

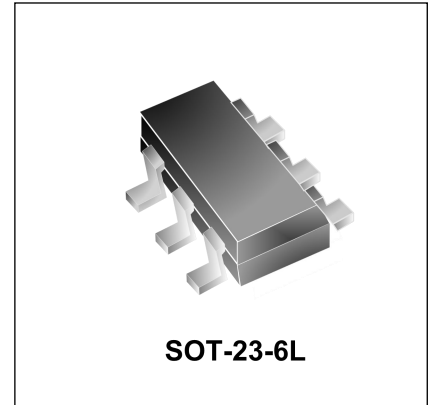


### Features

- 4 Bidirectional Transil functions
- ESD Protection for data, Signal and Vcc Bus
- Stand off voltage range:  $\pm 5V$
- Low leakage current  $< 1\mu A$
- Peak pulse power (8/20 $\mu s$ ) : 100W

### IEC Compatibility (EN61000-4)

- IEC 61000-4-2 (ESD)  $\pm 15kV$  (air),  $\pm 8kV$  (contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 6.5A (8/20 $\mu s$ )



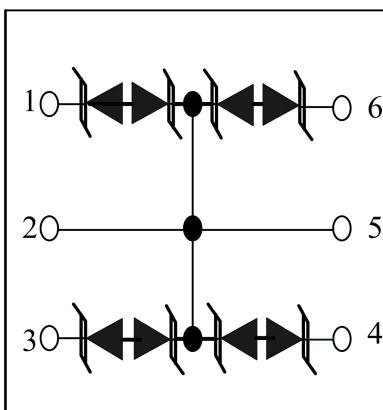
### Mechanical Characteristics

- SOT-23-6L package
- Molding compound flammability rating: UL 94V-0
- Marking: Marking Code
- Packaging: Tape and Reel
- RoHS Compliant

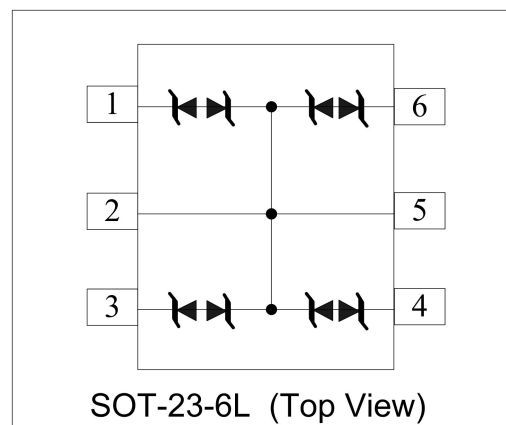
### Applications

- Computers
- Printers
- Communication systems
- Video equipment
- Monitors and Flat Panel Displays

### Circuit Diagram



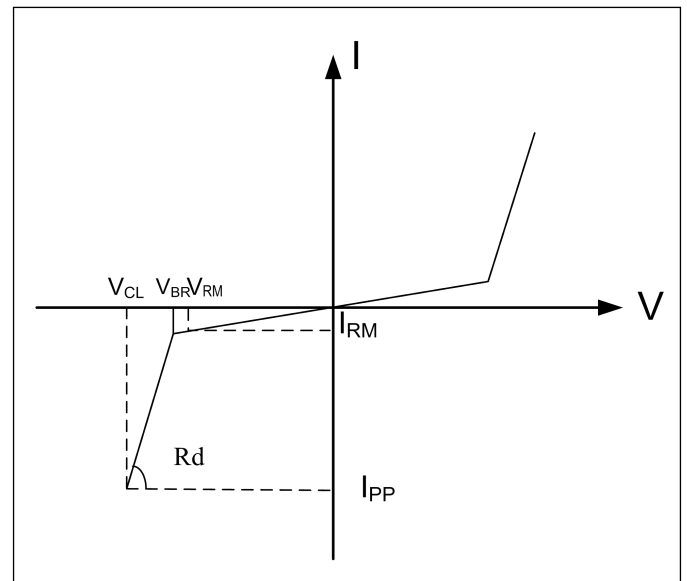
### Schematic & PIN Configuration



Absolute Maximum Rating(T=25°C)				
Parameter		Symbol	Value	Units
ESD discharge	IEC61000-4-2 air discharge	$V_{pp}$	15	KV
	IEC61000-4-2 contact discharge		8	
Peak Pulse Power (8/20 $\mu$ s )		$P_{PP}$	100	Watts
Junction temperature		$T_j$	150	°C
Maximum lead temperature for soldering during 10 s at 5mm for case		$T_L$	260	°C
Storage Temperature range		$T_{STG}$	-55 to +150	°C
Operating temperature range		$T_{op}$	-40 to +125	°C

