

EMI FILTER/TVS ARRAY

APPLICATIONS

- ✓ Cellular Phones
- ✓ SMART Cards
- ✓ Notebooks
- ✓ Personal Digital Assistant (PDA)
- ✓ Ground Positioning System (GPS)

IEC COMPATIBILITY (EN61000-4)

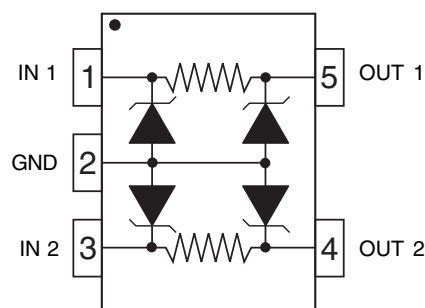
- ✓ 61000-4-2 (ESD): Air - 15kV, Contact - 8kV
- ✓ 61000-4-4 (EFT): 40A - 5/50ns

FEATURES

- ✓ ESD Protection > 25 kilovolts
- ✓ 175 Watts Peak Pulse Power per Line ($t_p = 8/20\mu s$)
- ✓ Bidirectional EMI Filtering
- ✓ Low Insertion Loss: Up to 10MHz, -3db Roll-Off @ 40MHz
- ✓ Protects Up to Two (2) Data Lines

MECHANICAL CHARACTERISTICS

- ✓ Molded JEDEC SC-70-5L
- ✓ Weight 0.1 grams (Approximate)
- ✓ 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}	175	Watts
Operating Temperature	T_J	-55°C to 150°C	°C
Storage Temperature	T_{STG}	-55°C to 150°C	°C
Typical Series Resistance per Line	R	40	Ohms

ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified							
PART NUMBER	DEVICE MARKING	RATED STAND-OFF VOLTAGE	MINIMUM BREAKDOWN VOLTAGE	MAXIMUM REVERSE LEAKAGE CURRENT	MAXIMUM REVERSE LEAKAGE CURRENT	TYPICAL CAPACITOR (Per Junction)	MAXIMUM CAPACITANCE (See Note 1)
		V_{WM} VOLTS	@ 1mA $V^{(BR)}$ VOLTS	@ V_{WM} I_D μA	@ 3.3V I_D μA	@ 0V, 1 MHz C_J pF	@ 0V, 1 MHz C_{TOT} pF
STF701	05F	5.0	6.0	5.0	1.0	40	160

Note 1: Capacitance measured between input and output, per line.

FIGURE 1
PEAK PULSE POWER VS PULSE TIME

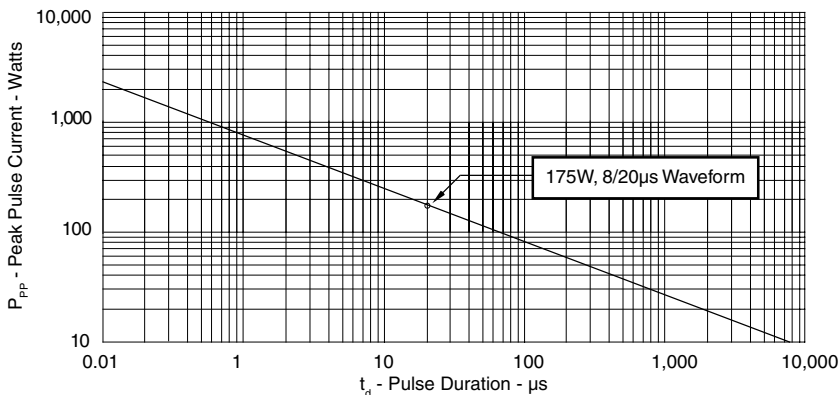
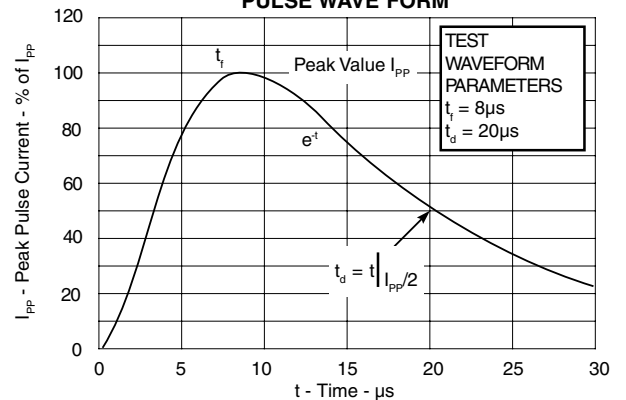
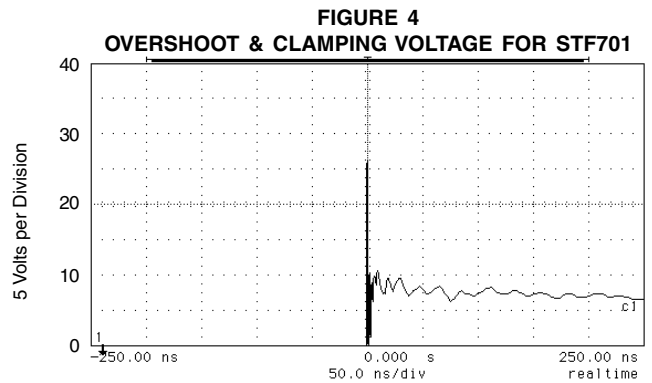
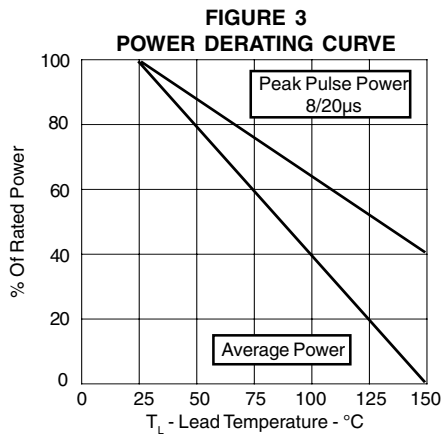


