

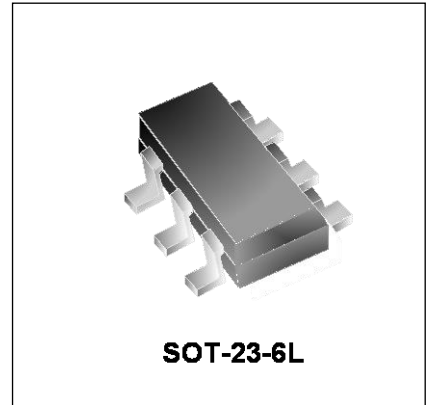


Features

- Solid-state silicon-avalanche technology
- 900 Watts Peak Pulse Power per Line ($t_p=8/20\mu s$)
- Low operating and clamping voltage
- Up to four I/O Lines of Protection
- Low capacitance:4.5pF(IO pin to GND)
- Low Leakage
- Low operating voltage:5V

IEC Compatibility (EN61000-4)

- IEC 61000-4-2 (ESD) $\pm 30kV$ (air), $\pm 30kV$ (contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 35A (8/20 μs)



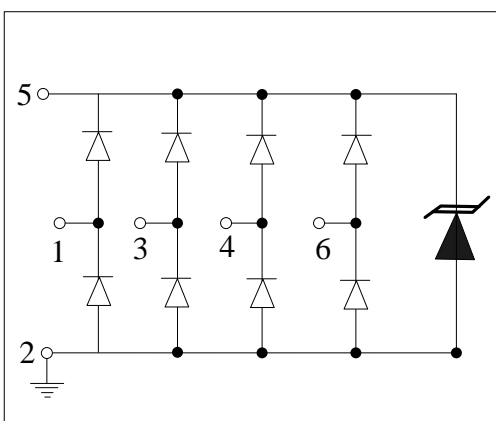
Mechanical Characteristics

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

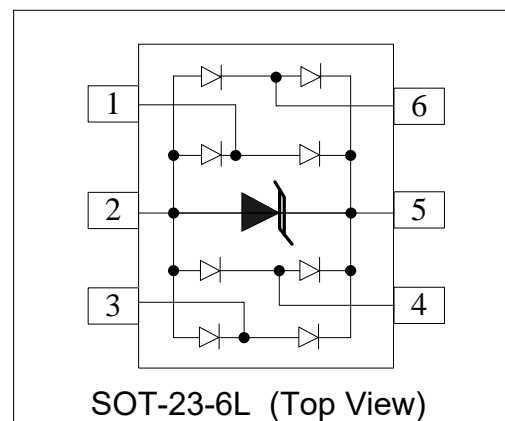
Applications

- Video/Graphics Card
- Digital Visual Interface (DVI)
- USB2.0 Power and Data lines protection
- Notebook and PC Computers
- Monitors and Flat Panel Displays

Circuit Diagram



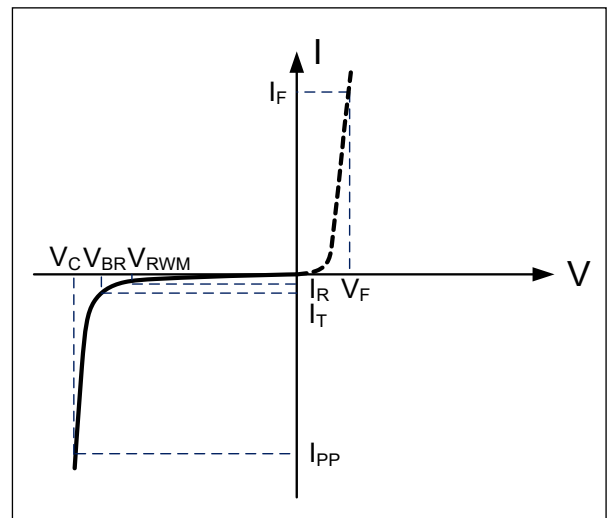
Schematic & PIN Configuration



Absolute Maximum Rating			
Rating	Symbol	Value	Units
Peak Pulse Power ($t_p = 8/20\mu s$)	P_{PP}	900	Watts
Peak Pulse Current ($t_p = 8/20\mu s$)	I_{PP}	35	A
Operating Temperature	T_J	-55 to + 85	°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}	Working Peak Reverse Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_F	Forward Current
V_F	Forward Voltage @ I_F



