1000 WATT TVS COMPONENT

RTCA DO-160G COMPLIANT PRODUCT

DO-214AA PACKAGE

APPLICATIONS

- Automotive

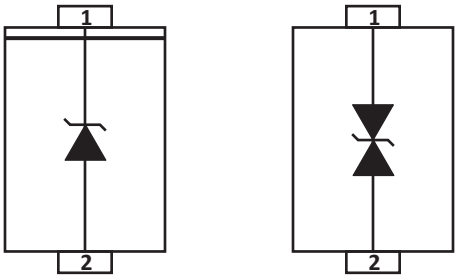
FEATURES

- **RTCA DO-160G COMPLIANT PRODUCT**
- ***AEC-Q101 Qualified***
- UL Registered
- Compatible with IEC 61000-4-2 (ESD): Level 4 - Air 15kV, Contact 8kV
- Compatible with IEC 61000-4-4 (EFT): 40A, 5/50ns
- Compatible with IEC 61000-4-5 (Surge): 8/20µs Waveform
- Glass Passivated Chip
- 1000 Watts Peak Pulse Power per Line (tp = 10/1000µs)
- Low Leakage Current
- Bidirectional and Unidirectional Configurations
- Excellent Clamping Capability
- Very Fast Response Time
- Available in Multiple Voltages
- RoHS Compliant
- REACH Compliant

MECHANICAL CHARACTERISTICS

- Molded JEDEC DO-214AA Package
- Approximate Weight: 0.103 grams
- Lead-Free Pure-Tin Plating (Annealed)
- Solder Reflow Temperature:
  Pure-Tin - Sn, 100: 260-270°C
- 12mm 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

RTCA DO-160G COMPLIANT PRODUCT

MAXIMUM RATINGS @ 25°C Unless Otherwise Specified			
PARAMETER	**SYMBOL**	**VALUE**	**UNITS**
Operating Temperature	T_J	-55 to 125	°C
Storage Temperature	T_{STG}	-55 to 150	°C
Peak Pulse Power (tp =10/1000µs) - See Figure 1 and Note 1	P_{PP}	1000	Watts
Power Dissipation on Infinite Heatsink at T_L = 75°C	P_D	5.0	Watts
Peak Forward Surge Current, 8.3ms single half sinewave - Unidirectional Only (Note 2)	I_{FSM}	100	Amps
Maximum Instantaneous Forward Voltage at 50A - Unidirectional Only (Note 3)	V_F	5.0	V

NOTE
1. Non-repetitive current pulse per Figure 2 and derated above T_A = 25°C per Figure 3.
2. Measured on 8.3ms single half sinewave or equivalent square wave, duty cycle = 4 pulses per minute maximum.
3. V_F < 3.5V .

ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified

PART NUMBER (Notes 1-2)	DEVICE MARKING		REVERSE STAND-OFF VOLTAGE	BREAKDOWN VOLTAGE $V_{(BR)}$ @ I_T VOLTS		TEST CURRENT	MAXIMUM CLAMPING VOLTAGE (Fig. 2)	MAXIMUM REVERSE SURGE CURRENT	MAXIMUM REVERSE LEAKAGE CURRENT
	UNI	BI	V_{RWM} VOLTS	MIN	MAX	@ I_T mA	@ I_P V_C VOLTS	@I_{PP} AMPS	@V_{RWM} I_R µA
PAM36DOAA18A	A18	C18	18.0	20.00	22.10	1	29.2	34.3	1
PAM36DOAA28A	A28	C28	28.0	31.10	34.40	1	45.4	22.1	1
PAM36DOAA30A	A30	C30	30.0	33.30	36.80	1	48.4	20.7	1
PAM36DOAA33A	A33	C33	33.0	36.70	40.60	1	53.3	18.8	1
PAM36DOAA36A	A36	C36	36.0	40.00	44.20	1	58.1	17.3	1

NOTES
1. Add suffix 'CA' after part number to specify a bidirectional device.
2. For bidirectional devices having a V_{RWM} of 10 Volts and under, the I_R limit is double.

