

## LGSMF05CT1G

### Thyristor Surge Protective Devices

#### MECHANICAL CHARACTERISTICS Features

- Molded JEDEC SOT-563 Package
- Weight 3 milligrams
- Available in Lead-Free Nickel-Paladium-Gold Plating
- Solder Reflow Temperature:  
Nicker-Paladium-Gold (Ni/Pd/Au)  
Sn/Ag/Cu, 96/3.5/0.5:260-270°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
- 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 >40kilovolts
- Low Leakage Current
- Protects Four (4) Bidirectional Lines and Five (5) Unidirectional Lines
- RoHS compliant on Lead-Free Versions

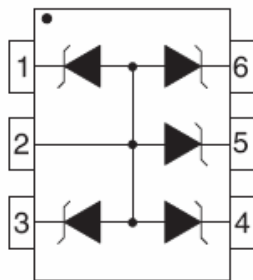
#### IEC COMPATIBILITY (EN6100-4)

- 61000-4-2 (ESD): Air – 1kV, Contact- 8kV
- 61000-4-4 (EFT): 40A – 5/50ns

#### Main applications

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

#### Functional diagram



#### DEVICE CHARACTERISTICS

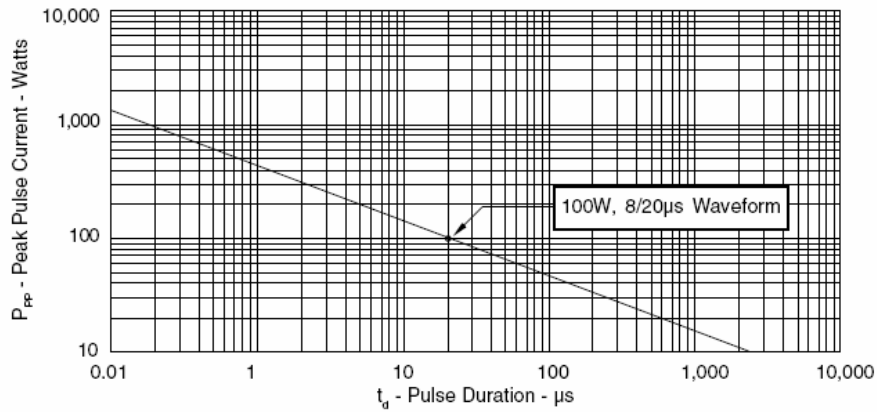
MAXIMUM RATINGS @ 25°C Unless Otherwise Specified			
PARAMETER	SYMBOL	VALUE	UNITS
Peak Pulse Power ( $t_p=8/20\mu s$ ) See Figure 1	$P_{PP}$	100	Watts
Operating Temperature	$T_J$	-55°C to 150 °C	°C
Storage Temperature	$T_{STG}$	-55°C to 150°C	°C

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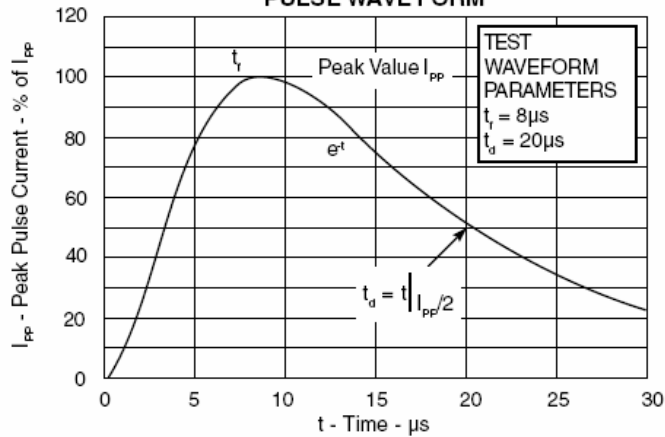
**ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified**

PART NUMBER	DEVICE MARKING	RATED STANDOFF VOLTAGE	MINIMUM BREAKDOWN VOLTAGE @1mA	MAXIMUM CLAMPING VOLTAGE (See Fig.2) @I <sub>p</sub> =5A	MAXIMUM CLAMPING VOLTAGE (See Fig.2) @8/20 μ s	MAXIMUM LEAKAGE CURRENT @V <sub>WM</sub> I <sub>D</sub>	TYPICAL CAPACITANCE (See Note 1) 0V@1MHz
		V <sub>WM</sub> VOLTS	V <sub>(BR)</sub> VOLTS	V <sub>C</sub> VOLTS	V <sub>C</sub> @I <sub>PP</sub>	μ A	C pF
LGSMF05CT1G	B	5.0	6.0	9.8	12.0V@9.0A	1	40
LGSMF12CT1G	D	12.0	13.3	-	23.8V@4.2A	1	20
LGSMF15CT1G	F	15.0	16.7	-	33.3V@3.0A	1	15
LGSMF24CT1G	H	24.0	26.7	-	55.5V@1.8A	1	10

