

**STANDARD TVS ARRAYS**
**APPLICATIONS**

- ✓ Low Frequency I/O Ports
- ✓ RS-232 & 423 Data Lines
- ✓ Power Bus Lines
- ✓ Monitoring & Industrial Data Ports
- ✓ Microprocessor Based Equipment

**IEC COMPATIBILITY (EN61000-4)**

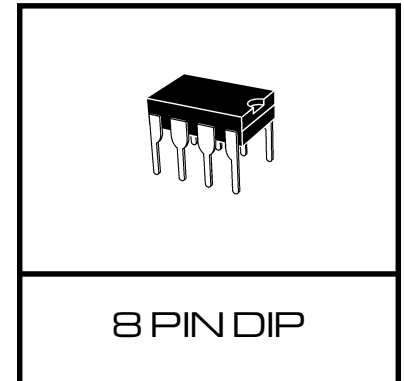
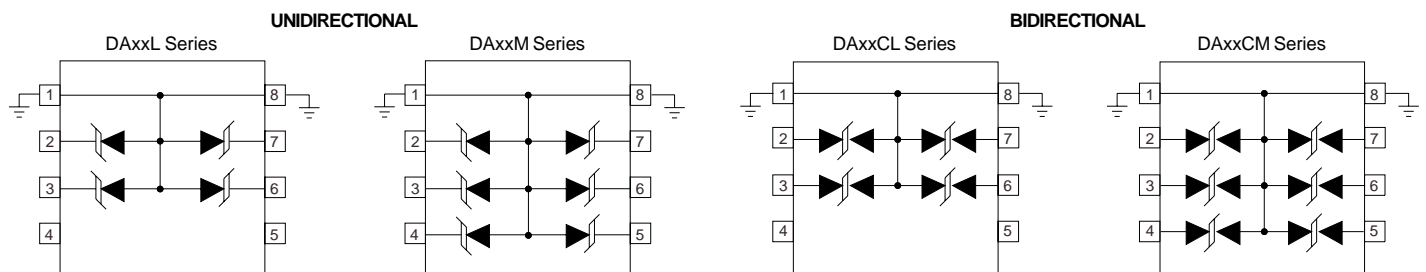
- ✓ 61000-4-2 (ESD): Air - 15kV, Contact - 8kV
- ✓ 61000-4-4 (EFT): 40A - 5/50ns
- ✓ 61000-4-5 (Surge): 24A, 8/20 $\mu$ s - Level 2(Line-Gnd) & Level 3(Line-Line)

**FEATURES**

- ✓ **ESD PROTECTION > 40 kilovolts**
- ✓ 800 Watts Peak Pulse Power Dissipation per Line (8/20 $\mu$ s)
- ✓ Protects 4 to 6 Lines
- ✓ Unidirectional & Bidirectional Configurations

**MECHANICAL CHARACTERISTICS**

- ✓ Molded Plastic Dual-in-Line 8 Pin Package
- ✓ Weight 0.55 grams (Approximate)
- ✓ Flammability Rating UL 94V-0
- ✓ Device Marking: Logo & Part Number
- ✓ Pin One Defined By DOT on Top of Package


**CIRCUIT DIAGRAMS**


## 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	$P_{PP}$	800	Watts
Operating Temperature	$T_J$	-55°C to 150°C	°C
Storage Temperature	$T_{STG}$	-55°C to 150°C	°C
Forward Surge Rating (1/20 seconds @ 25°C)	$V_F$	10	Amps