### Electrical Parameters (T=25°C)

Symbol	Parameter
$V_{RM}$	Stand-off voltage
$V_{BR}$	Breakdown voltage
$V_{CL}$	Clamping voltage
$I_{RM}$	Leakage current
$I_{pp}$	Peak pulse current
$\alpha T$	Voltage temperature coefficient
$V_F$	Forward voltage drop
C	Capacitance
$R_d$	Dynamic resistance



### Electrical Characteristics

Part Number	Reverse Stand off Voltage $V_{RWM}$ (Volts)	Minimum Breakdown Voltage $V_{BR}@1mA$ (Volts)	Maximum Clamping Voltage $V_c@I_{PP}$ (Volts)	Maximum Peak Pulse Current $I_{pp}$ (Amps)	Maximum Reverse Leakage current $I_R@V_{RWM}(\mu A)$	Typical Capacitance DC=0V $C_J@1MHz$ (pF)
DW05MS-B-S	5	6.1	15.5	6.5	1	20



## Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

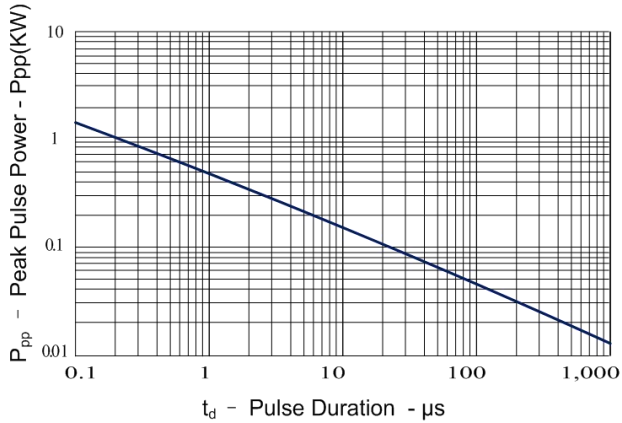


Figure 2: Power Derating Curve

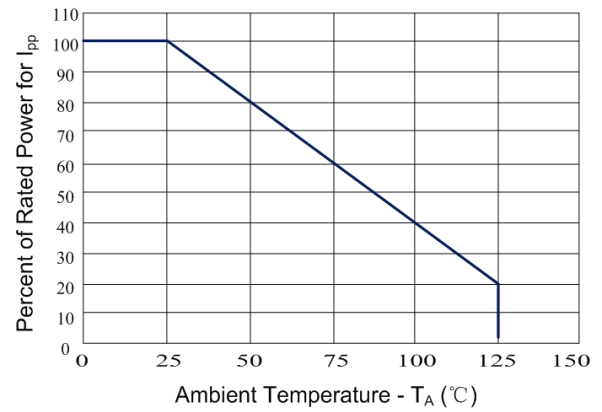


Figure 3: Pulse Waveform

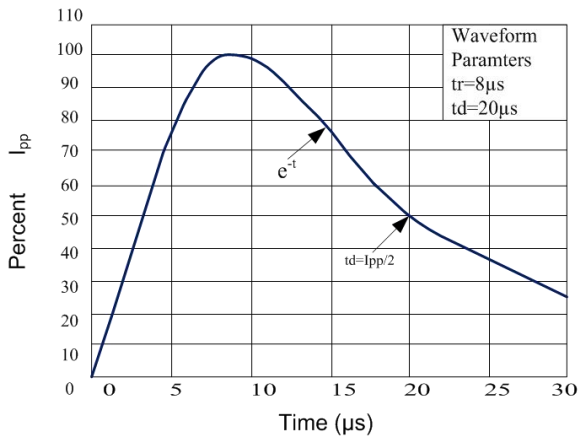


Figure 4: Clamping Voltage vs. Peak Pulse Current