TYPICAL DEVICE CHARACTERISTICS

RTCA DO-160G COMPLIANT PRODUCT

FIGURE 1
PEAK PULSE POWER VS PULSE TIME

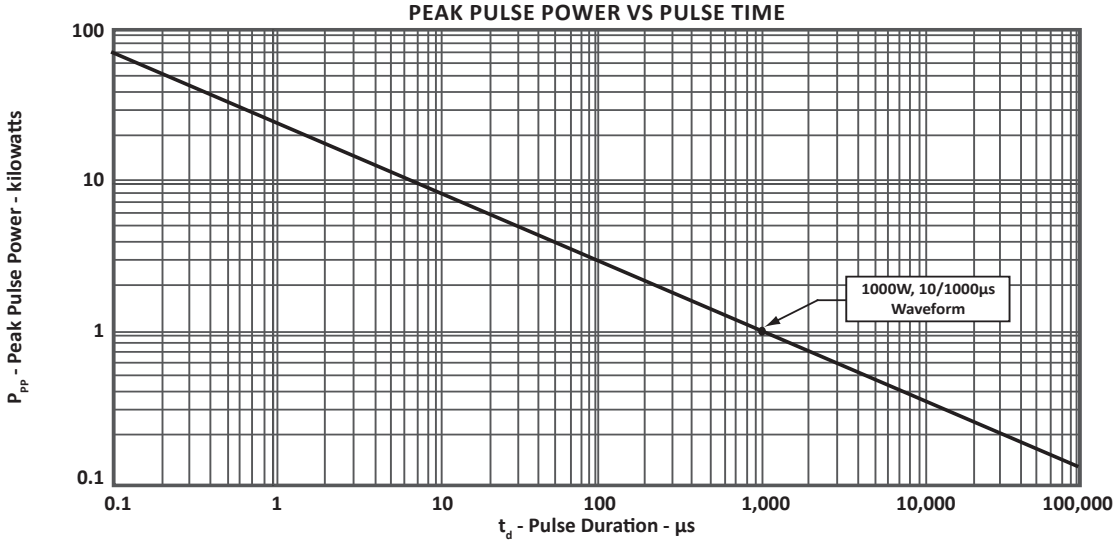


FIGURE 2
PULSE WAVEFORM

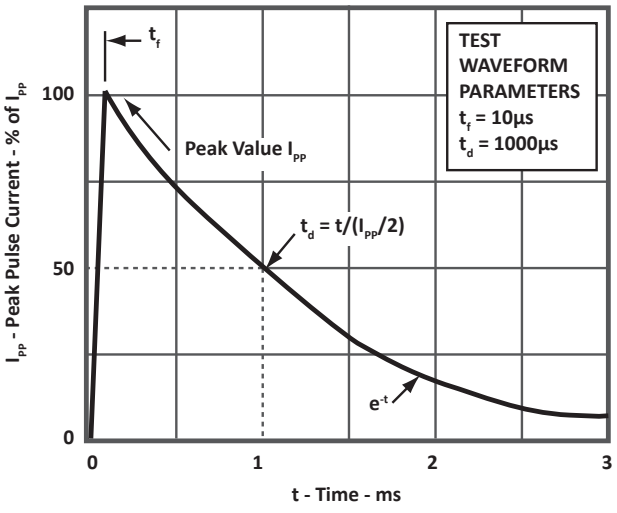
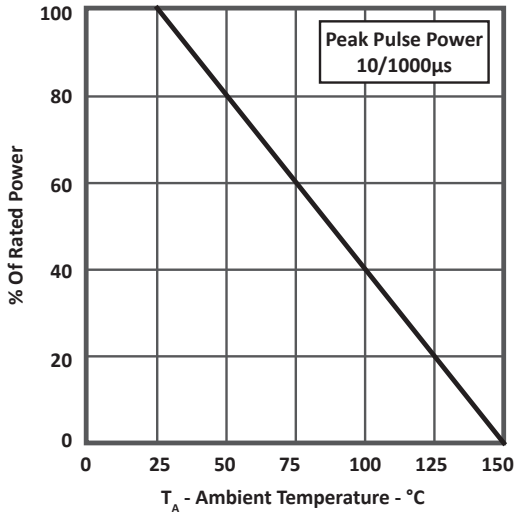


