



Features

- 100Watts Peak Power per Line (tp = 8/20μs)
- Protects two I/O lines
- Low operating voltage: 5V
- Ultra Low capacitance(<1.0pF) for high-speed interfaces
- Solid-state technology

IEC Compatibility (EN61000-4)

- IEC 61000-4-2 (ESD) ±15kV (air), ±8kV (contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 4A (8/20μs)



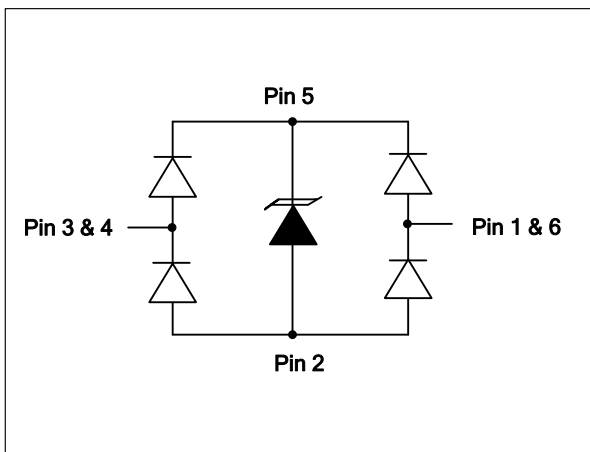
Mechanical Characteristics

- JEDEC SOT-563 package
- Molding compound flammability rating: UL 94V-0
- Marking : Making Code
- Packaging : Tape and Reel per EIA 481
- RoHS Compliant

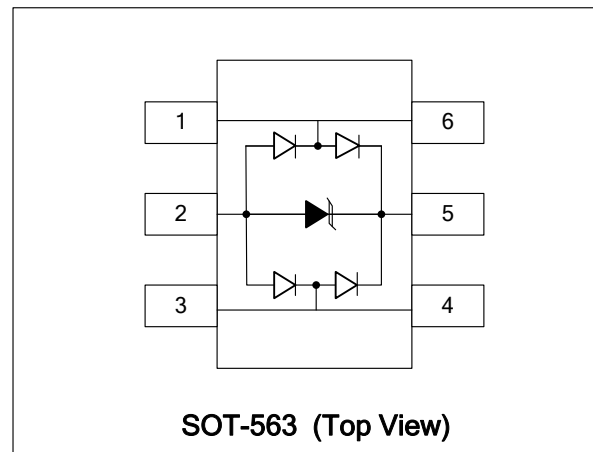
Applications

- FireWire & USB
- Sensitive Analog Inputs
- Portable Electronics
- LAN/WAN equipment
- Video Line Protection
- Microcontroller Input Protection

Circuit Diagram



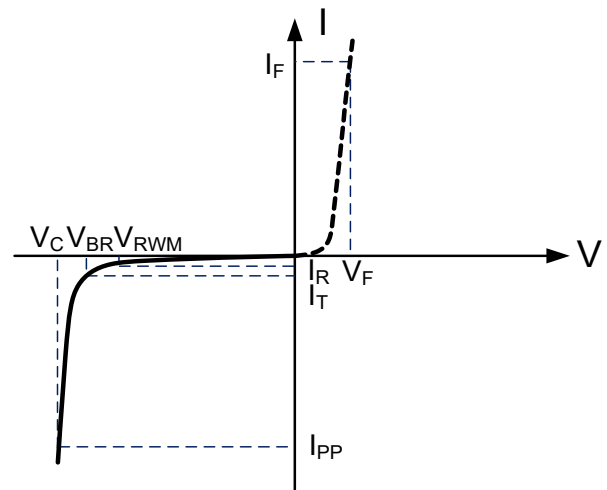
Schematic & PIN Configuration



Absolute Maximum Rating			
Rating	Symbol	Value	Units
Peak Pulse Power ($t_p=8/20\mu s$)	P_{PP}	100	Watts
Peak Pulse Current ($t_p=8/20\mu s$)	I_{PP}	4	A
Lead Soldering Temperature	T_L	260 (10sec)	$^{\circ}C$
Operating Temperature	T_J	-55 to + 125	$^{\circ}C$
Storage Temperature	T_{STG}	-55 to +150	$^{\circ}C$