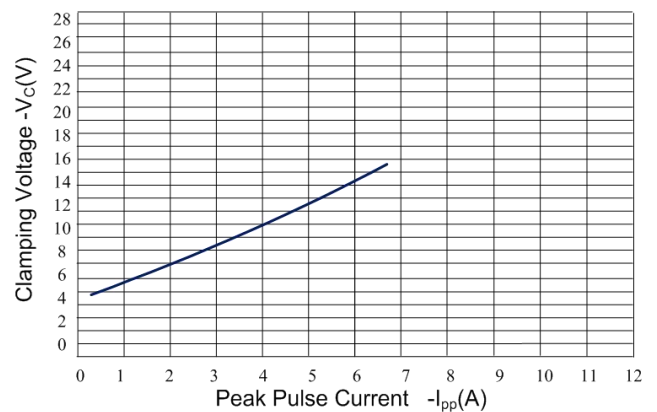


Figure 5: Capacitance vs. Reverse Voltage

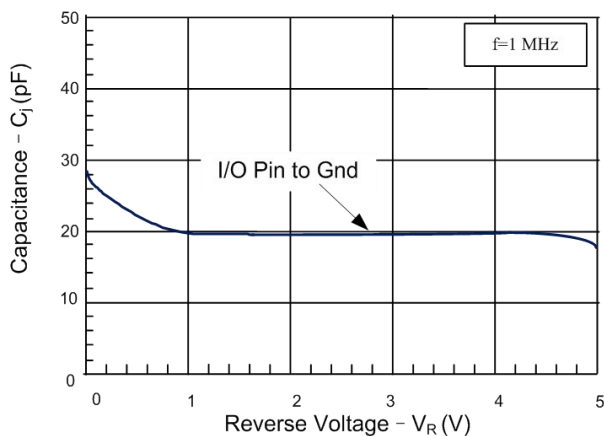
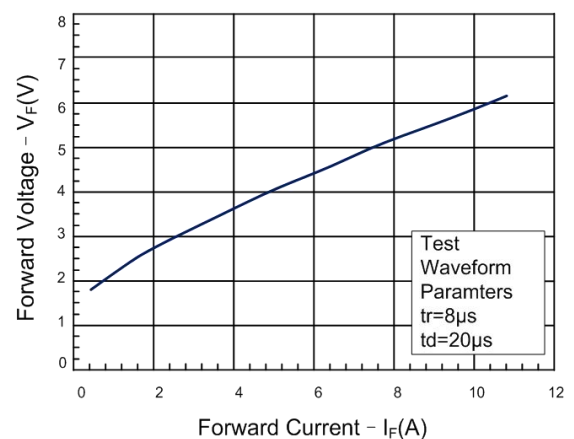


Figure 6: Forward Voltage vs. Forward Current





## Outline Drawing – SOT-23-6L

### PACKAGE OUTLINE

SOT-23-6L

DIMENSIONS				
SYM OL	INCHES		MILLIMETER	
	MIN	MAX	MIN	MAX
A	0.041	0.049	1.050	1.250
A1	0.000	0.004	0.000	0.100
A2	0.041	0.045	1.050	1.150
D	0.111	0.119	2.820	3.020
E	0.059	0.067	1.500	1.700
E1	0.104	0.116	2.650	2.950
e	0.037(BSC)		0.950(BSC)	
e1	0.071	0.079	1.800	2.000
L	0.012	0.024	0.300	0.600
b	0.010	0.020	0.25	0.50
θ	0°	8°	0°	8°

DIMENSIONS		
DIM	INCHES	MILLIMETERS
Z	0.141	3.60
G	0.055	1.40
P	0.037	0.95
X	0.024	0.60
Y	0.043	1.10
C	(0.098)	(2.50)

**Notes**

THIS LAND PATTERN IS FOR REFERENCE PURPOSES ONLY. CONSULT YOUR MANUFACTURING GROUP TO ENSURE YOUR COMPANY'S MANUFACTURING GUIDELINES ARE MET.

## Marking Codes

Part Number	DW05MS-B-S
Marking Code	5SB

## Package Information

Qty: 3k/Reel