FIGURE 3
POWER DERATING CURVE

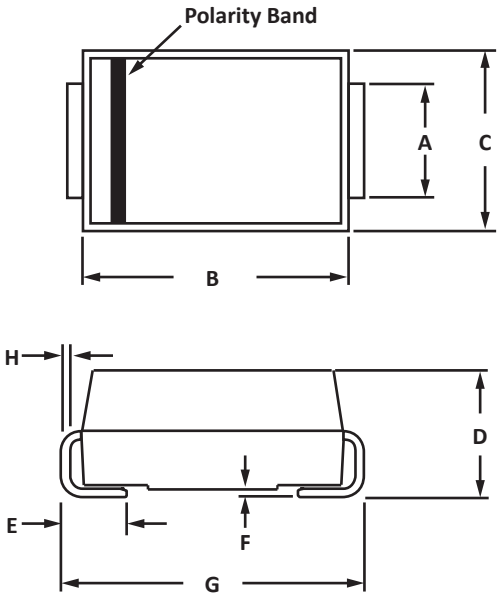


DO-214AA PACKAGE INFORMATION

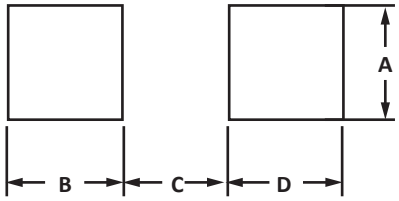
RTCA DO-160G COMPLIANT PRODUCT

OUTLINE DIMENSIONS				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.96	2.20	0.077	0.087
B	4.35	4.85	0.171	0.191
C	3.30	3.94	0.130	0.155
D	2.13	2.44	0.084	0.096
E	0.75	1.52	0.030	0.060
F	0.02	0.20	0.001	0.008
G	5.10	5.50	0.201	0.216
H	0.15	0.30	0.006	0.012

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

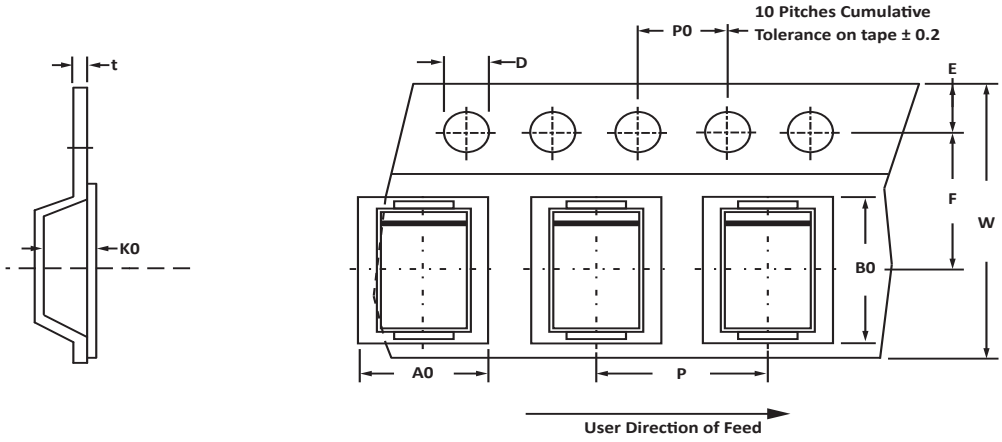


PAD LAYOUT DIMENSIONS				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	2.03	-	0.080	-
B	1.91	-	0.075	-
C	-	2.54	-	1.00
D	1.91	-	0.075	-



TAPE AND REEL

RTCA DO-160G COMPLIANT PRODUCT



SPECIFICATIONS											
REEL DIA.	TAPE WIDTH	A0	B0	K0	D	E	F	W	P0	P	tmax
330mm (13")	12mm	3.67 ± 0.10	5.69 ± 0.10	2.67 ± 0.10	1.55 ± 0.10	1.75 ± 0.10	5.5 ± 0.05	12.00 ± 0.30	4.00 ± 0.10	8.00 ± 0.10	0.4

NOTES
1. Dimensions are in millimeters.
2. Surface mount product is taped and reeled in accordance with EIA-481.
3. Suffix - T13 = 13" Reel - 3,000 pieces and T500 = 7" Reel - 500 pieces per 16mm tape.
4. Marking on Part - marking code (see page 2), date code, logo and cathode defined by polarity band.

ORDERING INFORMATION					
BASE PART NUMBER (Voltage = xx)	LEADFREE SUFFIX	TAPE SUFFIX	QTY/REEL	REEL SIZE	TUBE QTY
PAM36DOAAxxA	N/A	-T13	3,000	13"	N/A
PAM36DOAAxxCA	N/A	-T13	3,000	13"	N/A
PAM36DOAAxxA	N/A	-T500	500	7"	N/A
PAM36DOAAxxCA	N/A	-T500	500	7"	N/A
This device is only available in a Lead-Free configuration.					

COMPANY INFORMATION

RTCA DO-160G COMPLIANT PRODUCT

COMPANY PROFILE

In business more than 25 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. ProTek Devices is ISO 9001:2015 certified.

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