Electrical Characteristics

DW05-4R5S-S						
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			V
Reverse Leakage Current	I_R	$V_{RWM} = 5V, T = 25°C$			1	μA
Forward Voltage	V_F	$I_T = 10mA$		0.8	1.5	V
Clamping Voltage	V_C	$I_{PP} = 35A, t_p = 8/20\mu s$ I/O pin to GND			25	V
Junction Capacitance	C_j	$V_R = 0V, f = 1MHz$ I/O pin to GND		4.5	5	pF
		$V_R = 0V, f = 1MHz$ Between I/O pins		2	2.5	pF



Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

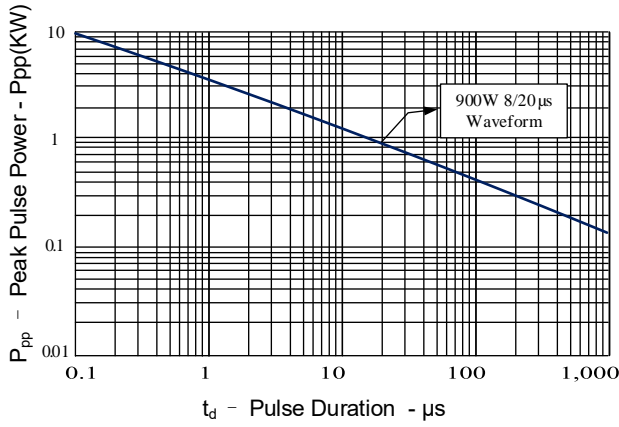


Figure 2: Power Derating Curve

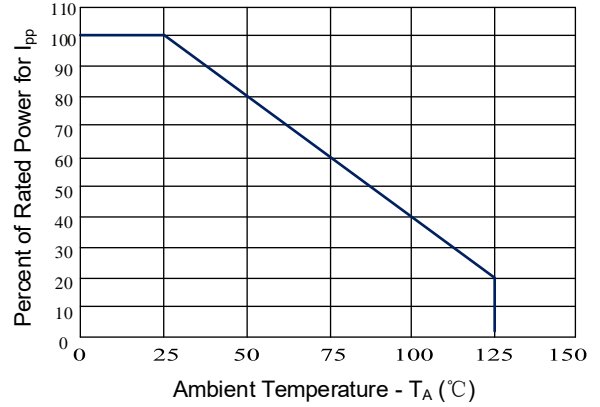


Figure 3: Pulse Waveform

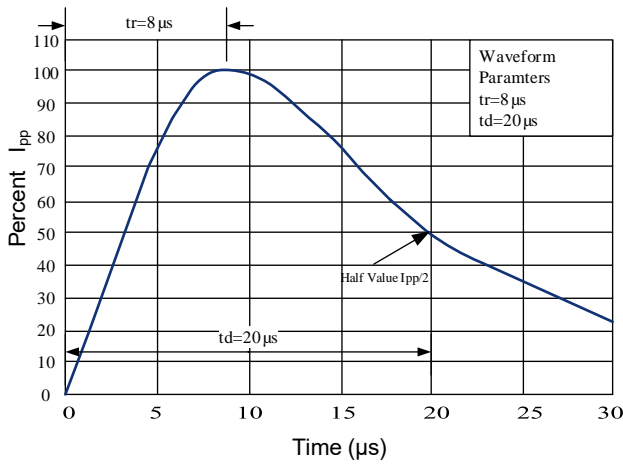


Figure 4: Clamping Voltage vs. Peak Pulse Current

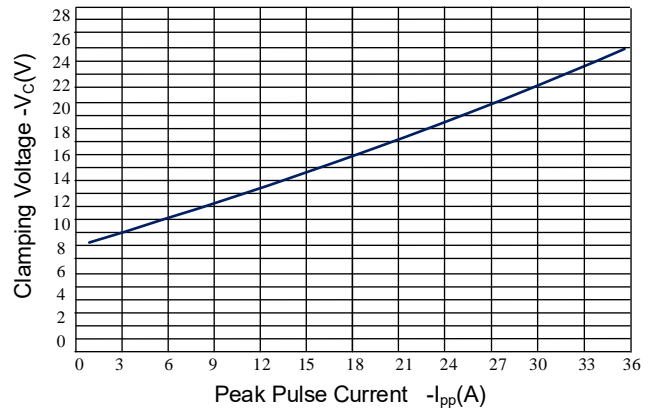
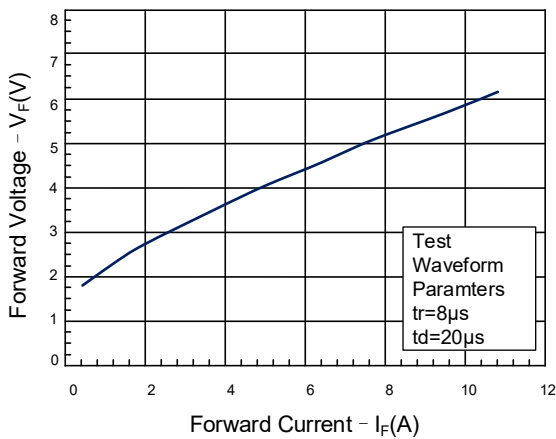
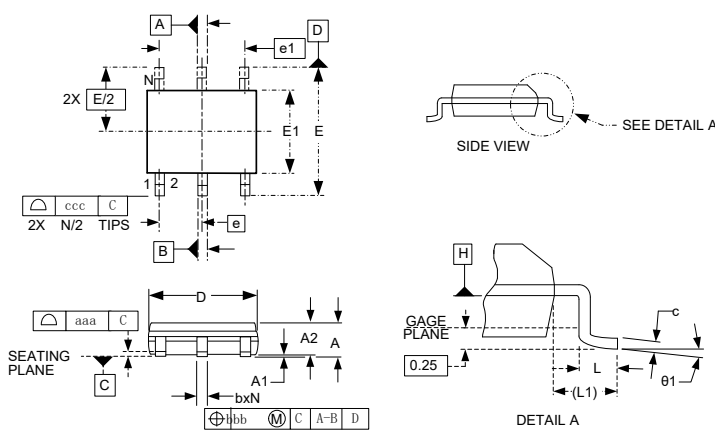


Figure 5: Forward Voltage vs. Forward Current



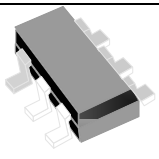
Outline Drawing – SOT-23-6L

PACKAGE OUTLINE



