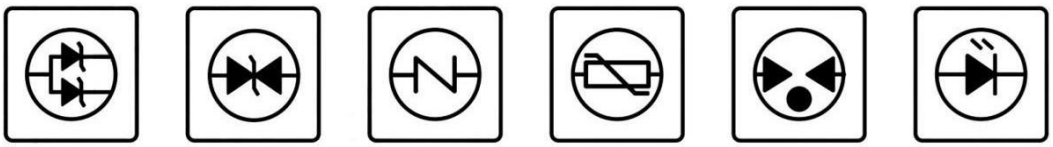
MSKSEMI 美森科
SEMICONDUCTOR



MSESD5Z7V0C

Product specification

MSESD5Z7V0C

Features

- 2-pinlead-lesspackage
- Junctioncapacitance(Typvalue:15pF)
- PeakPulsecurrent(8/20μs)Max:6A
- IEC61000-4-2(ESD)±25kV(air),±20kV(contact)
- Lowclampingvoltage
- Lowleakagecurrent
- Workingvoltages:7V
- RoHSCompliant

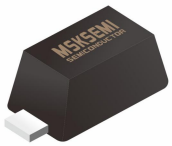
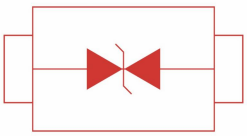
MechanicalCharacteristics

- Package:SOD-523
- LeadFinish:MatteTin
- CaseMaterial:“Green”MoldingCompound.
- ULFlammabilityClassificationRating94V-0
- MoistureSensitivity:Level3perJ-STD-020
- TapeReel:5000pcs

Applications

- CellularHandsetsandAccessories
- PersonalDigitalAssistants
- NotebooksandHandhelds
- PortableInstrumentation,DigitalCameras
- Peripherals,AudioPlayers,IndustrialEquipment

Reference News

PACKAGE OUTLINE	Bi-directional	Marking
		7C
SOD-523		

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

Parameters	Symbol	Value	Unit
Peak Pulse Power (tp=8/20μs waveform)	P_{PP}	90	W
Peak Pulse Current (8/20μs)	I_{PP}	6	A
ESD per IEC 61000−4−2 (Air) ESD per IEC 61000−4−2 (Contact)	V_{ESD}	±25 ±20	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}				7	V
Reverse Breakdown Voltage	V_{BR}	I_R = 1mA	7.5		9.5	V
Reverse Leakage Current	I_R	V_R = 7V			0.2	uA
Clamping voltage	V_C	I_{PP} = 1A,T_P=8/20us			9	V
Clamping voltage	V_C	I_{PP} = 6A,T_P=8/20us			14	V
Junction capacitance	C_J	V_R =0V,f =1MHz		15		pF

