



## Features

- Solid-state silicon-avalanche technology
- 100 Watts Peak Pulse Power per Line ( $t_p=8/20\mu s$ )
- Low operating and clamping voltages
- Up to Four (4) Lines of Protection
- Working Voltages: 5 V
- Low Leakage Current

## 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) 5.5A (8/20 $\mu s$ )

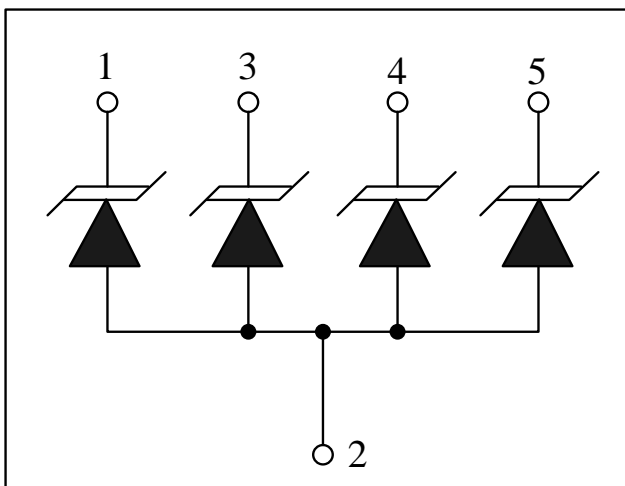
## Mechanical Characteristics

- SOT-353 package
- Molding compound flammability rating: UL 94V-0
- Marking: Marking Code
- Packaging: Tape and Reel
- RoHS Compliant

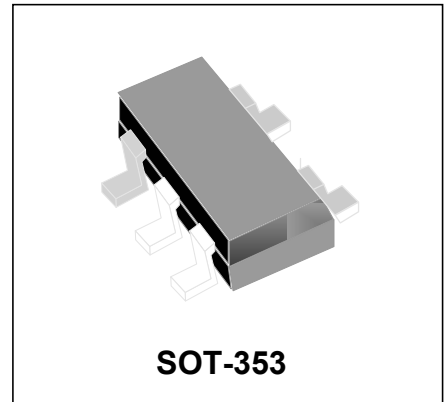
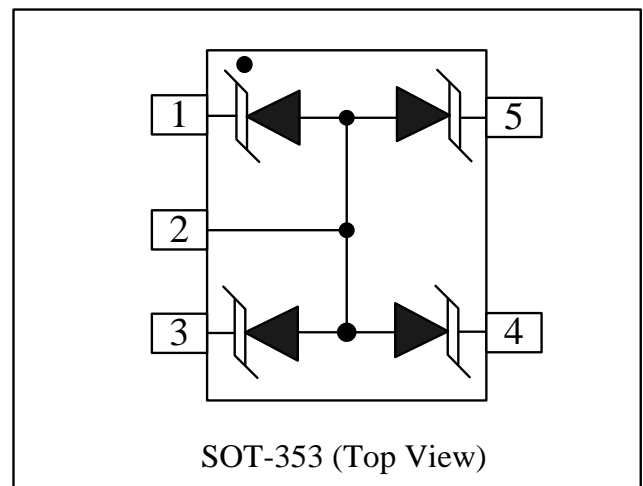
## Applications

- Cellular Handsets & Accessories
- Personal Digital Assistants (PDAs)
- Notebooks & Handhelds
- Portable Instrumentation
- Digital Cameras
- MP3 Player

## Circuit Diagram



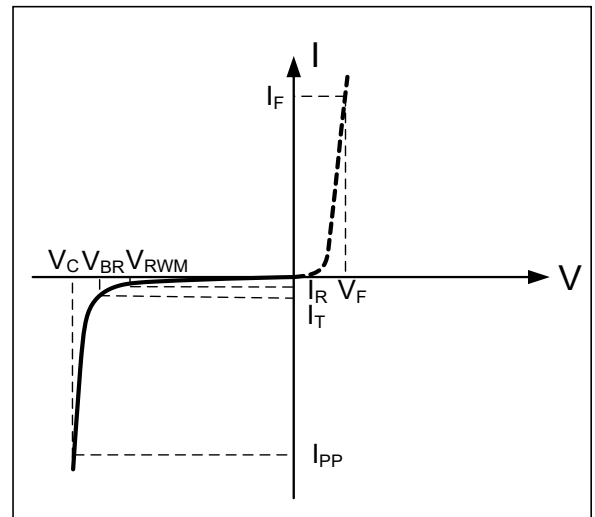
## Schematic & PIN Configuration



Absolute Maximum Rating			
Rating	Symbol	Value	Units
Peak Pulse Power ( $t_p = 8/20\mu s$ )	$P_{PP}$	100	W
Peak Forward Voltage ( $I_F = 1A, t_p = 8/20\mu s$ )	$V_{FP}$	1.5	V
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

