

1500 WATT TVS COMPONENT



APPLICATIONS

- Automotive

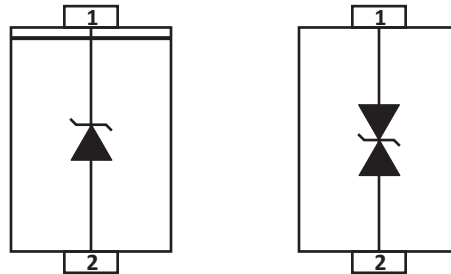
FEATURES

- **AEC-Q101 Qualified**
- IEC Compatibility 61000-4-2 (ESD)
- IEC Compatibility 61000-4-4 (EFT)
- IEC Compatibility 61000-4-5 (Surge)
- 1500 Watts Peak Pulse Power per Line ($t_p = 10/1000\mu s$)
- Halogen-Free
- Low Profile Package
- Built-in Strain Relief
- Glass Passivated Junction
- Excellent Clamping Capability
- Repetition Rate (Duty Cycle): 0.05%
- Fast Response Time: Typically less than 1.0ps from 0 Volts to BV Min
- Typical IR < 1 μA above 12V
- High Temperature Soldering: 260°C/40 seconds at Terminals
- Available in Multiple Voltages
- Bidirectional and Unidirectional Configurations
- RoHS Compliant
- REACH Compliant

MECHANICAL CHARACTERISTICS

- Molded JEDEC DO-214AB Package
- Approximate Weight: 0.21 grams
- Lead-Free Pure-Tin Plating (Annealed)
- Solder Reflow Temperature:
Pure-Tin - Sn, 100: 260-270°C
- 16mm Tape and Reel Per EIA Standard 481
- Terminal: Solderable per MIL-STD-750, Method 2026
- Flammability Rating UL 94V-0

PIN CONFIGURATIONS



TYPICAL DEVICE CHARACTERISTICS
MAXIMUM RATINGS @ 25°C Unless Otherwise Specified

PARAMETER	SYMBOL	VALUE	UNITS
Operating Temperature	T_L	-55 to 150	°C
Storage Temperature	T_{STG}	-55 to 150	°C
Peak Pulse Power (tp =10/1000µs) - See Figure 1	P_{PP}	1500	Watts

ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified

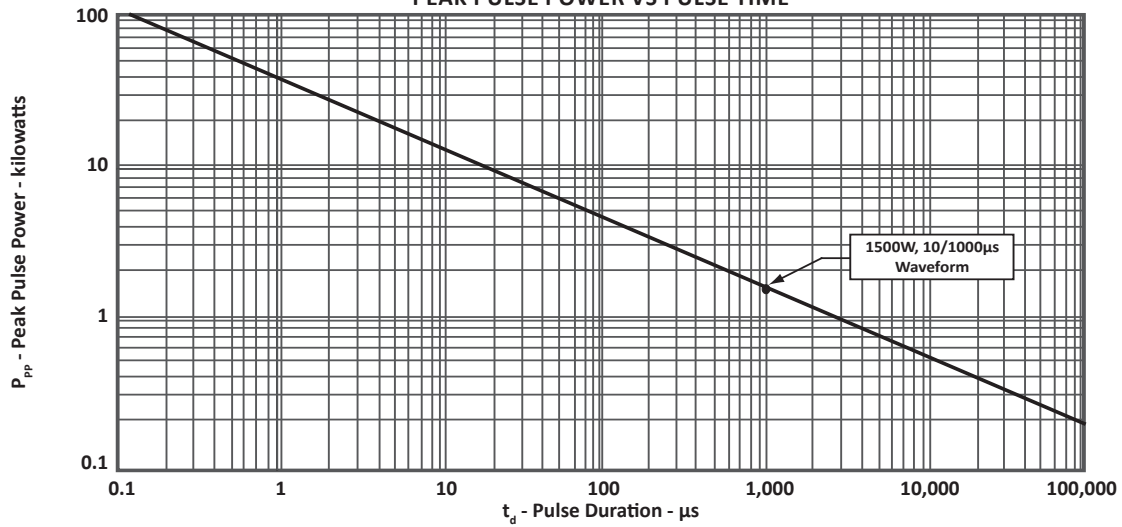
PART NUMBER (Notes 1 -2)	DEVICE MARKING	REVERSE STAND-OFF VOLTAGE V_{RWM} VOLTS	BREAKDOWN VOLTAGE $V_{(BR)} @ I_T$ VOLTS		TEST CURRENT $@ I_T$ mA	MAXIMUM CLAMPING VOLTAGE (Fig. 2) $@ I_P$ V_C VOLTS	PEAK PULSE CURRENT $@ I_{PP}$ AMPS	REVERSE LEAKAGE CURRENT $@ V_{RWM}$ I_R µA
			MIN	MAX				
PAM35DOAB30A	30A	25.60	28.50	31.50	1	41.4	36.7	1
PAM35DOAB47A	47A	40.20	44.70	49.40	1	64.8	23.5	1

