



1. Features

SOD523

- 2-pin lead-less package
- Junction capacitance (Max value:30pF)
- Peak Pulse current (8/20μs) Max:4A
- IEC61000-4-2 (ESD) ±30kV (air), ±30kV (contact)
- Low clamping voltage
- Low leakage current
- Working voltages:36V
- RoHS Compliant



2. Mechanical Data

- Case:Molded Plastic,SOD523.
- Epoxy:UL 94V-0 rate flame retardant.
- Terminals:Plated Leads Solderable per MIL-STD-750, Method-2026.
- Marking:M36
- Marking:marked on body.



3. Maximum Ratings

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

Characteristic	Symbol	Value	Unit
Peak Pulse Power (tp=8/20μs waveform)	P _{PP}	260	W
Peak Pulse Current (8/20μs)	I _{PP}	4	A
ESD per IEC 61000-4-2 (Air)	V _{ESD}	±30	KV
ESD per IEC 61000-4-2 (Contact)		±30	
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}		-	-	36	V
Reverse Breakdown Voltage	V _{BR}	I _R = 1mA	38	-	45	V
Reverse Leakage Current	I _R	V _R =36V	-	-	0.2	uA
Clamping voltage	V _C	I _{PP} = 1A, T _P =8/20us	-	-	50	V
Clamping voltage	V _C	I _{PP} = 4A, T _P =8/20us	-	-	65	V
Junction capacitance	C _J	V _R =0V, f=1MHz	-	-	30	pF



