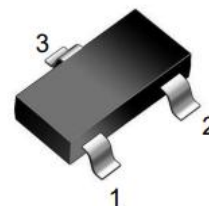
1. Features

- 2-pin lead-less package
- Junction capacitance (Max value: 0.8pF)
- Peak Pulse current (8/20 μ s) Max:5A
- IEC61000-4-2 (ESD) $\pm$ 25kV (air), $\pm$ 20kV (contact)
- Low clamping voltage
- Low leakage current
- Working voltages:5V
- RoHS Compliant

2. Mechanical Data

- Case:Molded Plastic,SOT23.
- Epoxy:UL 94V-0 rate flame retardant.
- Terminals:Plated Leads Solderable per MIL-STD-750, Method-2026.
- Marking:5MU
- Marking:marked on body.

SOT23



3. Maximum Ratings

Electrical Characteristics Rating at 25°C ambient temperature unless otherwise specified.

Characteristic	Symbol	Value	Unit
Peak Pulse Power (tp=8/20 μ s waveform)	P _{PP}	80	W
Peak Pulse Current (8/20 μ s)	I _{PP}	5	A
ESD per IEC 61000-4-2 (Air)	V _{ESD}	$\pm$ 25	KV
ESD per IEC 61000-4-2 (Contact)		$\pm$ 20	
Junction Temperature	T _j	-55~+125	°C
Storage Temperature	T _{stg}	-55~+150	°C

4. Electrical Characteristics (T_A=25°C unless otherwise noted)

Characteristics	Symbol	Condition	Min	TYP	Max	Unit
Reverse Working Voltage	V _{RWM}		-	-	5	V
Reverse Breakdown Voltage	V _{BR}	I _R = 1mA	6	-	9	V
Reverse Leakage Current	I _R	V _R =5V	-	-	0.2	uA
Clamping voltage	V _C	IPP = 1A, TP=8/20us, pin1 or pin2 to pin3	-	-	9	V
Clamping voltage	V _C	IPP =5A, TP=8/20us, pin1 or pin 2 to pin3	-	-	16	V
Junction capacitance	C _j	VR =0V, f =1MHz, between I/O pins, between pin1 and pin2	-	0.3	0.4	pF
Junction capacitance	C _j	VR =0V, f =1MHz, any I/O pin to ground, between pin1 or pin2 to pin3	-	0.6	0.8	pF