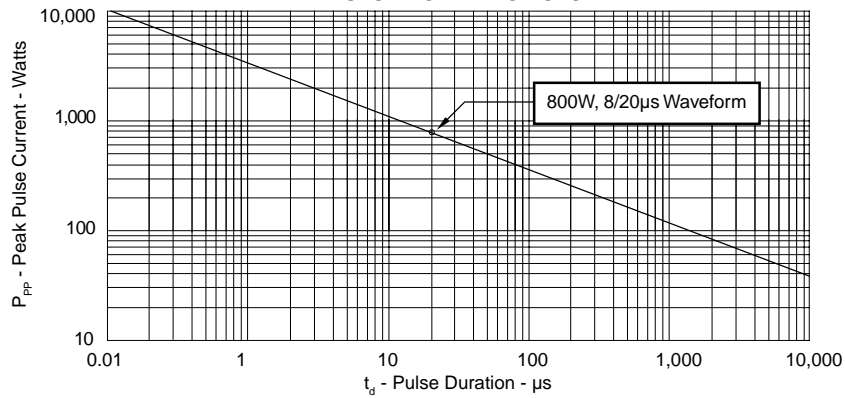
ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified						
PART NUMBER (See Notes 1 & 2)	RATED STAND-OFF VOLTAGE  $V_{WM}$ VOLTS	MINIMUM BREAKDOWN VOLTAGE  @ 1mA $V_{(BR)}$ VOLTS	MAXIMUM CLAMPING VOLTAGE (See Fig. 2)  @ $I_p = 1A$ $V_C$ VOLTS	MAXIMUM CLAMPING VOLTAGE (See Fig. 2)  @ 8/20 $\mu s$ $V_C @ I_{PP}$	MAXIMUM LEAKAGE CURRENT  @ $V_{WM}$ $I_D$ $\mu A$	TYPICAL CAPACITANCE  0V @ 1 MHz C pF
DA05L	5.0	6.0	12.5	24.6V @ 45A	200	880
DA12L	12.0	13.3	26.0	32.9V @ 34A	2	440
DA15L	15.0	16.7	33.0	37.2V @ 27A	2	400
DA24L	24.0	26.7	52.1	48.5V @ 22A	2	275
DA05M	5.0	6.0	12.5	24.6V @ 45A	200	880
DA12M	12.0	13.3	26.0	32.9V @ 34A	2	440
DA15M	15.0	16.7	33.0	37.2V @ 27A	2	400
DA24M	24.0	26.7	52.1	48.5V @ 22A	2	275
DA05CL	5.0	6.0	12.5	24.6V @ 45A	200	500
DA12CL	12.0	13.3	26.0	32.9V @ 34A	2	385
DA15CL	15.0	16.7	33.0	37.2V @ 27A	2	300
DA24CL	24.0	26.7	52.1	48.5V @ 22A	2	200
DA05CM	5.0	6.0	12.5	24.6V @ 45A	200	500
DA12CM	12.0	13.3	26.0	32.9V @ 34A	2	385
DA15CM	15.0	16.7	33.0	37.2V @ 27A	2	300
DA24CM	24.0	26.7	52.1	48.5V @ 22A	2	200

**Note 1:** Unidirectional Only:  $V_F = 1.5$  Volts @ 10A, 300 $\mu s$  (square wave).

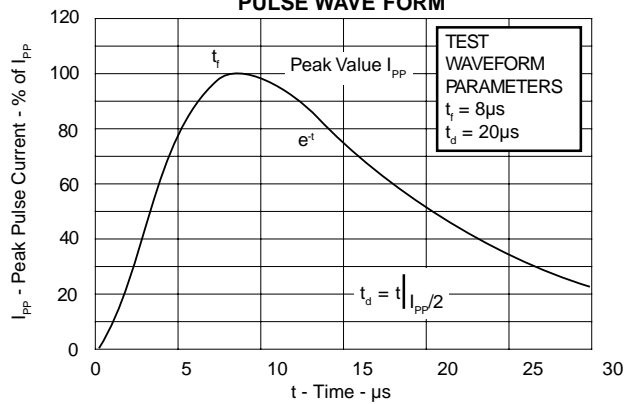
**Note 2:** The "C" suffix specifies a bidirectional device, such as DA05CM or DA12CL.

GRAPHS

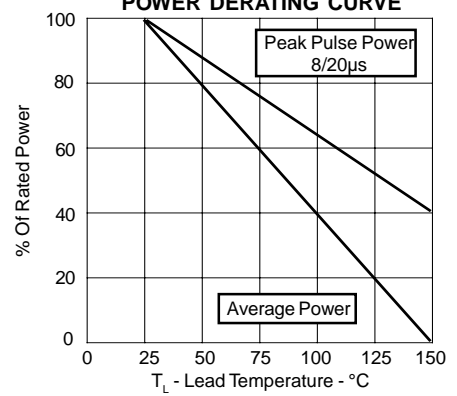
**FIGURE 1**  
**PEAK PULSE POWER VS PULSE TIME**