5. Rating And Characteristic Curves

Fig.1 Power rating derating curve

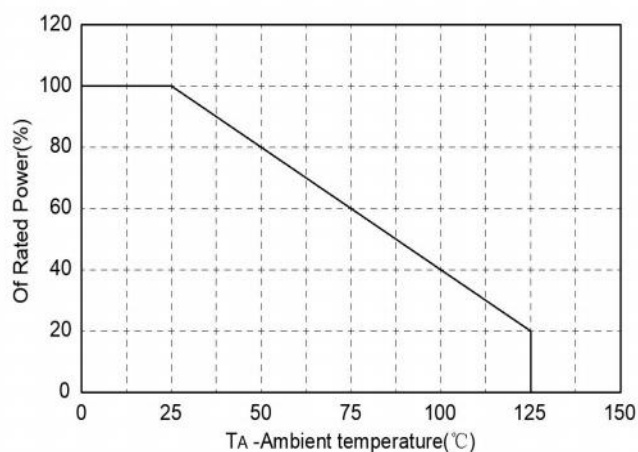


Fig.2 pulse Waveform

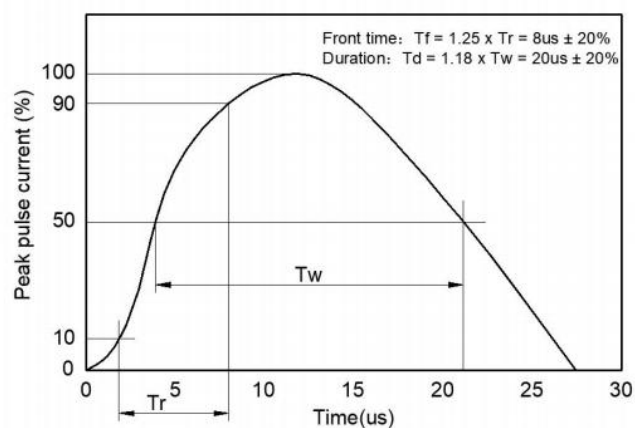


Fig.3 Capacitance between terminals characteristics

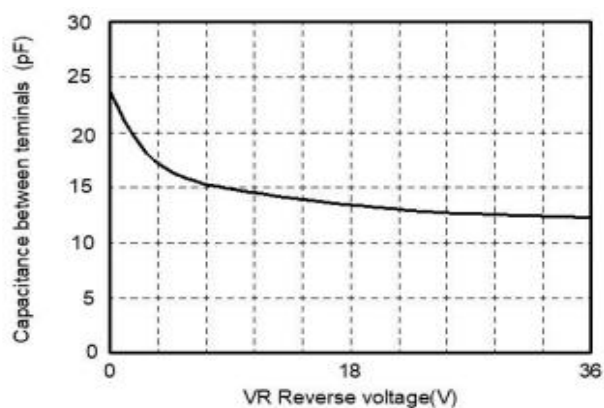
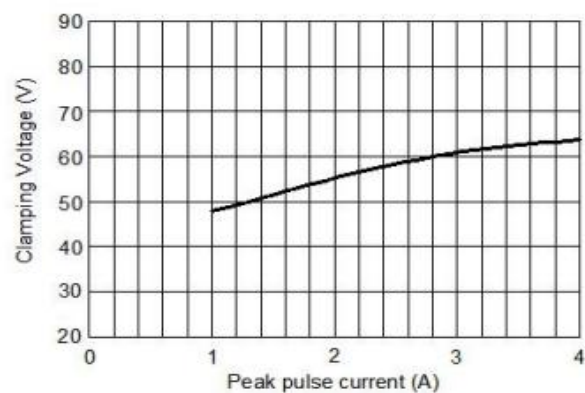
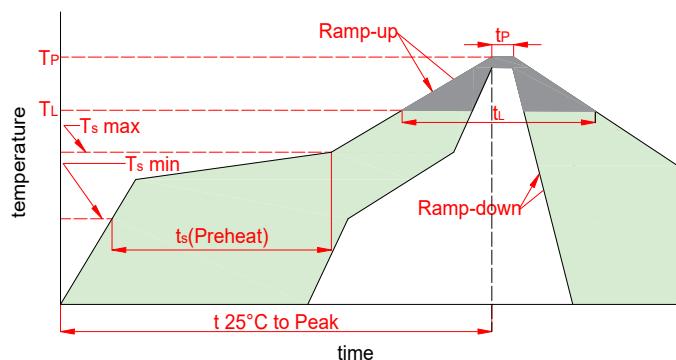


Fig.4 Clamping Voltage vs. Peak Pulse Current



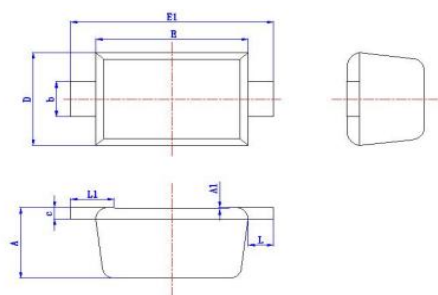


6. Soldering Parameters

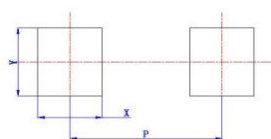


Reflow Condition		Lead-free
Pre Heat	Temp. min(T_s (min))	150°C
	Temp. max(T_s (min))	200°C
	Time(min to max)(t_s)	60~120s
Aver. ramp up rate(Liquidus Temp.)(T_L)to peak		3°C/s max
T_s (max) to T_L -Ramp-up Rate		3°C/s max
Reflow	Temp. (T_L)(Liquidus)	217°C
	Temp. (t_L)(Liquidus)	60~150s
Peak Temp. (T_P)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

7. Dimensions



Mounting PAD Layout



Symbol	Inches		Millimeters	
	Min	Max	Min	Max
A	0.020	0.030	0.50	0.75
A1	0.000	0.002	0.00	0.05
D	0.027	0.037	0.68	0.95
E	0.043	0.053	1.10	1.35
E1	0.059	0.071	1.50	1.80
b	0.010	0.014	0.25	0.35
c	0.003	0.006	0.08	0.15
L	0.005	0.012	0.13	0.30
L1	0.012		0.30	
X	0.024		0.60	
Y	0.028		0.70	
P	0.056		1.42	

8. Part Numbering System

Part Marking System

Cathode Band



9. Package Information

Package	Part Number	Marking Code	Quantity(pcs)
SOD523	ESDN3601D5	M36	8000



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