5. Rating And Characteristic Curves

Fig.1 Power rating derating curve

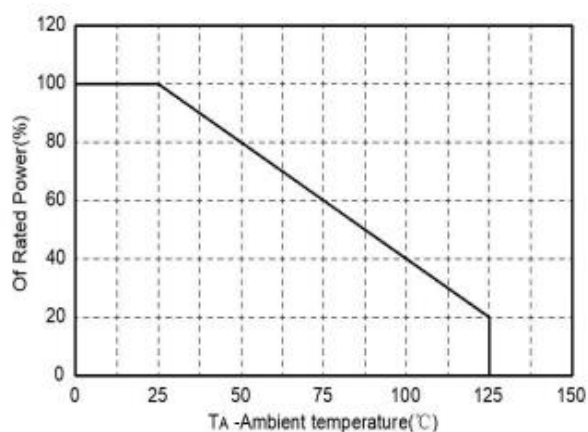


Fig.2 pulse Waveform

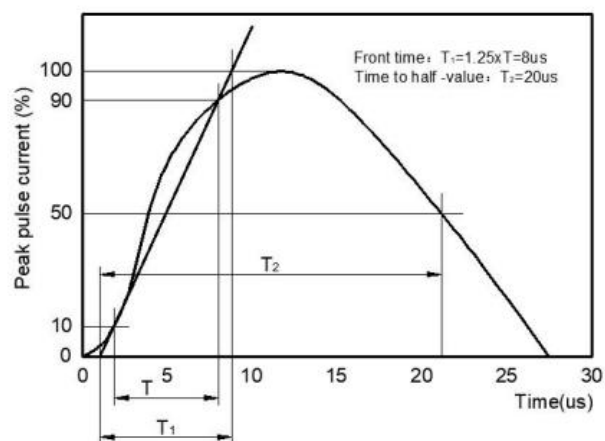


Fig.3 Capacitance between terminals characteristics

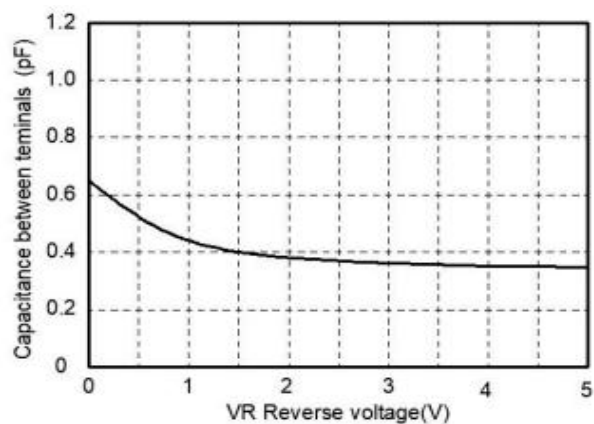
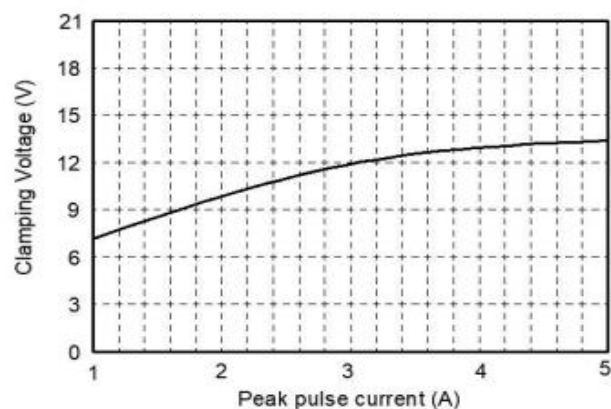
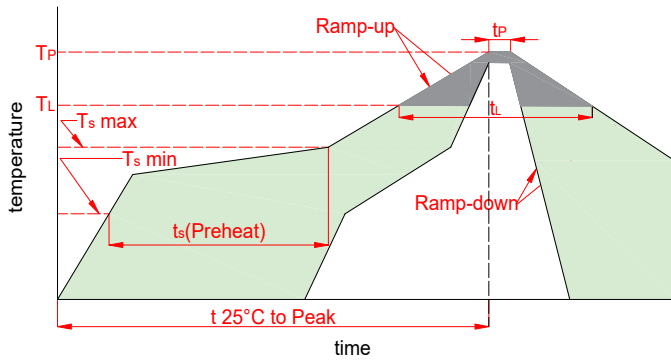


Fig.4 Clamping Voltage vs. Peak Pulse Current



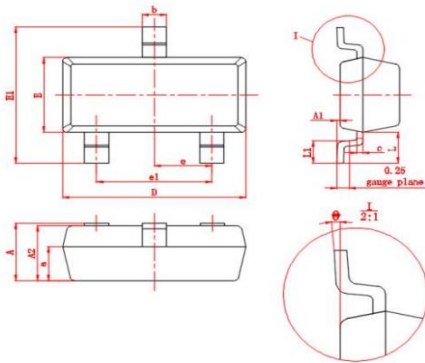


6. Soldering Parameters

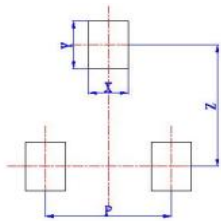


Reflow Condition		Lead-free
Pre Heat	Temp. min(T_s (min))	150℃
	Temp. max(T_s (min))	200℃
	Time(min to max)(t_s)	60~120s
Aver. ramp up rate(Liquidus Temp.)(T_L)to peak		3℃/s max
T_s (max) to T_L -Ramp-up Rate		3℃/s max
Reflow	Temp.(T_L)(Liquidus)	217℃
	Temp.(t_L)(Liquidus)	60~150s
Peak Temp.(T_P)		260 ^{+0/-5} ℃
Time within actual peak Temp.(t_p)		30s max
Ramp-down Rate		6℃/s max
Time 25℃ to peak Tempe.(T_p)		8 minutes max
Do not exceed		260℃

7. Dimensions



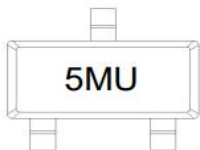
Mounting PAD Layout



Symbol	Inches		Millimeters	
	Min	Max	Min	Max
A	0.035	0.045	0.90	1.15
A1	0.000	0.004	0.00	0.10
A2	0.035	0.039	0.90	1.00
a	0.024		0.60	
D	0.110	0.118	2.80	3.00
E	0.047	0.055	1.20	1.40
E1	0.089	0.100	2.25	2.55
e	0.037		0.95	
e1	0.071	0.079	1.80	2.00
b	0.012	0.020	0.30	0.50
c	0.003	0.006	0.08	0.15
L	0.022		0.55	
L1	0.012	0.020	0.30	0.50
θ	0°	8°	0°	8°
c	0.024		0.60	
c	0.031		0.80	
c	0.080		2.02	
c	0.075		1.90	

8. Part Marking System

Cathode Band



9. Package Information

Package	Part Number	Marking Code	Quantity(pcs)
SOT23	ESDLC5V002E	5MU	3000



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