**FIGURE 2**  
**PULSE WAVE FORM**

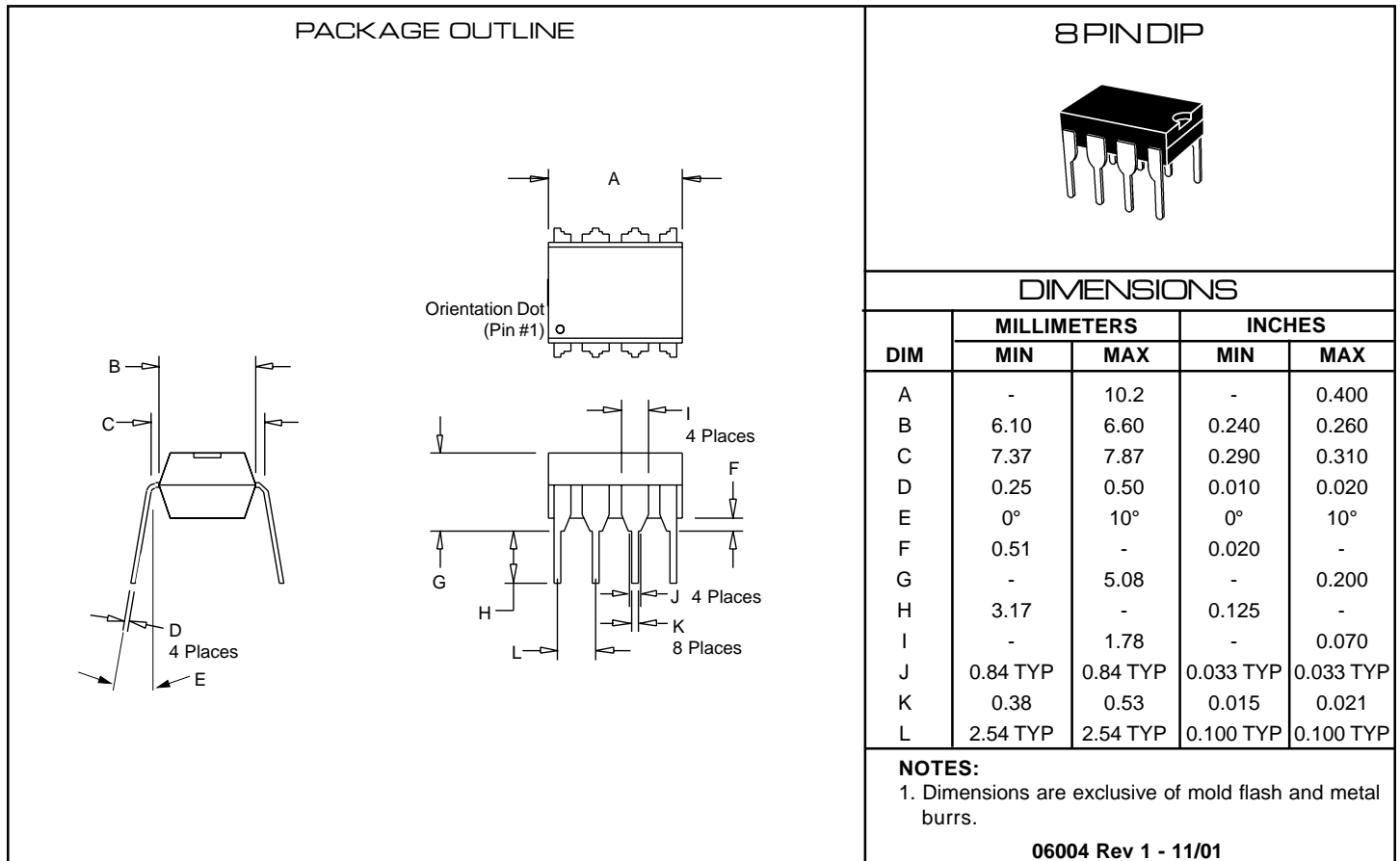


**FIGURE 3**  
**POWER DERATING CURVE**



# DA05L thru DA24CM

## PACKAGE OUTLINE & DIMENSIONS



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