

# MSKSEMI

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT

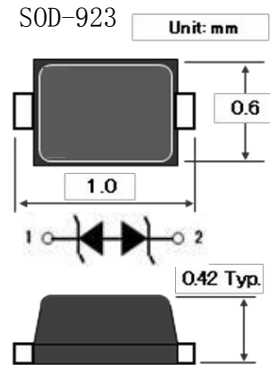


PLED

Product data sheet

[www.msksemi.com](http://www.msksemi.com)

- ◇ Bi-Directional Transient Voltage Suppressor
- ◇ Low capacitance and Low Leakage
- ◇ ESD Protection, IEC61000-4-2 Level 4
- ◇ SOD923 SMD
- ◇ RoHS compliant
- ◇ UL-94 V-0 / Green EMC
- ◇ Matte Tin Lead finish (Pb-Free)



**Ordering Information**

P/N	Package	Shipping	Tape wide	Emboss pitch	Tape specification	Notes
BTR9S23A10-MS	SOD923	Tape & Reel 8000pcs /7" Reel	8 mm	2 mm	Conductive	

**Absolute Maximum Ratings (Ta = 25 °C)**

Symbol	Parameter	Value	Units
$I_{PP}^{*1}$	Maximum Reverse Peak Pulse Current	5.0	A
$V_{ESD-Air}$	ESD Voltage IEC61000-4-2 Air	±15	kV
$V_{ESD-contact}$	ESD Voltage IEC61000-4-2 Contact	±8	kV
$T_J$	Junction Temperature	150	°C
$T_{STG}$	Storage Temperature	-55 to +150	°C
$P_D$	Power Dissipation	150	mW

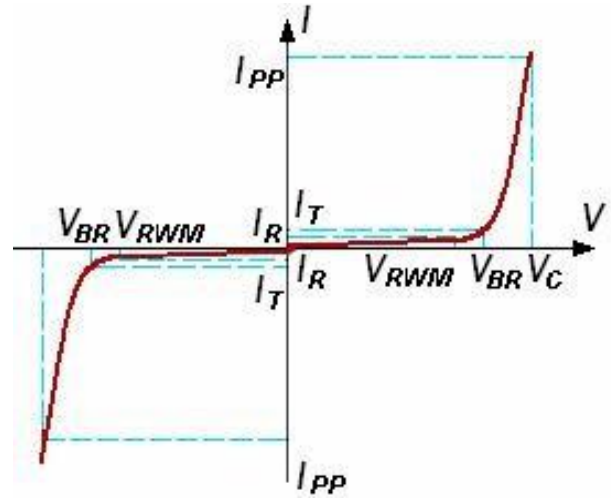
\*1  $t_p = 8/20\mu s$

**Electrical Characteristics (Ta = 25 °C)**

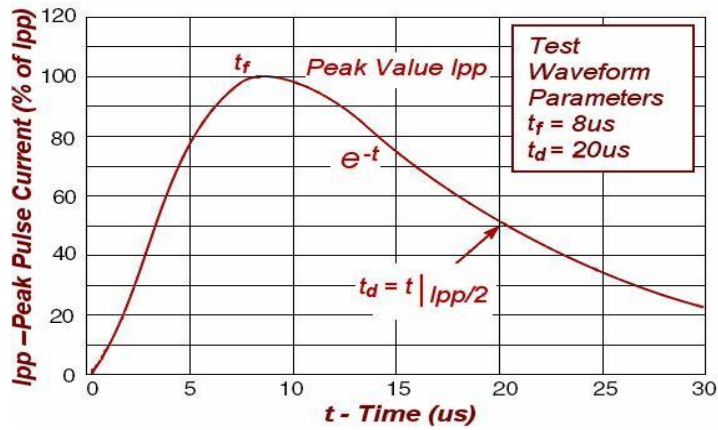
Symbol	Parameter	Conditions	Min	Typ	Max	Units
$V_{RWM}$	Reverse Working Peak Voltage	-			5.0	V
$V_{BR}$	Reverse Breakdown Voltage Pin 1 to 2	$I_T = 1mA$	5.6		8.2	V
$I_R$	Reverse Current	$V_{RWM} = \pm 5V$			1.0	$\mu A$
$C_D$	Diode Capacitance	$V_R = 0V, f = 1MHz$		13		pF

