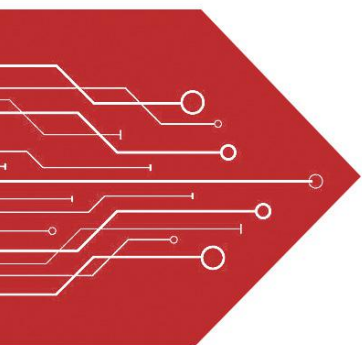


MSKSEMI

SEMICONDUCTOR



ESD



TVS



TSS



MOV



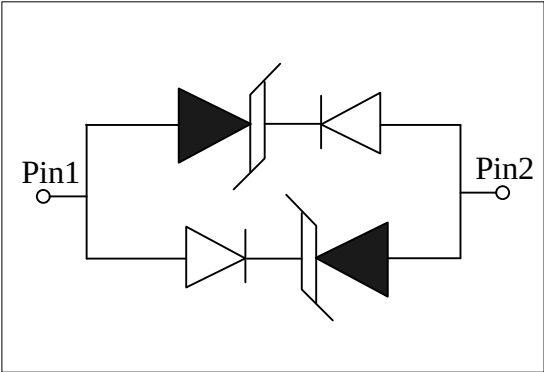
GDT



PLED

Product data sheet

Schematic & PIN Configuration



SOD-523

Features

- Small Body Outline Dimensions
- Low Body Height: 0.024" (0.6 mm) nom
- Bidirectional ESD protection of one I/O line
- Low clamping voltage
- Working voltage: 5V
- Low leakage current
- Solid-state silicon-avalanche technology

IEC COMPATIBILITY (EN61000-4)

- IEC 61000-4-2 (ESD) ±15kV (air), ±8kV (contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)

Mechanical Characteristics

- JEDEC SOD-523 package
- Marking : Marking Code
- Packaging : Tape and Reel per EIA 481
- RoHS Compliant

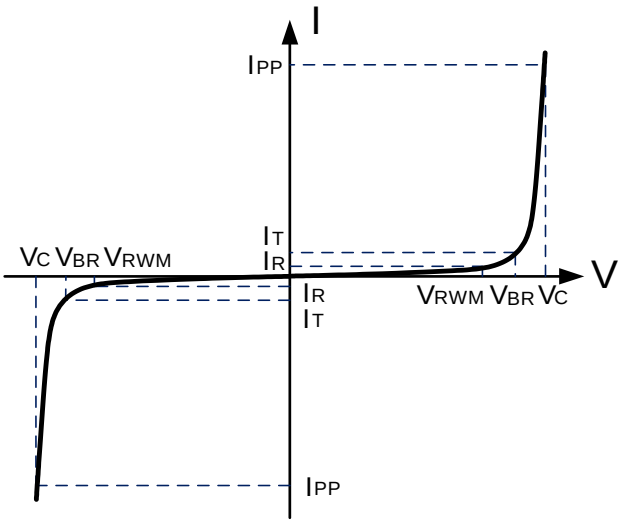
Applications

- Cellular Handsets & Accessories
- Personal Digital Assistants (PDAs)
- Notebooks & Handhelds
- Portable Instrumentation
- Digital Cameras
- MP3 players

Absolute Maximum Rating			
Rating	Symbol	Value	Units
Operating Temperature	T _J	-55 to + 125	°C
Storage Temperature	T _{STG}	-55 to +150	°C

Electrical Parameters (T=25°C)

Symbol	Parameter
I_{PP}	Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Reverse Stand-Off Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current



Electrical Characteristics

WE05D5UC-B						
Parameter	Symbol	Conditions	Minimum	Typical	Maximum	Units
Reverse Stand-Off Voltage	V_{RWM}				5.0	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	6.0		10.0	V
Reverse Leakage Current	I_R	$V_{RWM}=5V, T=25^{\circ}C$			200	nA
ESD Clamping Voltage ¹	V_C	$I_{PP} = 4A$ $t_p = 0.2/100ns$		11.9		V
ESD Clamping Voltage ¹	V_C	$I_{PP} = 16A$ $t_p = 0.2/100ns$		23.4		V
Dynamic Resistance ^{1,2}	R_{DYN}	TLP=0.2/100ns		0.95		Ω
Junction Capacitance	C_j	$V_R=0V, f=1MHz$		0.5	1.0	pF

Notes : 1、 TLP Setting : $t_p=100ns, t_r=0.2ns, I_{TLP}$ and V_{TLP} sample window: $t_1=70ns$ to $t_2=90ns$.
2、 Dynamic resistance calculated from $I_{PP}=4A$ to $I_{PP}=16A$ using “Best Fit”.