DW05MF-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	$I_R$	$V_{RWM} = 5V, T = 25^{\circ}C$			1	$\mu A$
Peak Pulse Current	$I_{PP}$	$t_p = 8/20\mu s$			5.5	A
Clamping Voltage	$V_C$	$I_{PP} = 1A, t_p = 8/20\mu s$			9.6	V
Clamping Voltage	$V_C$	$I_{PP} = 5.5A, t_p = 8/20\mu s$		15	18	V
Junction Capacitance	$C_j$	Between I/O pins and Ground $V_R = 0V, f = 1MHz$		22	25	pF



### Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

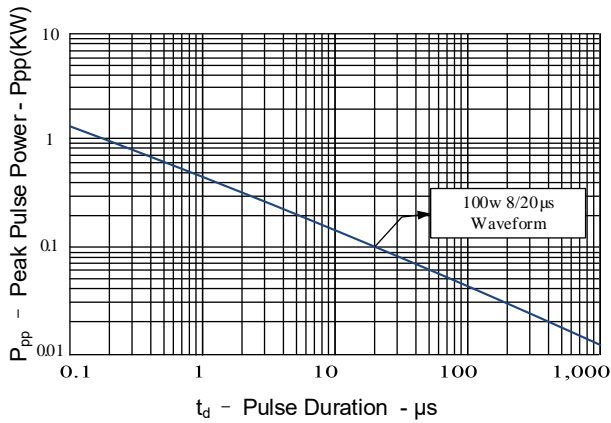


Figure 2: Power Derating Curve

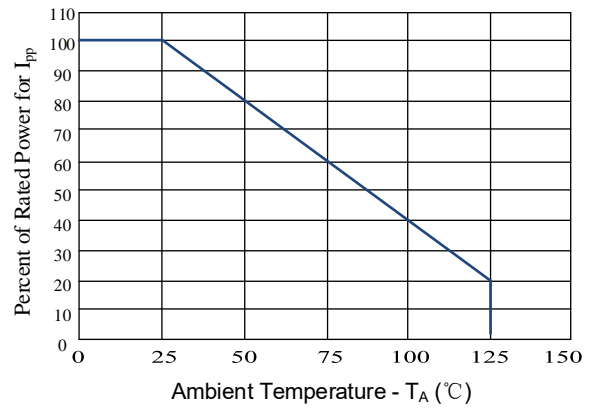


