

FEATURES

- | 180W Peak Pulse Power per Line($t_p=8/20\mu s$)
- | Protects One Bidirectional I/O Line
- | Working voltages : 1.8 V
- | Low Clamping Voltage

APPLICATIONS

- | Portable Instrumentation
- | Cellular Handsets & Accessories
- | Automobile Applications
- | Low-voltage interfaces
- | Central Office Equipment
- | Integrated magnetics



SOD-523



Marking

IEC COMPATIBILITY

- | IEC61000-4-2 (ESD) $\pm 30kV$ (air), $\pm 30kV$ (contact)
- | IEC61000-4-4 (EFT) 40A (5/50ns)

APPROVALS

RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003



Schematic Symbol

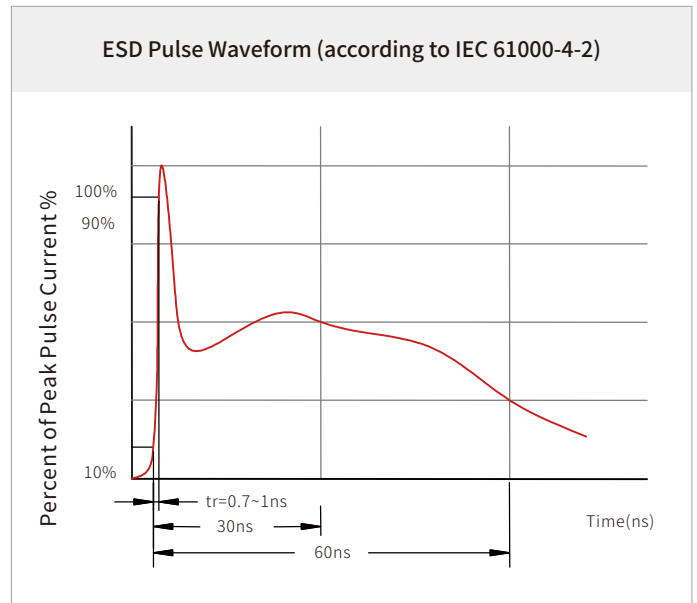
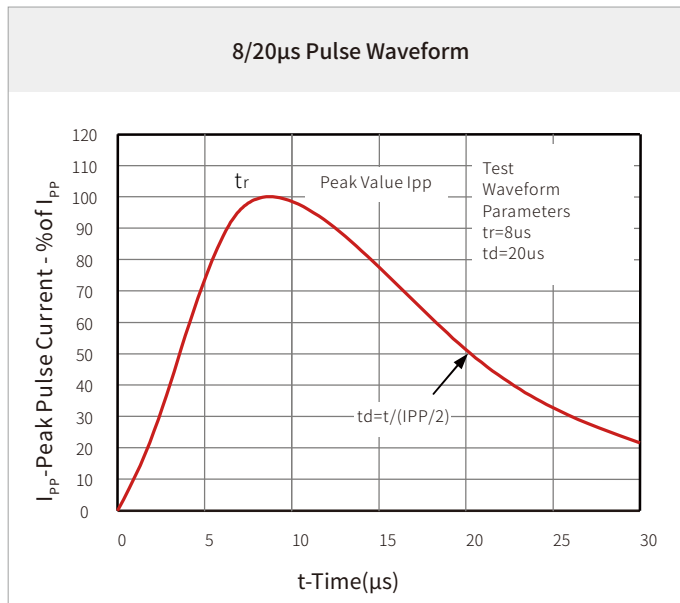
THERMAL CONSIDERATIONS

Symbol	Parameter	Value	Unit
P_{pp}	Peak Pulse Power ($t_p=8/20\mu s$ waveform)	180	Watts
T_J	Operating Temperature Range	-40 to +125	$^{\circ}C$
T_{STG}	Storage Temperature Range	-55 to +150	$^{\circ}C$