Electrical Parameters (T=25 $^{\circ}C$)

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
I_F	Forward Current
V_F	Forward Voltage @ I_F



Electrical Characteristics

DW05-2RT5-E						
Parameter	Symbol	Conditions	Minimum	Typical	Maximum	Units
Reverse Stand-Off Voltage	V_{RWM}				5.0	V
Breakdown Voltage	V_{BR}	$I_T=1mA$	6.0			V
Reverse Leakage Current	I_R	$V_{RWM}=5V, T=25^{\circ}C$			1.0	μA
Clamping Voltage	V_C	$I_{PP}=1A, t_p=8/20\mu s$		10		V
Clamping Voltage	V_C	$I_{PP}=4A, t_p=8/20\mu s$			25	V
Junction Capacitance	C_j	Between I/O pins and Ground $V_R=0V, f=1MHz$		0.8	1.0	pF
		Between I/O pins $V_R=0V, f=1MHz$		0.4	0.6	pF

Typical Characteristics

Figure 1: Peak Pulse Power Vs Pulse Time

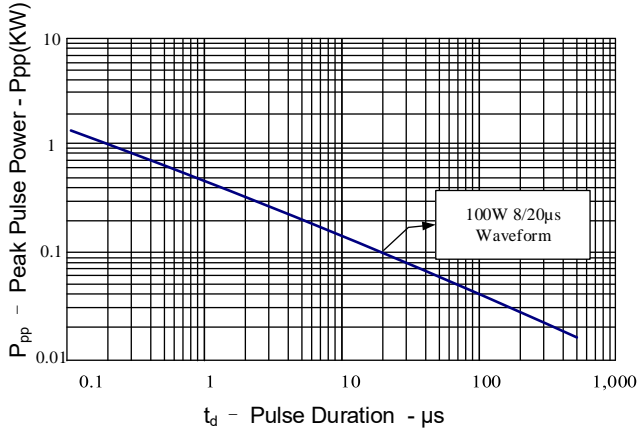


Figure 2: Power Derating Curve

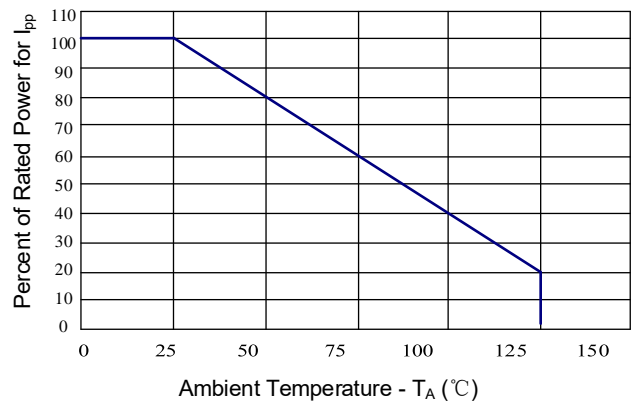


Figure 3: Pulse Waveform

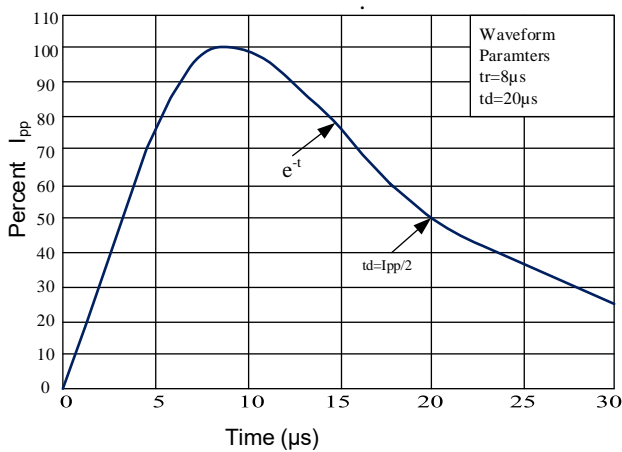


Figure 4: Clamping Voltage vs. Peak Pulse Current