Figure 3: Clamping Voltage vs. Peak Pulse Current

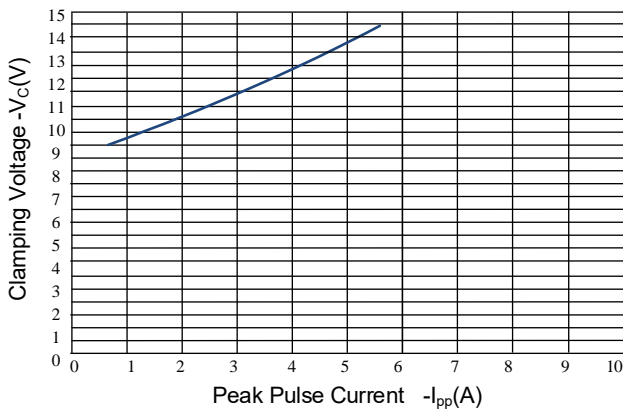


Figure 4: DW05MF-S Insertion Loss

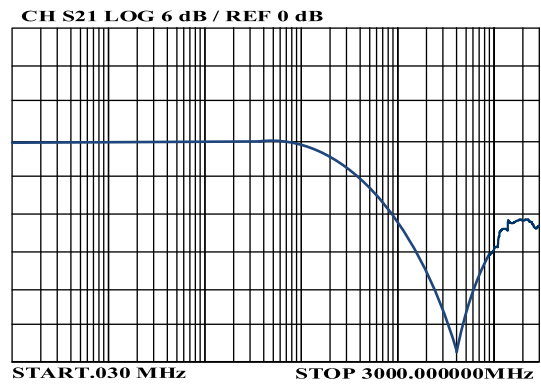


Figure 5: Normalized Junction Capacitance vs. Reverse Voltage

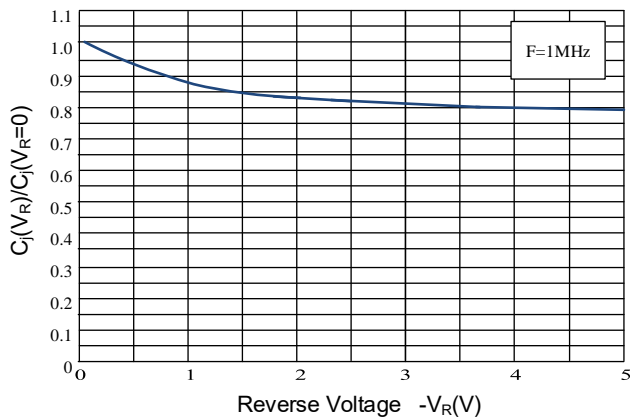
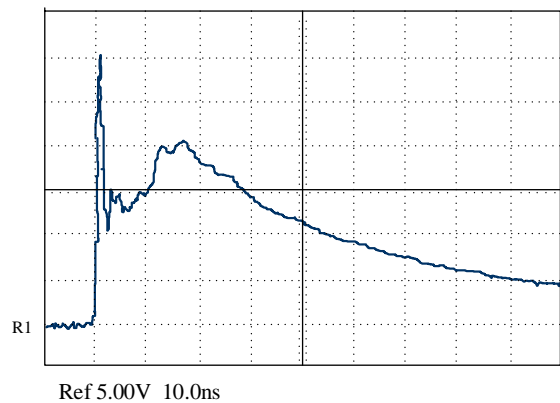
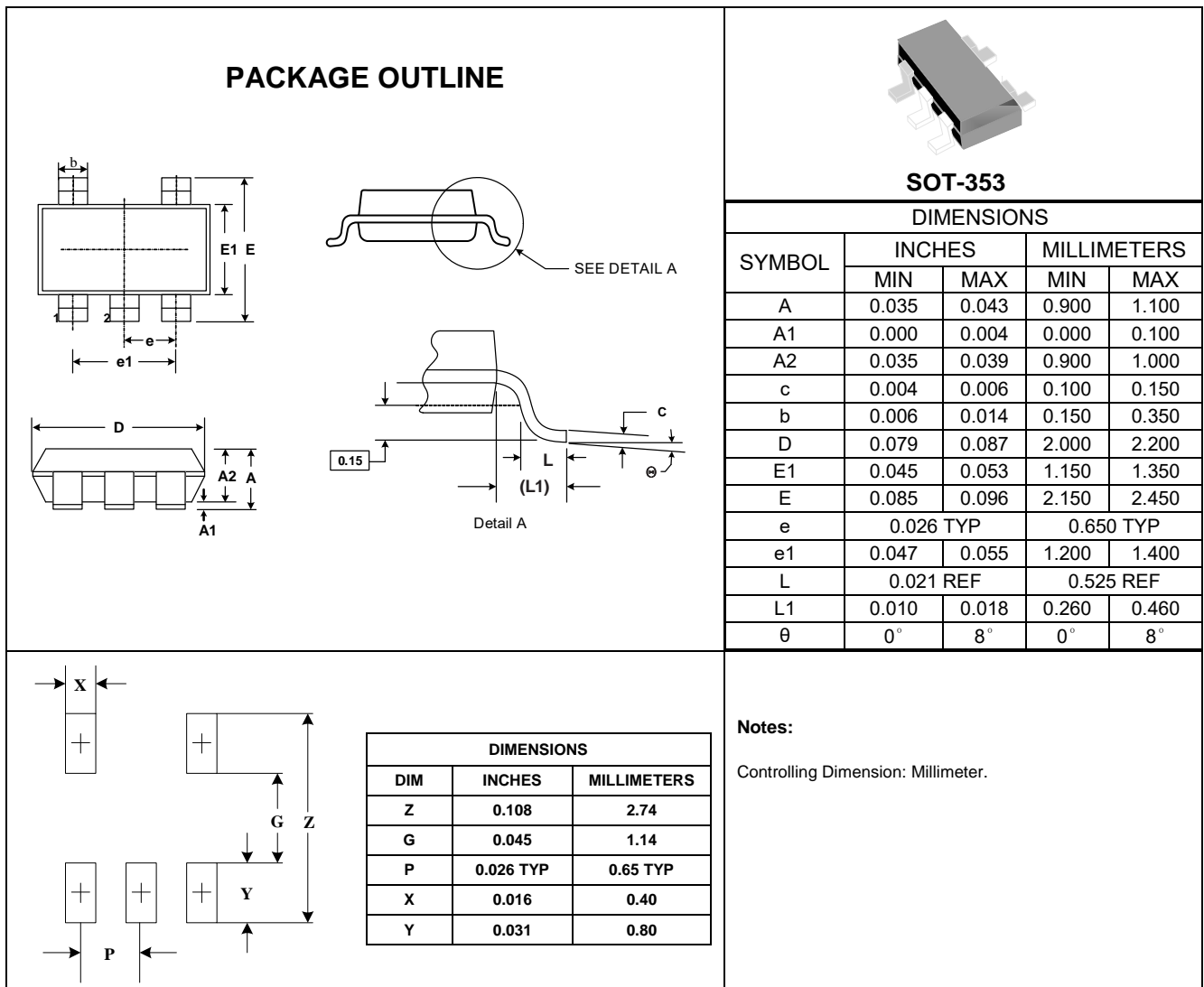


Figure 6: ESD Pulse Waveform (Per IEC 61000-4-2)



## Outline Drawing – SOT-353



## Marking Codes

Part Number	DW05MF-S
Marking Code	05F

## Package Information

Qty: 3k/Reel