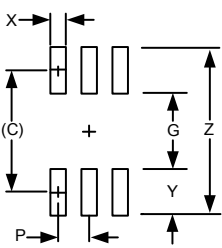
NOTES:

- Controlling Dimensions are In Millimeters (Angles In Degrees).
- Datums **A** And **B** To Be Determined At Datum Plane **H**.
- Dimensions "E1" And "D" Do Not Include Mold Flash, Protrusions Or Gate Burrs.



SOT-23-6L

DIM	INCHES			MILLIMETERS		
	MIN	NOM	MAX	MIN	NOM	MAX
A	.035	-	.057	0.90	-	1.45
A1	.000	-	.006	0.00	-	0.15
A2	.035	.049	.051	0.90	1.25	1.30
b	.010	-	.020	0.35	-	0.50
c	.003	-	.007	0.08	-	0.20
D	.110	.114	.122	2.80	2.90	3.00
E1	.060	.063	.069	1.50	1.625	1.75
E	.110BSC			2.80 BSC		
e	.037 BSC			0.95 BSC		
e1	.075BSC			1.90 BSC		
L	.013	.018	.024	0.35	0.45	0.60
L1	(.024)			(0.60)		
θ 1	0°	-	8°	0°	-	8°
N	6			6		
aaa	.004			0.10		
bbb	.008			0.20		
ccc	.008			0.20		



DIMENSIONS		
DIM	INCHES	MILLIMETERS
C	(.098)	(2.50)
G	.055	1.40
P	.037	0.95
X	.024	0.60
Y	.043	1.10
Z	.141	3.60

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	DW05-4R5S-S
Marking Code	54S

Package Information

Qty: 3k/Reel