

STANDARD TVS ARRAY

APPLICATIONS

- ✓ Computer Notebooks
- ✓ Communication Systems & Cellular Phones
- ✓ Printers
- ✓ Personal Digital Assistant (PDA)
- ✓ Video Equipment

IEC COMPATIBILITY (EN61000-4)

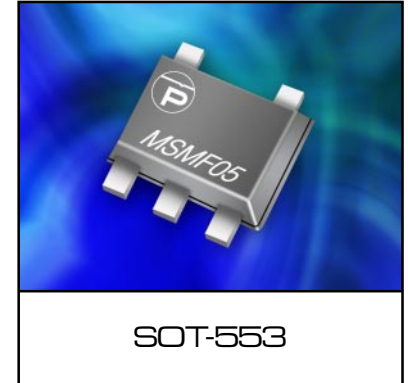
- ✓ 61000-4-2 (ESD): Air - 15kV, Contact - 8kV
- ✓ 61000-4-4 (EFT): 40A - 5/50ns

FEATURES

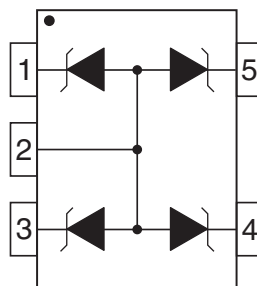
- ✓ 100 Watts Peak Pulse Power per Line ($t_p=8/20\mu s$)
- ✓ Monolithic Structure
- ✓ Available in 4 Voltage Types: 5V to 24V
- ✓ Low Clamping Voltage
- ✓ ESD Protection > 40 kilovolts
- ✓ Low Leakage Current
- ✓ Protects Three (3) Bidirectional Lines and Four (4) Unidirectional Lines
- ✓ RoHS Compliant in Lead-Free Versions

MECHANICAL CHARACTERISTICS

- ✓ Molded JEDEC SOT-553 Package
- ✓ Weight 3 milligrams (Approximate)
- ✓ Available in Lead-Free Nickel-Paladium-Gold Plating
- ✓ Solder Reflow Temperature:
 Nickel-Paladium-Gold (Ni/Pd/Au) Sn/Ag/Cu: 260-270°C
- ✓ Flammability Rating UL 94V-0
- ✓ 8mm Tape and Reel Per EIA Standard 481
- ✓ Marking: Marking Code & Pin One Defined By Dot on Top of Package



PIN CONFIGURATION



DEVICE CHARACTERISTICS

MAXIMUM RATINGS @ 25°C Unless Otherwise Specified			
PARAMETER	SYMBOL	VALUE	UNITS
Peak Pulse Power ($t_p = 8/20\mu s$) - See Figure 1	P_{PP}	100	Watts
Operating Temperature	T_J	-55°C to 150°C	°C
Storage Temperature	T_{STG}	-55°C to 150°C	°C
Maximum Forward Voltage @ 10mA	V_F	1.0	V

ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified						
PART NUMBER	DEVICE MARKING	RATED STAND-OFF VOLTAGE	MINIMUM BREAKDOWN VOLTAGE	MAXIMUM CLAMPING VOLTAGE (See Fig. 2)	MAXIMUM LEAKAGE CURRENT	TYPICAL CAPACITANCE (See Note 1)
		V_{WM} VOLTS	@ 1mA $V_{(BR)}$ VOLTS	@ 8/20 μs $V_C @ I_{PP}$	@ V_{WM} I_D μA	0V @ 1 MHz C pF
MSMF05	A	5.0	6.0	12.0V @ 9.0A	1	40
MSMF12	C	12.0	13.3	23.8V @ 4.2A	1	20
MSMF15	E	15.0	16.7	33.3V @ 3.0A	1	15
MSMF24	G	24.0	26.7	55.5V @ 1.8A	1	10

Note 1: Pins 1, 3, 4, 5 or 6 to pin 2.