**Electrical Parameter**

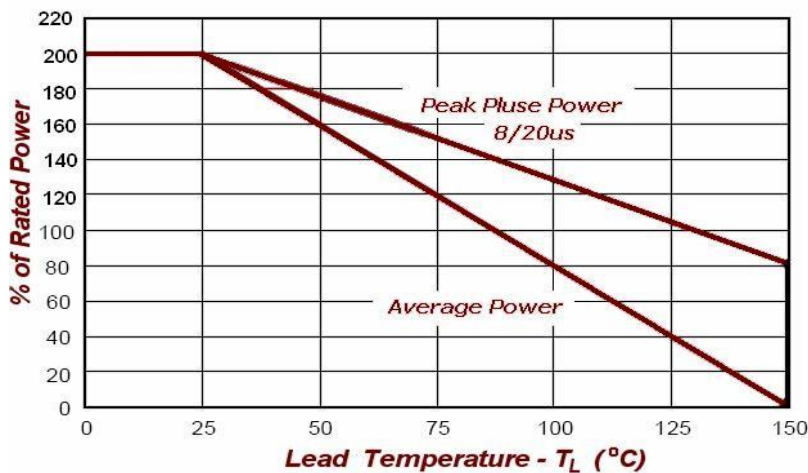
Symbol	Parameter
$I_{PP}$	Maximum Reverse Peak Pulse Current
$V_C$	Clamping Voltage @ $I_{PP}$
$V_{RWM}$	Working Peak Reverse Voltage
$I_R$	Maximum Reverse Leakage Current @ $V_{RWM}$
$I_T$	Test Current
$V_{BR}$	Breakdown Voltage @ $I_T$



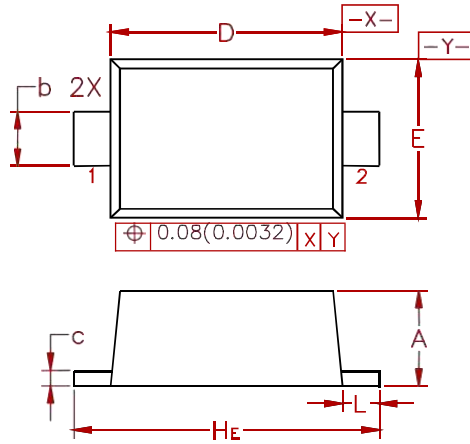
**FIG1: Pulse Waveform**



**FIG2: Power Derating**

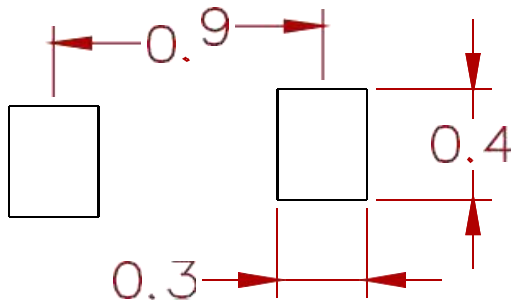


**PACKAGE MECHANICAL DATA**



Dim	Millimeters			Inches		
	Min	Nom	Max	Min	Nom	Max
A	0.36	0.40	0.43	0.014	0.016	0.017
b	0.15	0.20	0.25	0.006	0.008	0.010
c	0.07	0.12	0.17	0.003	0.005	0.007
D	0.75	0.80	0.85	0.030	0.031	0.033
E	0.55	0.60	0.65	0.022	0.024	0.026
HE	0.95	1.00	1.05	0.037	0.039	0.041
L	0.05	0.10	0.15	0.002	0.004	0.006

**Suggested Pad Layout**



Dimensions: Millimeters

**REEL SPECIFICATION**

P/N	PKG	QTY
BTR9S23A10-MS	SOD-923	8000

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