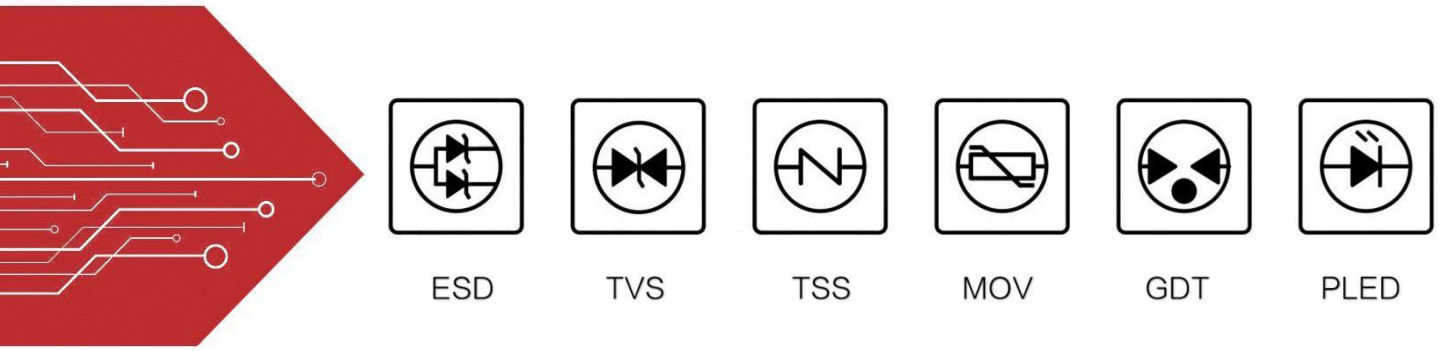
MSKSEMI
SEMICONDUCTOR



Product data sheet

www.msksemi.com

Feature

80W peak pulse power per line (t_P = 8/20μs)

SOD-523 package

Replacement for MLV(0603)

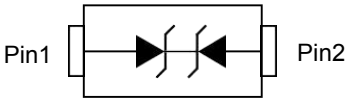
Bidirectional configurations

Protects one power or I/O port

Low clamping voltage

RoHS compliant

Transient protection for data lines to IEC 61000-4-2(ESD)
±30kV(air), ±30kV(contact); IEC 61000-4-4 (EFT) 40A (5/50ns)



Circuit Diagram

SOD-523

Applications

Cellular phones

Portable devices

Digital cameras

Power supplies

Mechanical Characteristics

Lead finish:100% matte Sn(Tin)

Mounting position: Any

Qualified max reflow temperature:260℃

Device meets MSL 1 requirements

Pure tin plating: 7 ~ 17 um

Pin flatness：≤3mil

Electrical characteristics per line@25?(unless otherwisespecified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Peak Reverse Working Voltage	V_{RWM}				5	V
Breakdown Voltage	V_{BR}	I_T = 1mA	5.8		7.8	V
Reverse Leakage Current	I_R	V_{RWM} = 5V T=25℃			1.0	μA
Clamping Voltage[1)]	V_C	TLP = 16A, t_p = 100ns		9.0		V
Dynamic resistance[1)]	R_{DYN}			0.15		Ω
Clamping Voltage[2)]	V_C	I_{PP}=10A		8	10	V
Junction Capacitance	C_J	V_R=0V f = 1MHz		33		pF

Notes:

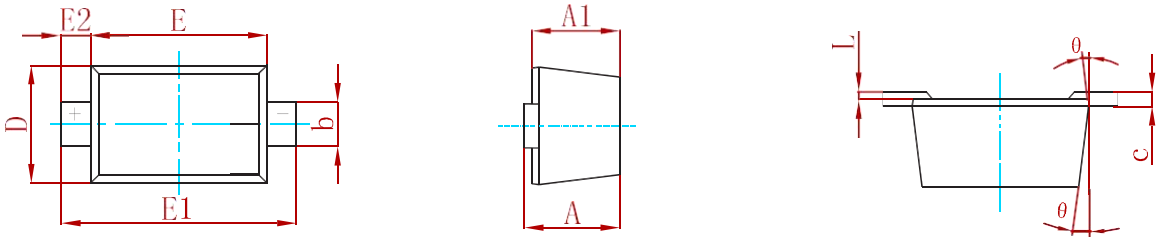
1.TLP parameter: Z_0=50Ω, t_p=100ns, t_r=2ns, averaging window from 60ns to 80ns. R_{DYN} is calculated from 4A to 16A.

2.Non-repetitive current pulse, according to IEC61000-4-5.

Absolute maximum rating@25?

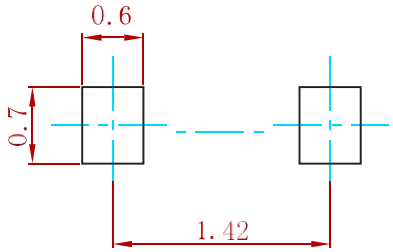
Rating	Symbol	Value	Unit
Peak Pulse Power (t_p=8/20μs)	P_{pp}	80	W
Operating Temperature	T_J	-55 to +150	℃
Storage Temperature	T_{STG}	-55 to +150	℃

PACKAGE MECHANICAL DATA



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.510	0.770	0.020	0.031
A1	0.500	0.700	0.020	0.028
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	0.750	0.850	0.030	0.033
E	1.100	1.300	0.043	0.051
E1	1.500	1.700	0.059	0.067
E2	0.200 REF		0.008 REF	
L	0.010	0.070	0.001	0.003
0	7° REF		7° REF	

Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.

REEL SPECIFICATION

P/N	PKG	QTY
MSESD5Z5CL	SOD-523	3000

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