HIGH POWERED MULTI-LINE TVS ARRAY



DESCRIPTION

The DA16 Series are high powered multi-line TVS arrays available in a 16 pin DIP package. This series is designed to protect monitoring and industrial equipment from the damaging effects of ESD, EFT and secondary transient threats.

The DA16 Series has a peak pulse power rating of 800 Watts for an $8/20\mu s$ waveshape. This devices meets the IEC 61000-4-2, IEC 61000-4-4 and IEC 61000-4-5 requirements.

FEATURES

- Compatible with IEC 61000-4-2 (ESD): Air 15kV, Contact 8kV
- Compatible with IEC 61000-4-4 (EFT): 40A 5/50ns
- Compatible with IEC 61000-4-5 (Surge): 24A, 8/20μs Level 2(Line-Gnd) & Level 3(Line-Line)
- 800 Watts Peak Pulse Power per Line (tp = 8/20μs)
- Unidirectional & Bidirectional Configurations
- ESD Protection > 25 kilovolts
- Available in Multiple Voltages
- Protects 8 to 12 Lines
- RoHS Compliant
- REACH Compliant

APPLICATIONS

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

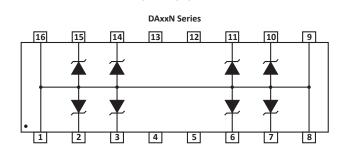
MECHANICAL CHARACTERISTICS

- Molded 16 Pin Dual-In-Line (DIP) Package
- Approximate Weight: 1.2 grams
- Lead-Free Pure-Tin Plating (Annealed)
- Solder Reflow Temperature:

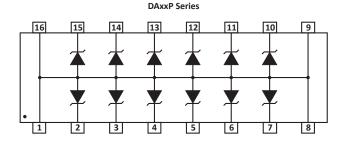
Pure-Tin - Sn, 100: 260-270°C

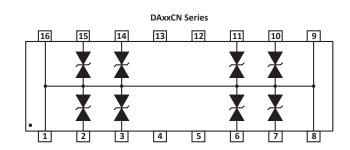
• Flammability Rating UL 94V-0

PIN CONFIGURATIONS

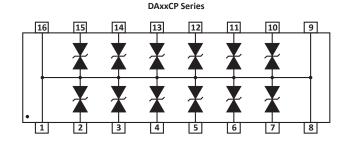


UNIDIRECTIONAL





BIDIRECTIONAL



TYPICAL DEVICE CHARACTERISTICS

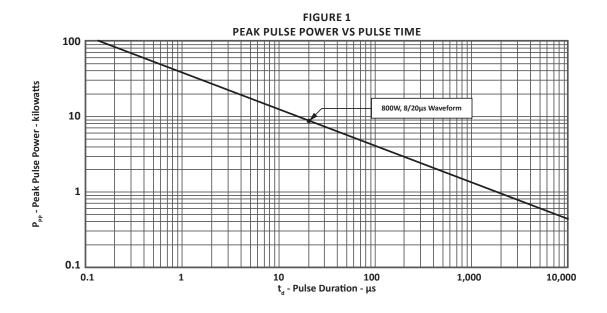
MAXIMUM RATINGS @ 25°C Unless Otherwise Specified					
PARAMETER	SYMBOL	VALUE	UNITS		
Peak Pulse Power (tp = 8/20μs) - See Figure 1	P _{pp}	800	Watts		
Operating Temperature	T _L	-55 to 150	°C		
Storage Temperature	T _{stg}	-55 to 150	°C		
Forward Surge Rating	I _F	10	Amps		