Typical Characteristics

FIG1：Power rating derating curve

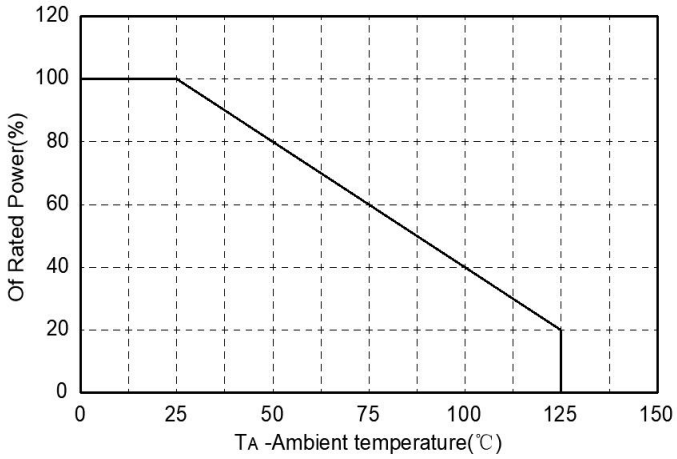


FIG2： pulse Waveform

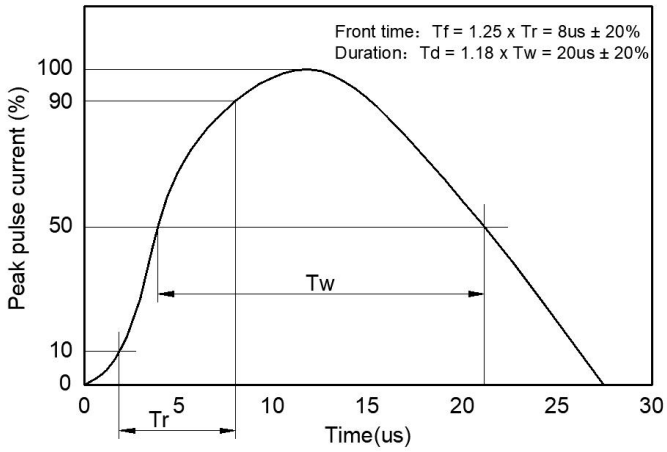


FIG3：Capacitance between teminals charateristics

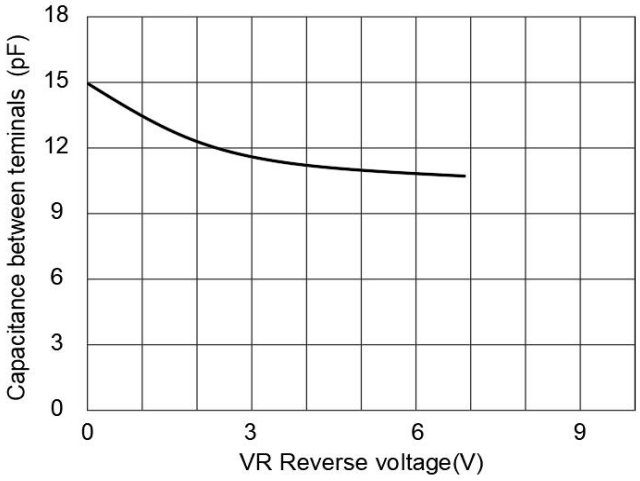
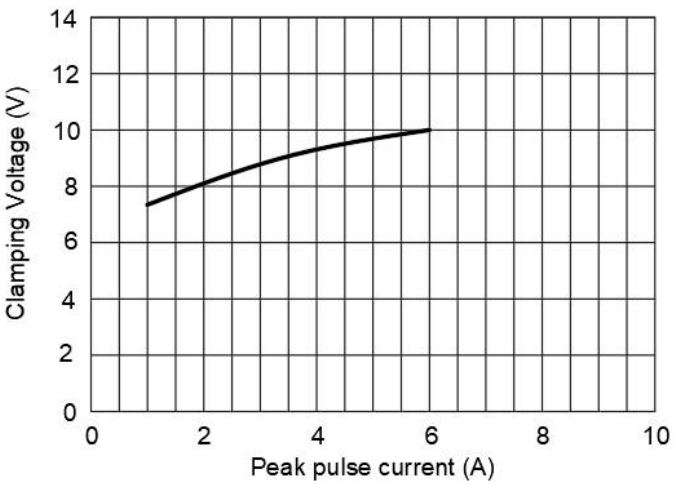
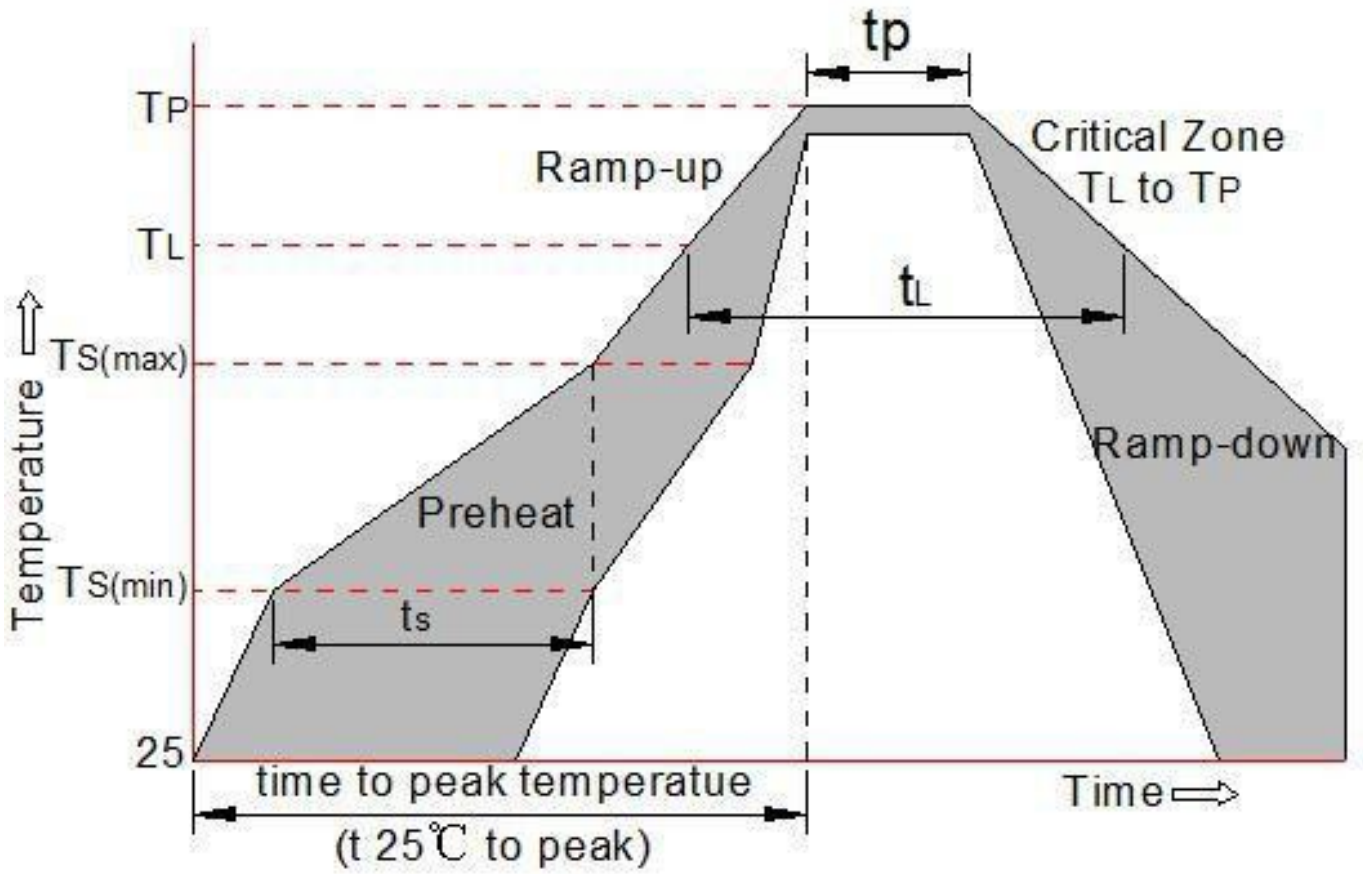