NOTE

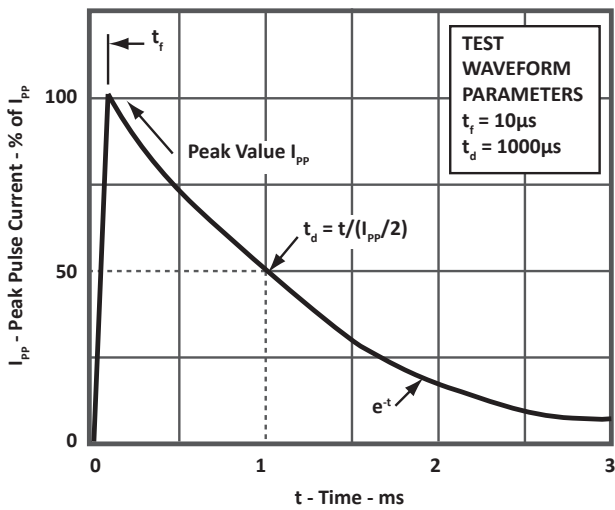
- Part numbers shown are unidirectional devices only. Add "C" to specify bidirectional when ordering, i.e., PAM35DOAB30CA.
- Marking code shown are for unidirectional devices only. Replace "A" with "C" for device marking, i.e., marking code for PAM35DOAB30CA is 30C.

TYPICAL DEVICE CHARACTERISTICS

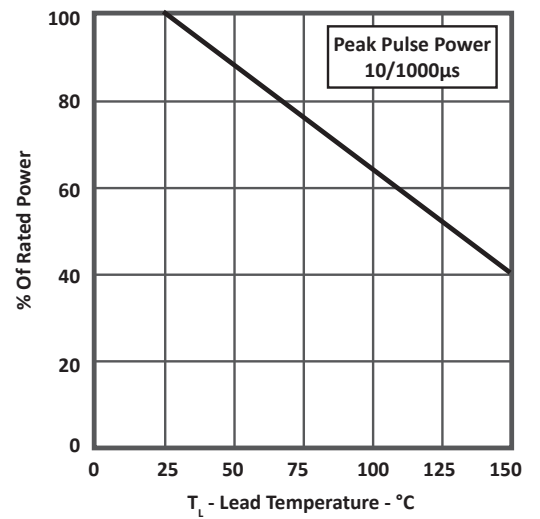
**FIGURE 1
PEAK PULSE POWER VS PULSE TIME**