FIGURE 1
PEAK PULSE POWER VS PULSE TIME

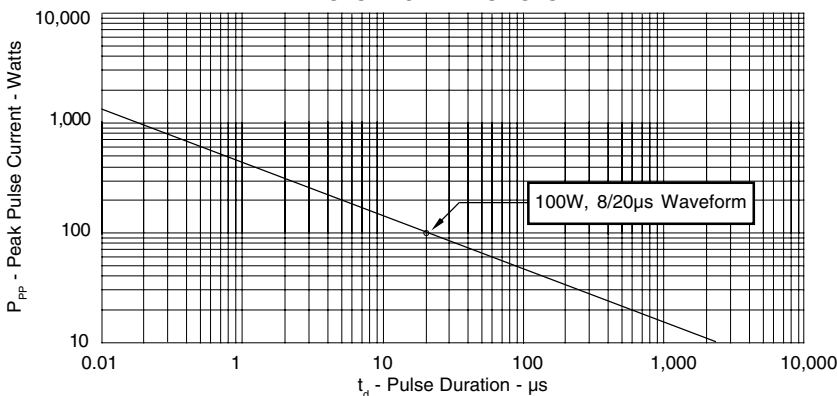
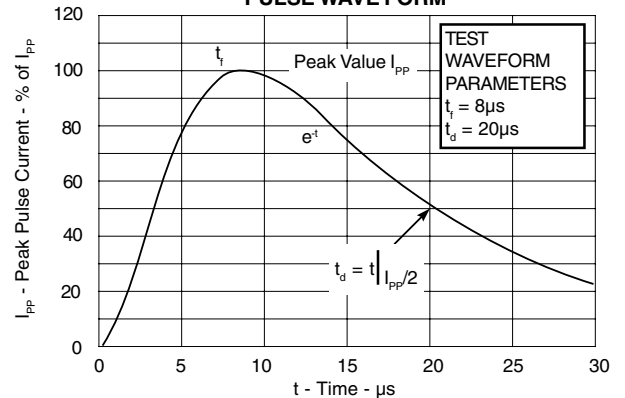
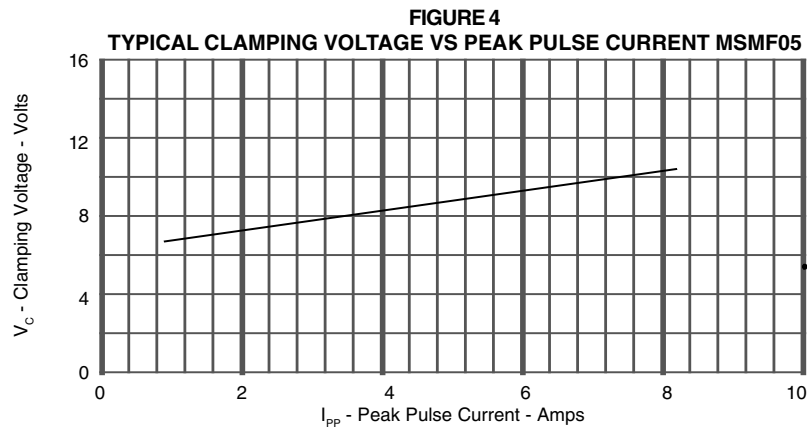
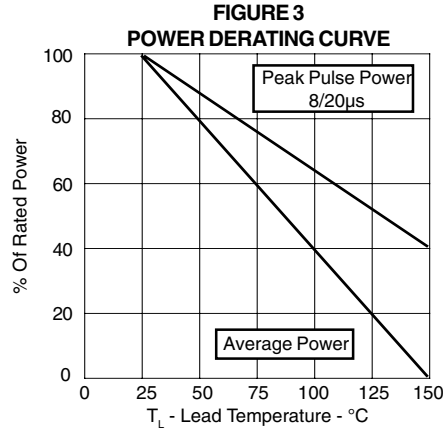


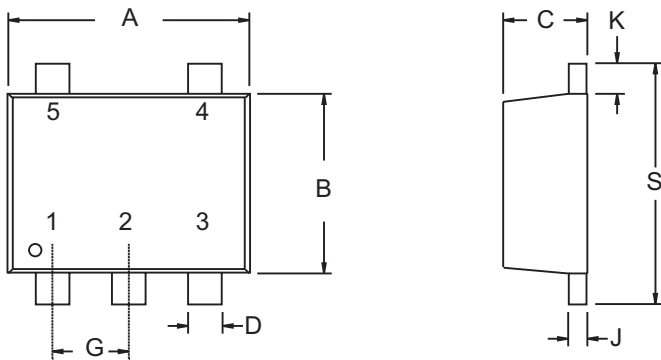

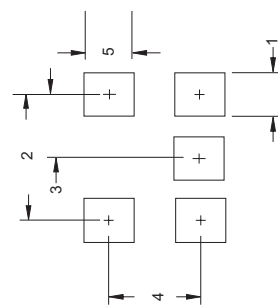
FIGURE 2
PULSE WAVE FORM



GRAPHS



PACKAGE OUTLINE & DIMENSIONS

<p style="text-align: center;">PACKAGE OUTLINE</p> 	<p style="text-align: center;">SOT-553</p>  <p style="text-align: center;">PACKAGE DIMENSIONS</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">DIM</th> <th colspan="2">MILLIMETERS</th> <th colspan="2">INCHES</th> </tr> <tr> <th>MIN</th> <th>MAX</th> <th>MIN</th> <th>MAX</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>1.50</td> <td>1.70</td> <td>0.059</td> <td>0.067</td> </tr> <tr> <td>B</td> <td>1.10</td> <td>1.30</td> <td>0.043</td> <td>0.051</td> </tr> <tr> <td>C</td> <td>0.50</td> <td>0.60</td> <td>0.020</td> <td>0.024</td> </tr> <tr> <td>D</td> <td>0.17</td> <td>0.27</td> <td>0.007</td> <td>0.011</td> </tr> <tr> <td>G</td> <td>0.50 BSC</td> <td>-</td> <td>0.020 BSC</td> <td>-</td> </tr> <tr> <td>J</td> <td>0.08</td> <td>0.16</td> <td>0.003</td> <td>0.007</td> </tr> <tr> <td>K</td> <td>0.10</td> <td>0.30</td> <td>0.004</td> <td>0.012</td> </tr> <tr> <td>S</td> <td>1.50</td> <td>1.70</td> <td>0.059</td> <td>0.067</td> </tr> </tbody> </table>	DIM	MILLIMETERS		INCHES		MIN	MAX	MIN	MAX	A	1.50	1.70	0.059	0.067	B	1.10	1.30	0.043	0.051	C	0.50	0.60	0.020	0.024	D	0.17	0.27	0.007	0.011	G	0.50 BSC	-	0.020 BSC	-	J	0.08	0.16	0.003	0.007	K	0.10	0.30	0.004	0.012	S	1.50	1.70	0.059	0.067
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Tape & Reel Specifications (Dimensions in millimeters)

Reel Dia.	Tape Width	A0	B0	K0	D	E	F	W	P0	P2	P	tmax
178mm (7")	8mm	1.78 ± 0.05	1.78 ± 0.05	0.69 ± 0.05	1.50 ± 0.10	1.75 ± 0.10	3.50 ± 0.05	8.00 ± 0.30	4.00 ± 0.10	2.00 ± 0.05	4.00 ± 0.10	0.25

