

Features

- Protects one data line
- Ultra low leakage: nA level
- Low operating voltage: 5V
- Low clamping voltage
- RoHS compliant



IEC Compatibility (EN61000-4)

- IEC 61000-4-2 (ESD) $\pm 8\text{kV}$ contact $\pm 15\text{kV}$ air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 2A (8/20 μs)

SOD-523

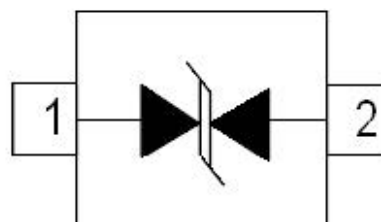
Applications

- Cellular Handsets and Accessories
- Personal Digital Assistants
- Notebooks and Handhelds
- Portable Instrumentation
- Digital Cameras
- Peripherals
- Audio Players
- Keypads, Side Keys, LCD Displays

Mechanical Characteristics

- Case Material: "Green" Molding Compound.
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 3 per J-STD-020
- Terminal Connections: See Diagram Below

Schematic & PIN Configuration



SOD-523

Absolute Maximum Ratings

Parameter	Symbol	Value	Unit
Peak Pulse Power ($T_P = 8/20\mu s$ waveform)	P_{PP}	40	W
Peak Pulse Current (8/20 μs)	I_{PP}	2	A
ESD per IEC 61000-4-2 (Air)	V_{ESD}	± 15	kV
ESD per IEC 61000-4-2 (Contact)		± 8	
Operating Temperature Range	T_J	-55 to +125	$^{\circ}C$
Storage Temperature Range	T_{STG}	-55 to +150	$^{\circ}C$

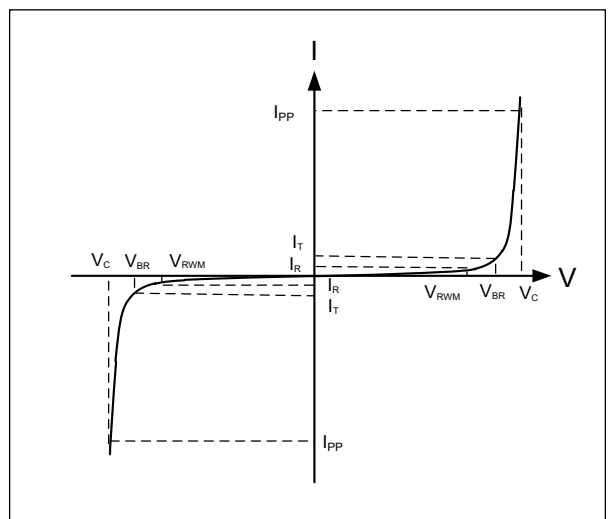
Electrical Characteristics

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V_{RWM}				5	V
Punch-Through Voltage	V_{BR}	$I_T = 1mA$	6			V
Reverse Leakage Current	I_R	$V_{RWM} = 5V$			0.15	μA
Clamping Voltage	V_C	$I_{PP} = 1A$ (8 x 20 μs pulse)			10	V
Clamping Voltage	V_C	$I_{PP} = 2A$ (8 x 20 μs pulse)			13	V
Junction Capacitance	C_J	$V_R = 0V, f = 1MHz$		2.5	3.5	pF

Electrical Parameters (TA = 25 $^{\circ}C$ unless otherwise noted)

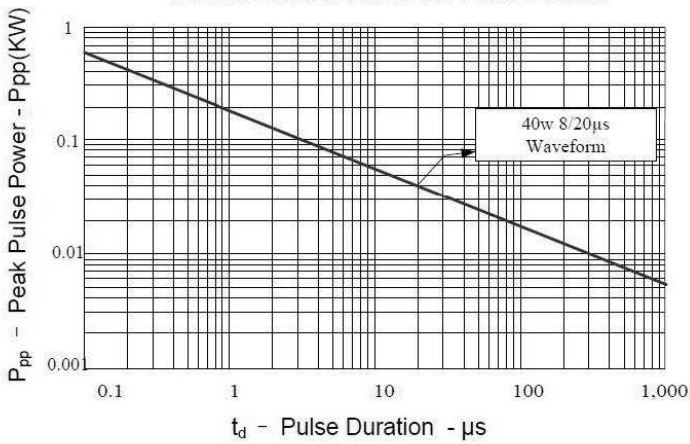
Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current

Note:.. 8/20 μs pulse waveform.