**FIGURE 2
PULSE WAVEFORM**



**FIGURE 3
POWER DERATING CURVE**



TYPICAL DEVICE CHARACTERISTICS

FIGURE 4
TYPICAL JUNCTION CAPACITANCE

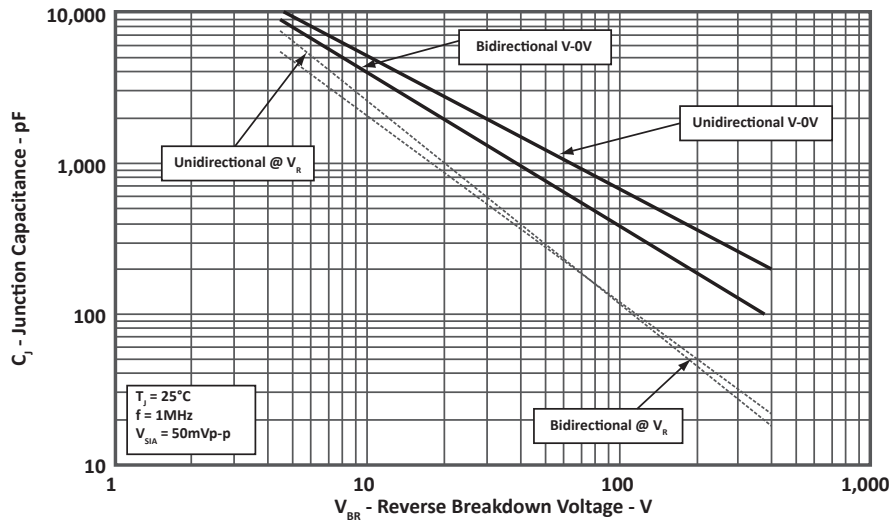


FIGURE 5
MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT
(UNIDIRECTIONAL ONLY)

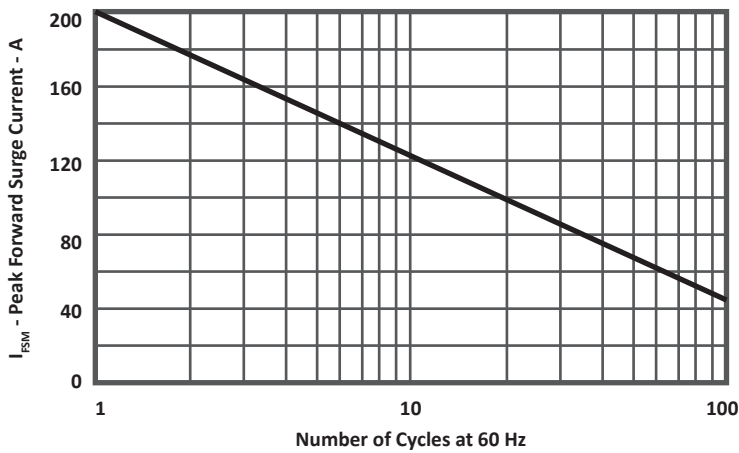
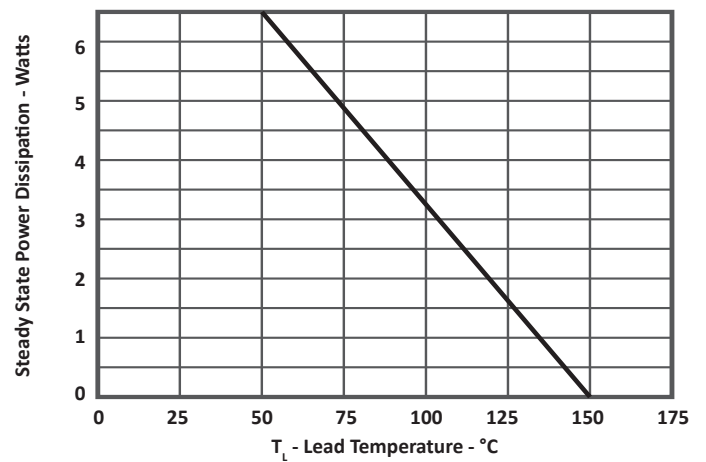


FIGURE 6
STEADY STATE POWER DERATING CURVE



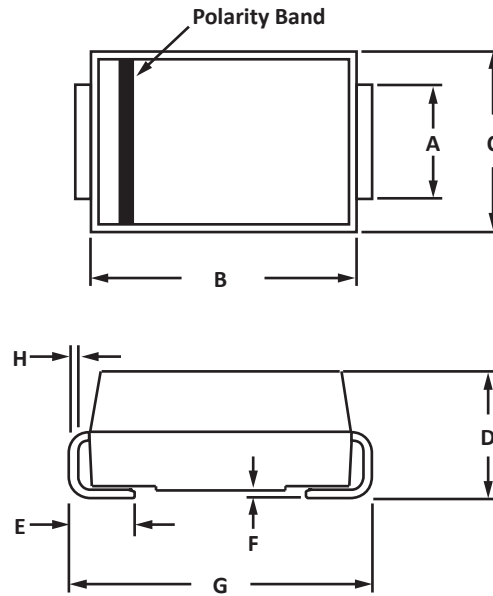
DO-214AB PACKAGE INFORMATION

OUTLINE DIMENSIONS

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	2.90	3.20	0.114	0.126
B	6.60	7.11	0.260	0.280
C	5.59	6.22	0.220	0.245
D	2.06	2.62	0.079	0.103
E	0.76	1.52	0.030	0.060
F	-	0.203	-	0.008
G	7.75	8.13	0.305	0.320
H	0.152	0.305	0.006	0.012