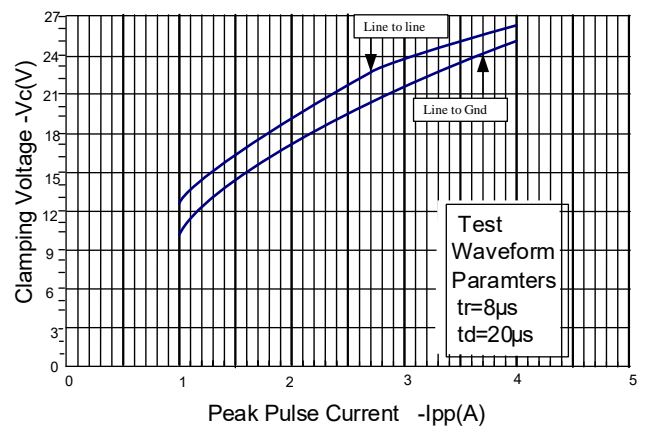


Figure 5: Forward Voltage vs. Forward Current

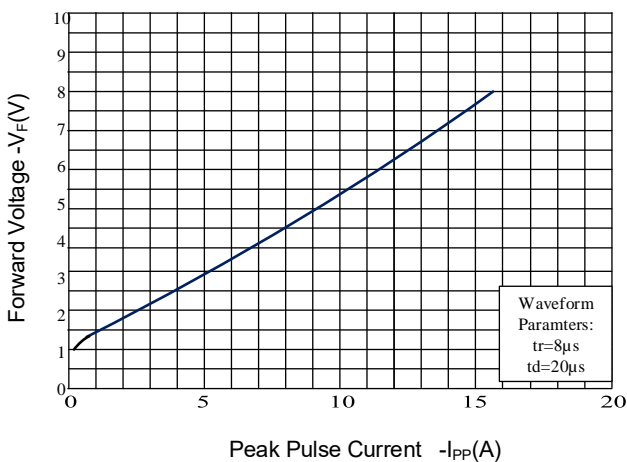
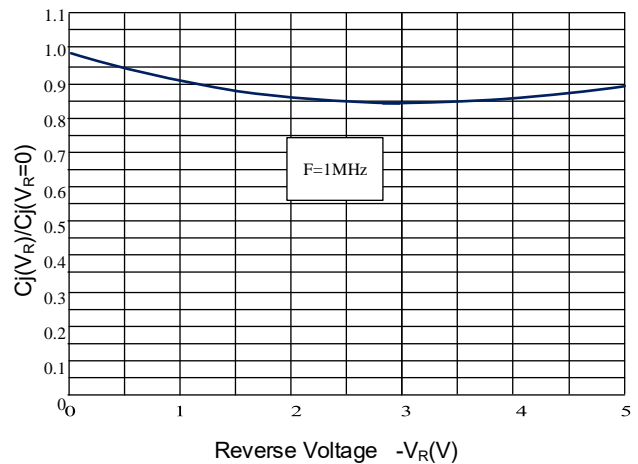


Figure 6: Capacitance vs. Reverse Voltage





Outline Drawing – SOT-563

PACKAGE OUTLINE

SOT-563

DIMENSIONS				
SYMBOL	INCHES		MILLIMETER	
	MIN	MAX	MIN	MAX
L				
A	0.021	0.024	0.525	0.600
A1	0.000	0.002	0.000	0.050
e	0.018	0.022	0.450	0.550
c	0.004	0.006	0.090	0.160
D	0.059	0.067	1.500	1.700
b	0.007	0.011	0.170	0.270
E1	0.043	0.051	1.100	1.300
E	0.059	0.067	1.500	1.700
L	0.004	0.012	0.100	0.300
θ	7°REF		7°REF	

DIMENSIONS		
DIM	INCHES	MILLIMETERS
Z	0.0752	1.91
G	0.0350	0.89
P	0.020TYP	0.51 TYP
X	0.0118	0.3
Y	0.0201	0.51

Notes

1. Dimensioning and tolerances per ANSI Y14.5M, 1985.
2. Controlling Dimension: Inches
3. Dimensions are exclusive of mold flash and metal burrs.

Marking Codes

Part Number	DW05-2RT5-E
Marking Code	5R5

Package Information

Qty: 3k/Reel