FIG4: Clamping Voltage vs. Peak Pulse Current

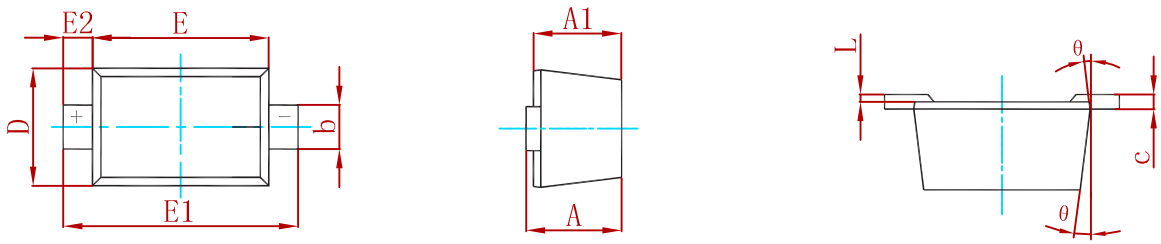


Soldering parameters

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℃

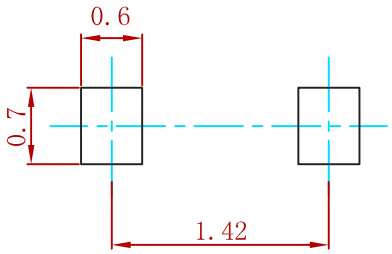


PACKAGE MECHANICAL DATA



Symbol	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
θ	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.

REELSPECIFICATION

P/N	PKG	QTY
MSESD5Z7V0C	SOD-523	5000

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