ELECTRICAL CHARACTERISTICS

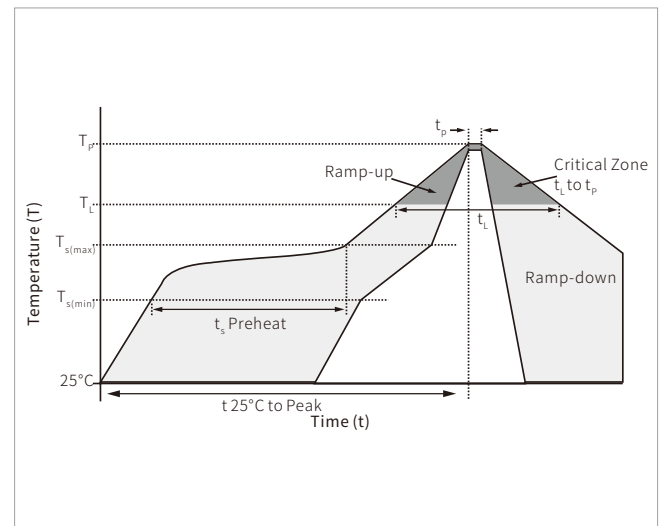
Symbol	Parameter	Condition	Min.	Typ.	Max.	Unit
V_{RWM}	Reverse Stand-off Voltage				1.8	V
V_{BR}	Reverse Breakdown Voltage	$I_T=1mA$	2.3			V
I_R	Reverse Leakage Current	$V_{RWM}=1.8V$			0.1	μA
V_C	Clamping Voltage	$I_{pp}=1A, t_p=8/20\mu s$			3.5	V
V_C	Clamping Voltage	$I_{pp}=10A, t_p=8/20\mu s$			6	V
V_C	Clamping Voltage	$I_{pp}=20A, t_p=8/20\mu s$			9	V
I_{PP}	Peak Pulse Current	$t_p=8/20\mu s$			20	A
C_J	Off State Junction Capacitance	$V_R=0V, f=1MHz$		25		pF

CHARACTERISTIC CURVES

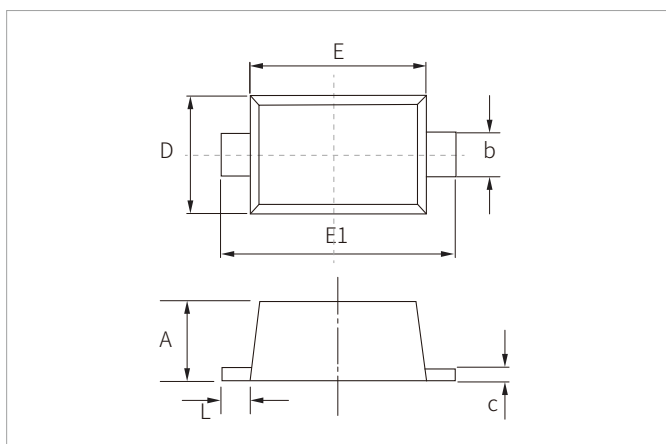


SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ($T_{s(min)}$)	150°C
	Temperature Max ($T_{s(max)}$)	200°C
	Time (min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak)		3°C/second max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/second max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Time (min to max) (t_L)	60 – 150 seconds
Peak Temperature (T_p)		260°C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T_p)		8 minutes max.
Do not exceed		260°C

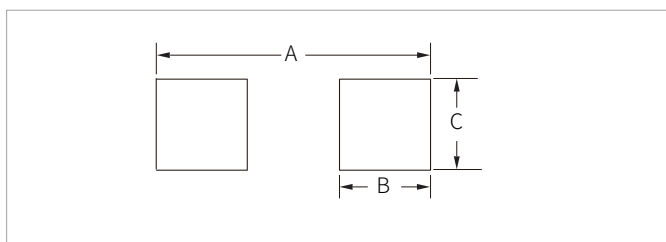


SOD-523 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.50	0.80	0.020	0.031
b	0.25	0.35	0.010	0.014
c	0.07	0.20	0.003	0.008
D	0.70	0.90	0.028	0.035
E	1.10	1.30	0.043	0.051
E1	1.50	1.70	0.059	0.067
L	0.15	0.25	0.006	0.010

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters	Inches
	Min.	Min.
A	2.00	0.0787
B	0.60	0.0236
C	0.70	0.0276

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
SE5D20B1.8A	SOD-523	3000PCS	7"

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