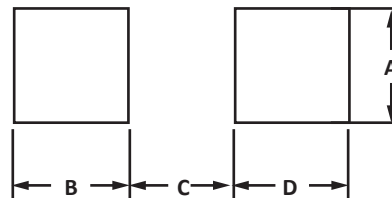
NOTES

1. Dimensions are exclusive of mold flash and metal burrs.

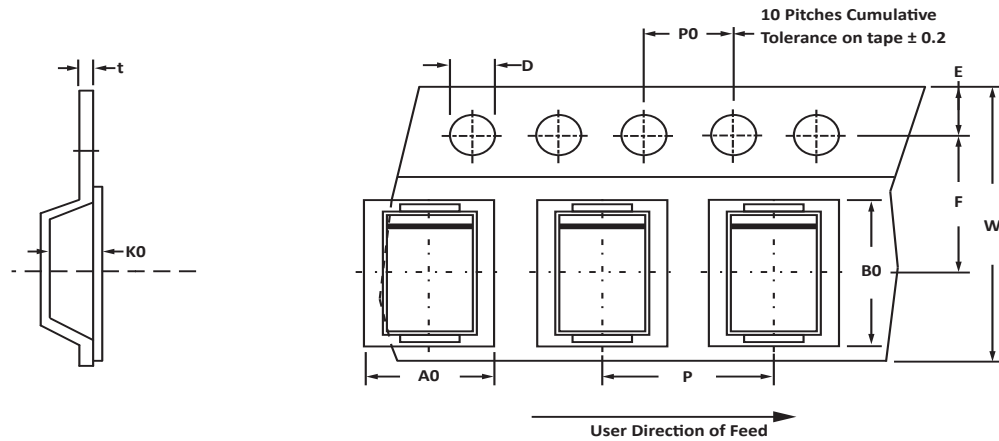


PAD LAYOUT DIMENSIONS

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	3.30	-	0.129	-
B	2.40	-	0.094	-
C	-	4.20	-	0.165
D	2.40	-	0.094	-



TAPE AND REEL



SPECIFICATIONS

REEL DIA.	TAPE WIDTH	A0	B0	K0	D	E	F	W	P0	P	tmax
330mm (13")	16mm	6.50 ± 0.20	8.25 ± 0.20	2.40 ± 0.30	1.55 ± 0.05	1.75 ± 0.10	7.5 ± 0.05	16.00 ± 0.30	4.00 ± 0.10	8.00 ± 0.10	0.4 ± 0.10

NOTES

- Dimensions are in millimeters.
- Surface mount product is taped and reeled in accordance with EIA-481.
- Suffix - T13 = 13" Reel - 3,000 pieces per 16mm tape.
- Marking on Part - marking code (see page 2), date code, logo and pin one defined by polarity band.

ORDERING INFORMATION

BASE PART NUMBER (xx = Voltage)	LEADFREE SUFFIX	TAPE SUFFIX	QTY/REEL	REEL SIZE	TUBE QTY
PAM35DOABxxA	N/A	-T13	3,000	13"	98
PAM35DOABxxCA	N/A	-T13	3,000	13"	98

This device is only available in a Lead-Free configuration.

COMPANY INFORMATION

COMPANY PROFILE

In business more than 20 years, ProTek Devices™ is a privately held semiconductor company. The company offers a product line of overvoltage protection and overcurrent protection components. These include transient voltage suppressor array (TVS arrays) avalanche breakdown diode, steering diode TVS array and electronics SMD chip fuses. These components deliver circuit protection in electronic systems from numerous overvoltage and overcurrent events. They include lightning; electrostatic discharge (ESD); nuclear electromagnetic pulses (NEMP); inductive switching; and electromagnetic interference (EMI) / radio frequency interference (RFI). ProTek Devices also offers LED wafer die for ESD protection and related high frequency products.

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