Typical Characteristics

Figure 1: Normalized Junction Capacitance vs. Reverse Voltage

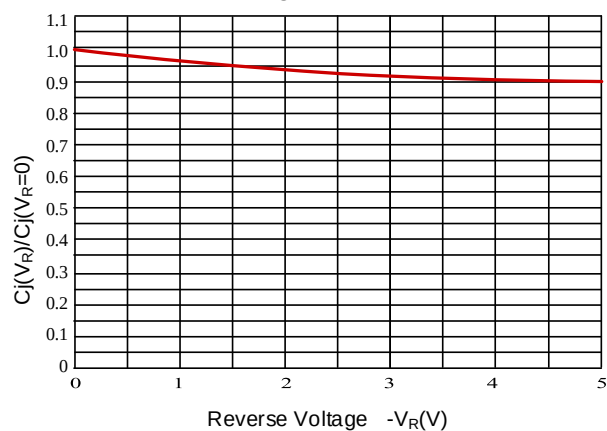


Figure 2: Power Derating Curve

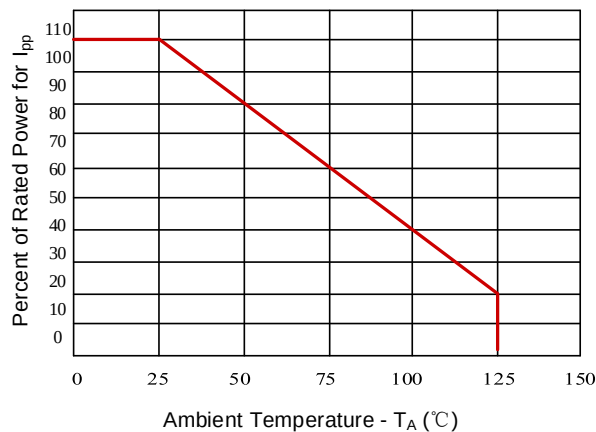


Figure 3: TLP Positive I-V Curve

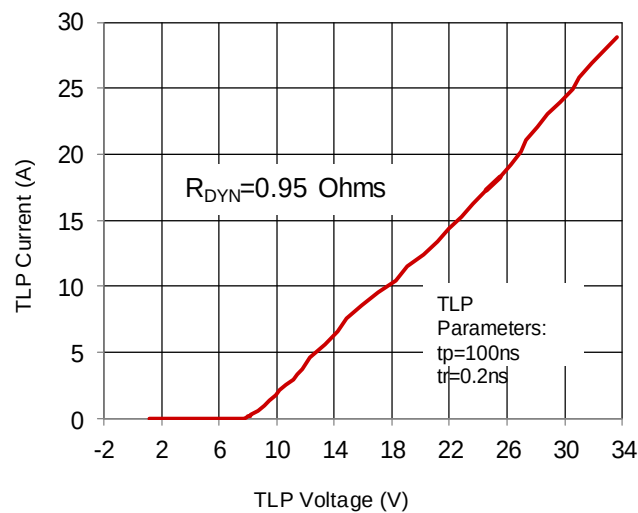
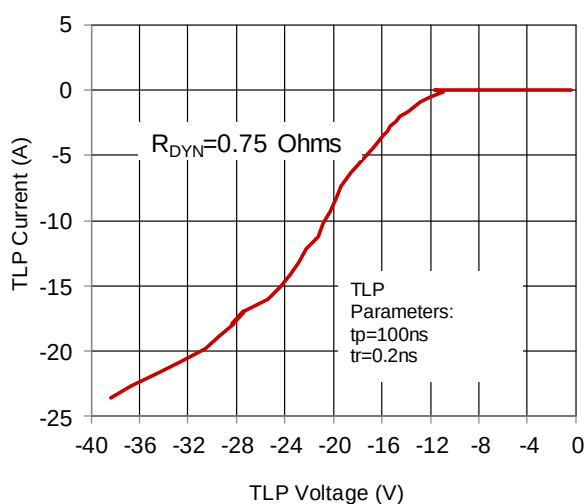
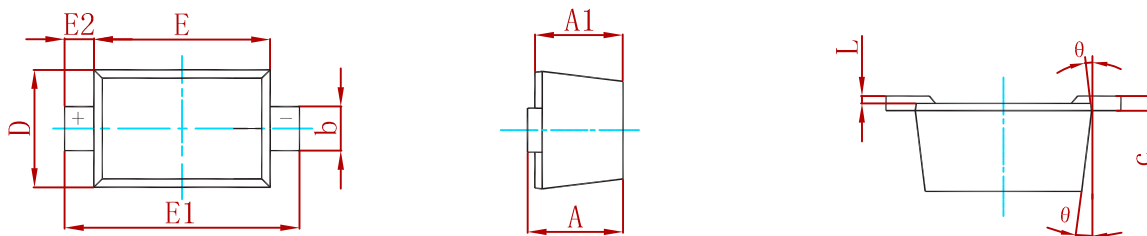


Figure 4: TLP Negative I-V Curve

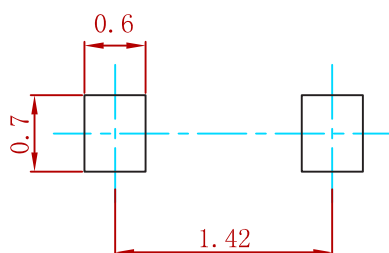


PACKAGE MECHANICAL DATA



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: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.

REEL SPECIFICATION

P/N	PKG	QTY
MS05D5UC-B	SOD-523	3000

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