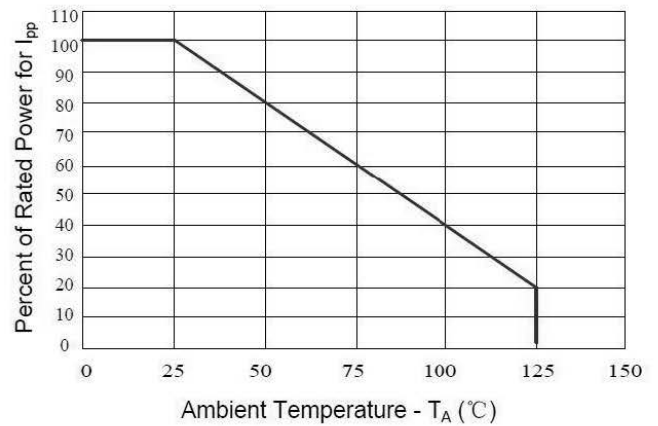


Typical Performance Characteristics

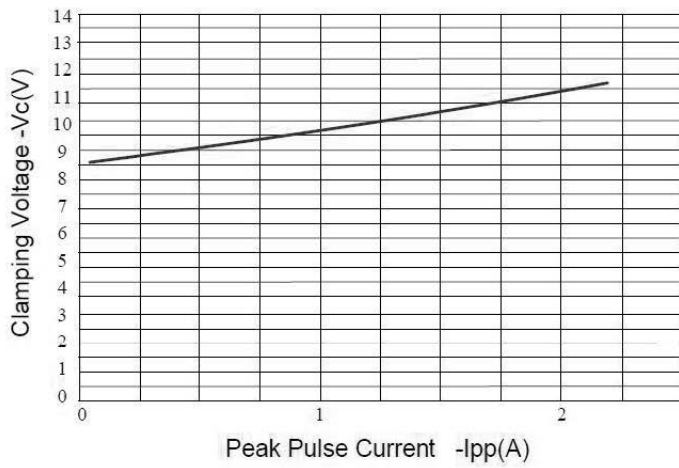
Peak Pulse Power Vs Pulse Time



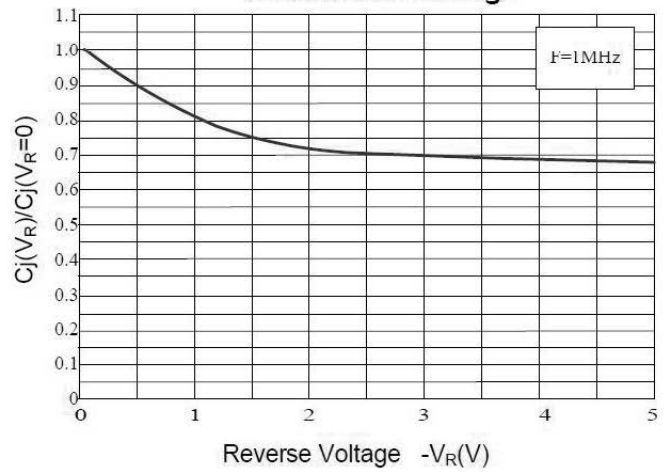
Power Derating Curve



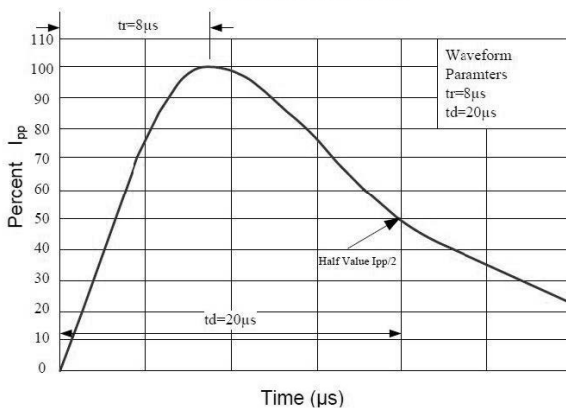
Clamping Voltage vs. Peak Pulse Current



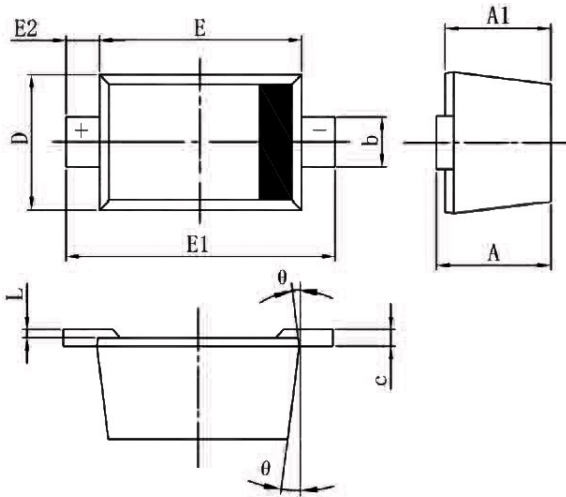
Normalized Junction Capacitance vs. Reverse Voltage



Pulse Waveform

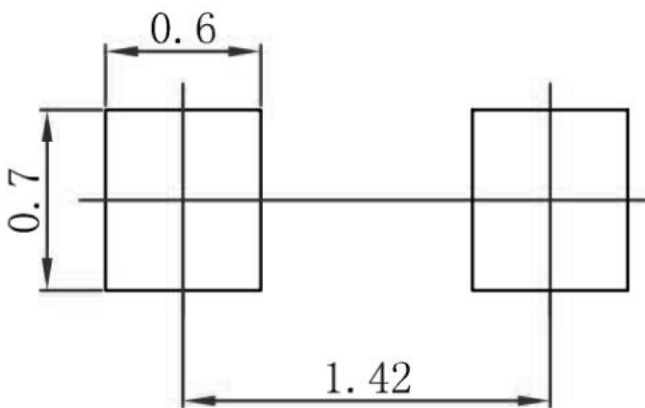


Package Mechanical Data



SYM	DIMENSIONS					
	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	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	0.20REF			0.008REF		
L	0.010	-	0.070	0.001	-	0.003
Φ	7°REF			7°REF		

Suggested Land Pattern



Package Information

Order code	Package	Base qty	Delivery mode
PTD522L4S5B4	SOD-523	3K	Tape and reel