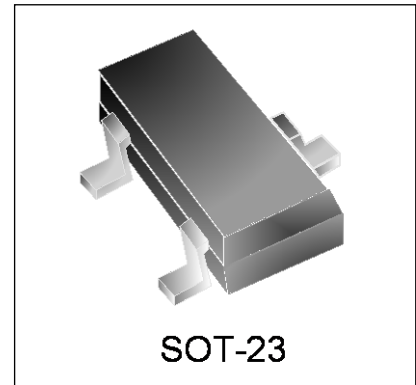


### Features

- 100 Watts Peak Pulse Power
- Low Clamping Voltage
- Ultra Low Capacitance (< 0.4pF)
- Working Voltage: 5V
- Low Leakage Current
- Response Time is Typically < 1 ns



### IEC COMPATIBILITY (EN61000-4)

- IEC 61000-4-2 (ESD)  $\pm 18\text{kV}$  (air),  $\pm 12\text{kV}$  (contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 5A (8/20 $\mu\text{s}$ )

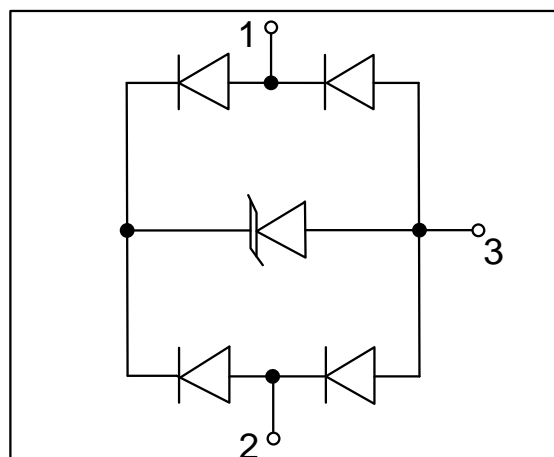
### Mechanical Characteristics

- SOT-23 package
- Molding compound flammability rating: UL 94V-0
- Marking: Marking Code
- Packaging: Tape and Reel per EIA 481
- RoHS Compliant

### Applications

- Laptop Computers
- USB 2.0 and USB 3.0
- Cellular Phones
- Digital Cameras
- HDMI 1.3 and HDMI 1.4

### Circuit Diagram

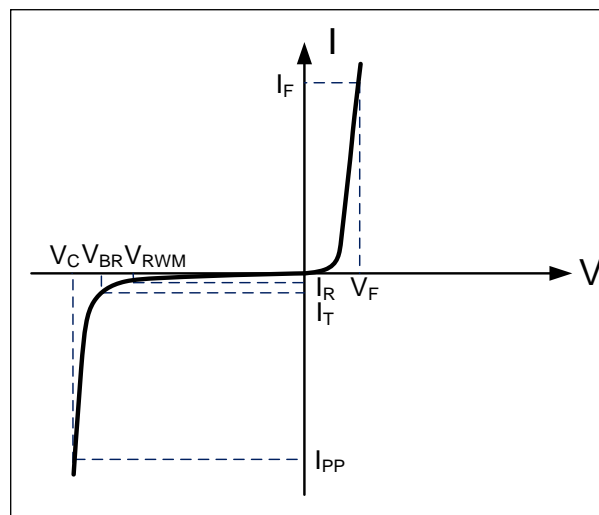


### Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power ( $t_p = 8/20\mu s$ )	$P_{PP}$	100	Watts
Peak Pulse Current ( $t_p = 8/20\mu s$ )	$I_{pp}$	5	A
ESD per IEC 61000-4-2(Air) ESD per IEC 61000-4-2(contact)	$V_{ESD}$	+/-18 +/-12	kV
Operating Temperature	$T_J$	-55 to + 125	°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 @ $I_{PP}$
$V_{RWM}$	Reverse Stand-Off 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 @ $I_F$