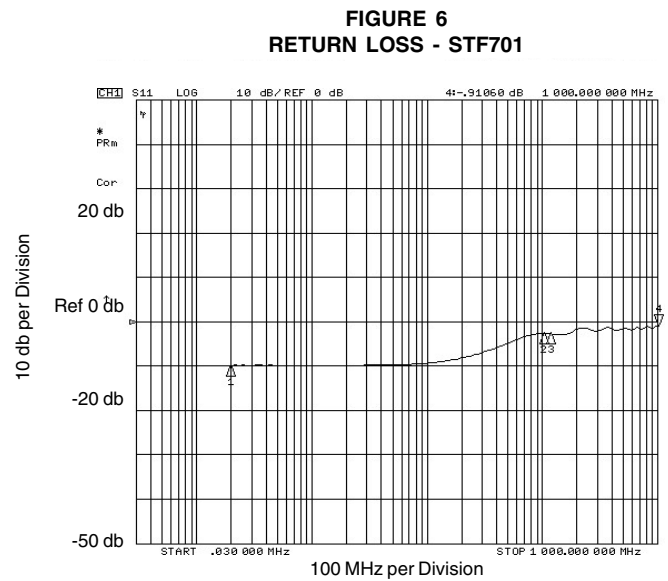
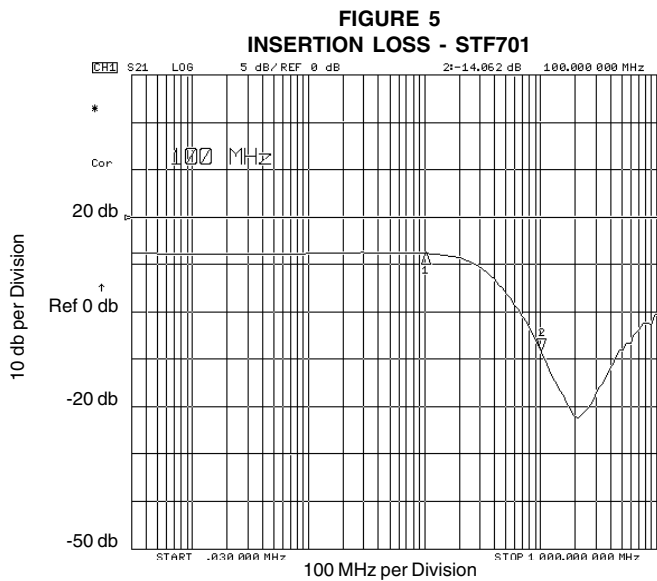
FIGURE 2
PULSE WAVE FORM



GRAPHS



ESD Test Pulse: 25 kilovolt, 1/30ns (waveform)



PACKAGE OUTLINE & DIMENSIONS

PACKAGE OUTLINE

SC-70-5L

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.90	2.15	0.074	0.084
B	1.15	1.35	0.045	0.055
C	0.80	1.00	0.031	0.040
D	0.15	0.30	0.006	0.012
E	0.65 BSC	-	0.0255 BSC	-
F	1.30 BSC	-	0.0512 BSC	-
G	0.80	1.10	0.031	0.043
J	0.08	0.25	0.003	0.010
K	1.90	2.15	0.074	0.084
L	0	0.10	0	0.004
M	0.26	0.46	0.010	0.018

MOUNTING PAD

TYPICAL		
DIM	Millimeters	Inches
1	0.50	0.020
2	1.30	0.051
3	0.65	0.026
4	2.40	0.094
5	0.60	0.024
6	0.70	0.028
7	2.50	0.098

NOTES

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

TAPE & REEL ORDERING NOMENCLATURE

- Surface mount product is taped and reeled in accordance with EIA-481.
- Suffix-T7 = 7 Inch Reel - 3,000 pieces per 8mm tape, i.e., STF701-T7.

Outline & Dimensions: Rev 0 - 11/01, 06005

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