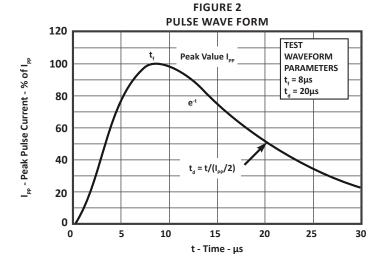
ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified						
PART NUMBER (Note 1)	RATED STAND-OFF VOLTAGE	MINIMUM BREAKDOWN VOLTAGE	MAXIMUM CLAMPING VOLTAGE (Fig. 2)	MAXIMUM CLAMPING VOLTAGE (Fig. 2)	MAXIMUM LEAKAGE CURRENT	TYPICAL CAPACITANCE
	V _{wM} VOLTS	@1mA V _(BR) VOLTS	@ IP = 10A V _c VOLTS	@ 8/20μs V _c @ Ι _{ρρ}	@V _{wм} Ι _D μΑ	@0V, 1MHz C pF
DA05N	5.0	6.0	12.5	24.6V @ 45.0A	200	880
DA05P	5.0	6.0	12.5	24.6V @ 45.0A	200	880
DA05CN	5.0	6.0	12.5	24.6V @ 45.0A	200	500
DA05CP	5.0	6.0	12.5	24.6V @ 45.0A	200	500
DA12N	12.0	13.3	26.0	32.9V @ 34.0A	2	440
DA12P	12.0	13.3	26.0	32.9V @ 34.0A	2	440
DA12CN	12.0	13.3	26.0	32.9V @ 34.0A	2	385
DA12CP	12.0	13.3	26.0	32.9V @ 34.0A	2	385
DA15N	15.0	16.7	33.0	37.7V @ 27.0A	2	400
DA15P	15.0	16.7	33.0	37.7V @ 27.0A	2	400
DA15CN	15.0	16.7	33.0	37.7V @ 27.0A	2	300
DA15CP	15.0	16.7	33.0	37.7V @ 27.0A	2	300
DA24N	24.0	26.7	52.1	53.0V @ 20.0A	2	275
DA24P	24.0	26.7	52.1	53.0V @ 20.0A	2	275
DA24CN	24.0	26.7	52.1	53.0V @ 20.0A	2	200
DA24CP	24.0	26.7	52.1	53.0V @ 20.0A	2	200
NOTES		<u> </u>	<u> </u>			

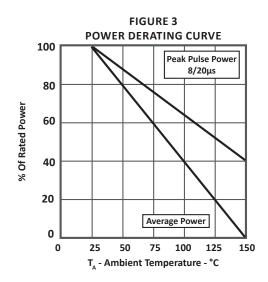
NOTES 1. The "C" suffix denotes a bidirectional device, such as DA05 $\underline{\mathbf{C}}$ N.

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TYPICAL DEVICE CHARACTERISTICS





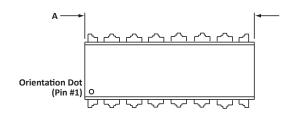


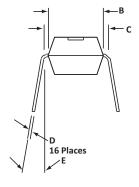
16 PIN DIP PACKAGE INFORMATION

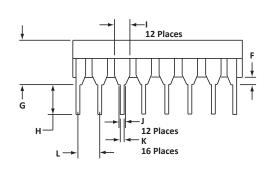
OUTLINE DIMENSIONS					
DIM	MILLIMETERS		INCHES		
	MIN	MAX	MIN	MAX	
А	18.80	19.55	0.740	0.770	
В	6.35	6.85	0.250	0.270	
С	7.50	7.74	0.295	0.305	
D	0.21	0.38	0.008	0.015	
Е	0°	10°	0°	10°	
F	0.51	1.01	0.020	0.040	
G	3.69	4.44	0.145	0.175	
Н	2.80	3.30	0.110	0.130	
I	1.02	1.77	0.040	0.070	
J	1.27	1.27	0.050	0.050	
К	0.39	0.53	0.015	0.021	
L	2.54	2.54	0.100	0.100	



- ${\bf 1.} \ \ {\bf Dimensions} \ {\bf are} \ {\bf exclusive} \ {\bf of} \ {\bf mold} \ {\bf flash} \ {\bf and} \ {\bf metal} \ {\bf burrs}.$
- 2. Dimensions "J" and "L" are between centers.







ORDERING INFORMATION					
BASE PART NUMBER (xx = Voltage)	LEADFREE SUFFIX	TAPE SUFFIX	QTY/REEL	REEL SIZE	TUBE QTY
DAxxN	-LF	n/a	n/a	n/a	25
DAxxP	-LF	n/a	n/a	n/a	25
DAxxCN	-LF	n/a	n/a	n/a	25
DAxxCP	-LF	n/a	n/a	n/a	25

NOTES

1. Marking on Part - logo, part number, date code and pin one defined by dot on top of package.

Package outline per document number 06003.R2 9/09.



COMPANY INFORMATION

COMPANY PROFILE

ProTek Devices, based in Tempe, Arizona USA, is a manufacturer of Transient Voltage Suppression (TVS) products designed specifically for the protection of electronic systems from the effects of lightning, Electrostatic Discharge (ESD), Nuclear Electromagnetic Pulse (NEMP), inductive switching and EMI/RFI. With over 25 years of engineering and manufacturing experience, ProTek designs TVS devices that provide application specific protection solutions for all electronic equipment/systems.

ProTek Devices Analog Products Division, also manufactures analog interface, control, RF and power management products.

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