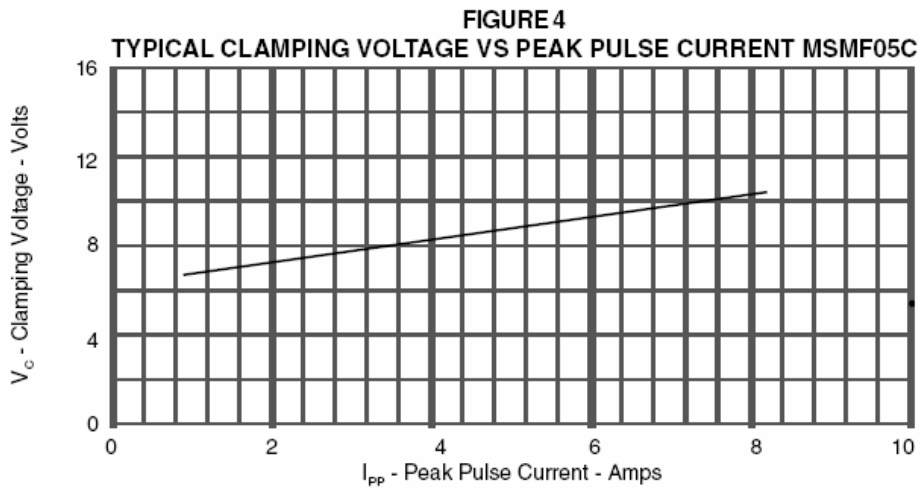
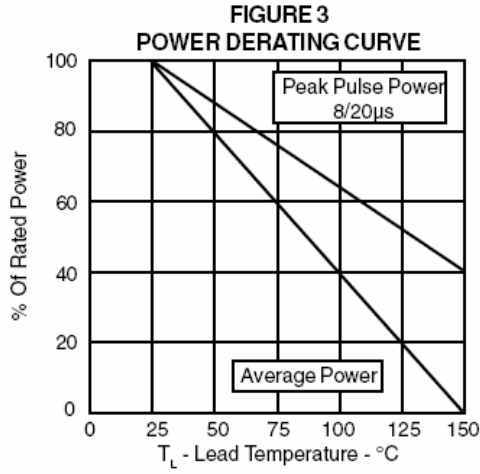
**FIGURE 1  
PEAK PULSE POWER VS PULSE TIME**



**FIGURE 2  
PULSE WAVE FORM**

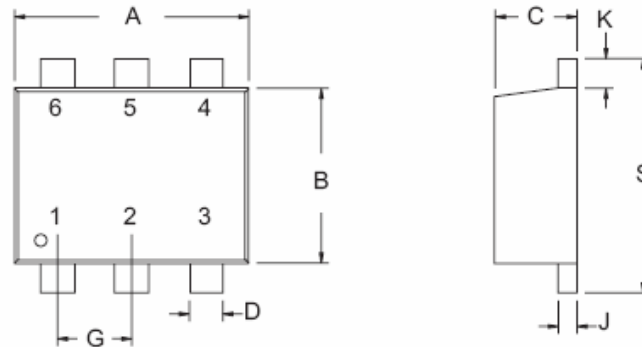


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PACKAGE OUTLINE



PACKAGE DIMENSIONS				
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

**NOTES**

1. Dimensioning 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.

**TAPE & REEL/BULK ORDERING NOMENCLATURE**

1. Surface mount product is taped and reeled in accordance with EIA-481.
2. Suffix-T7=7 Inch Reel – 3,000 pieces per 8mm tape, i.e., SESMF05C-T7
3. Suffix-T13=13 Inch Reel – 10,000 pieces per 8mm tape, i.e., SESMF05C-T13.
4. Suffix-P=Lead-Free, Nickel-Paladium-Gold Plating, i.e., SESMF05C-P-T-7.

Outline & Dimensions: Rev1-9/05,06051