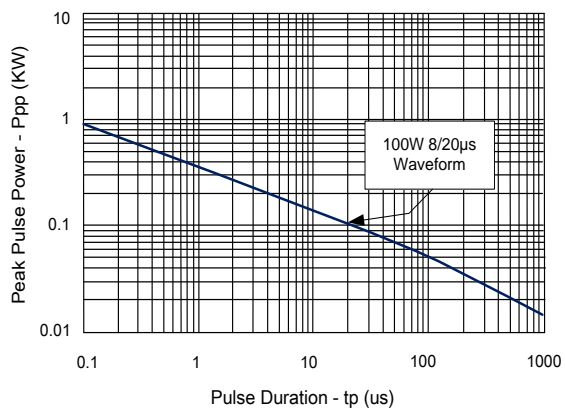


### Electrical Characteristics

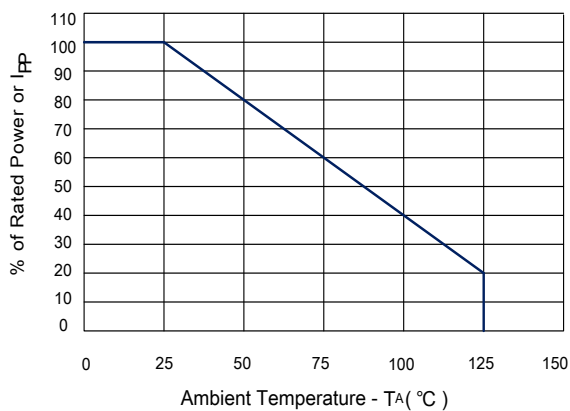
Parameter	Symbol	Conditions	Minimum	Typical	Maximum	Units
Reverse Stand-Off Voltage	$V_{RWM}$				5.0	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T = 1mA$	6.0			V
Reverse Leakage Current	$I_R$	$V_{RWM} = 5V, T = 25^\circ C$			0.5	$\mu A$
Clamping Voltage	$V_C$	$I_{pp} = 1A, t_p = 8/20\mu s$			10	V
Clamping Voltage	$V_C$	$I_{pp} = 5A, t_p = 8/20\mu s$			15	V
Junction Capacitance	$C_j$	$V_R = 0V, f = 1MHz$ I/O pin to GND		0.6	0.8	pF
		$V_R = 0V, f = 1MHz$ Between I/O pins		0.3	0.4	pF

### Typical Characteristics

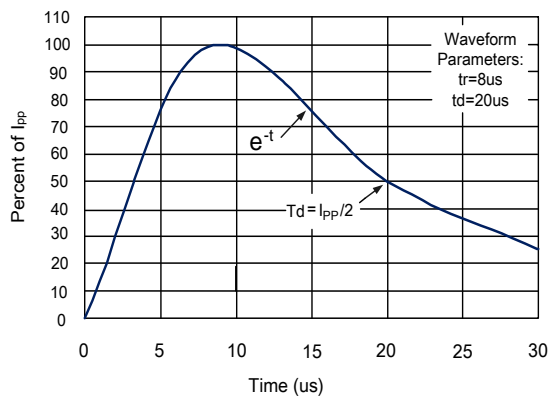
Non-Repetitive Peak Pulse Power vs. Pulse Time



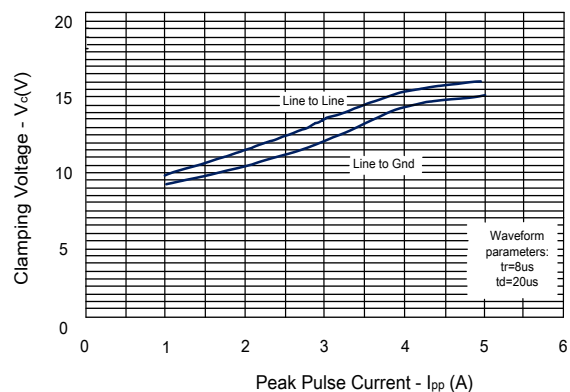
Power Derating curve



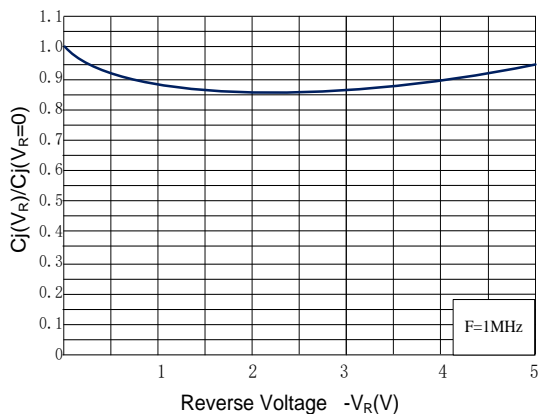
Pulse Waveform



Clamping Voltage vs. Peak Pulse Current



Normalized Junction Capacitance vs. Reverse Voltage



Outline Drawing – SOT-23

### PACKAGE OUTLINE

**SOT-23**

DIMENSIONS				
SYMBOL	MILLIMETER		INCHES	
	MIN	MAX	MIN	MAX
A	0.90	1.15	0.035	0.045
A1	0.00	0.10	0.000	0.004
A2	0.60	0.70	0.0236	0.0275
b	0.30	0.50	0.012	0.020
c	0.08	0.15	0.003	0.006
D	2.80	3.00	0.110	0.118
E	2.25	2.55	0.089	0.100
E1	1.20	1.40	0.047	0.055
e	0.95 BSC		0.0374 BSC	
e1	1.80	2.00	0.071	0.079
L	0.30	0.50	0.012	0.020
θ	0	8°	0	8°

DIMENSIONS		
DIM	INCHES	MILLIMETERS
M	0.0795	2.02
C	0.0315	0.80
Z	0.111	2.82
e	0.037 BSC	0.95 BSC
e1	0.075 BSC	1.9 BSC
b	0.0315	0.80

**Notes**

1. Dimensioning and tolerances per ANSI Y14.5M, 1985.
2. Controlling Dimension: Inches
3. Pin 3 is the cathode (Unidirectional Only).
4. Dimensions are exclusive of mold flash and metal burrs.

**Marking Codes**

Part Number	DW05M2UC-E	Marking Code	5MU
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**Package Information**

Qty: 3k/Reel