

## 7000 WATT TVS COMPONENT



**DO-214AB PACKAGE**

### APPLICATIONS

- Belt Starter (BSG) Generator Circuit
- Integrated Starter (ISG) Generator Circuit
- Hybrid Electric Vehicles

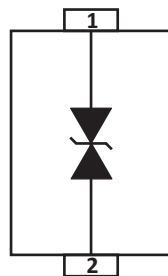
### FEATURES

- AEC-Q101 Qualified
- IEC Compatibility 61000-4-2 (ESD)
- IEC Compatibility 61000-4-4 (EFT)
- IEC Compatibility 61000-4-5 (Surge)
- Glass Passivated Chip
- 7000 Watts Peak Pulse Power per Line ( $t_p = 10/1000\mu s$ )
- Low Leakage Current
- Bidirectional Configuration
- Very Low Maximum Clamping Voltage
- RoHS Compliant
- REACH Compliant

### MECHANICAL CHARACTERISTICS

- Molded JEDEC DO-214AB Package
- Approximate Weight: 0.248 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 CONFIGURATION



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

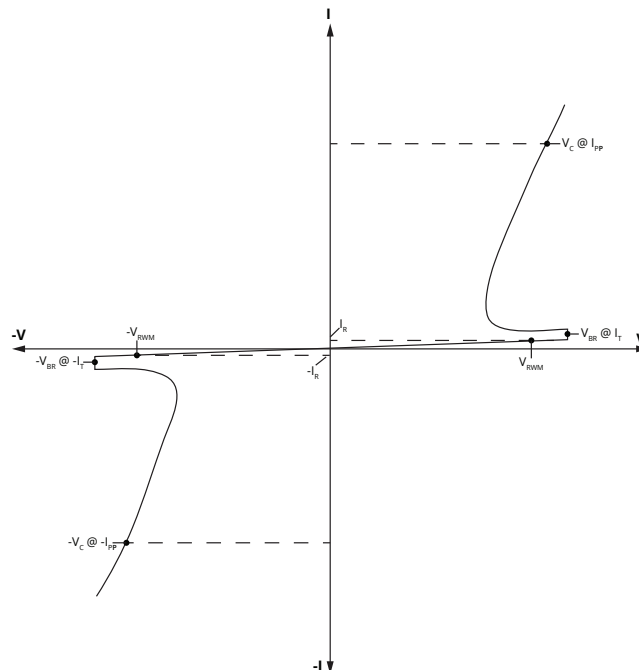
PARAMETER	SYMBOL	VALUE	UNITS
Operating Temperature	$T_J$	-55 to 150	°C
Storage Temperature	$T_{STG}$	-55 to 150	°C
Peak Pulse Power (tp = 10/1000µs) - Note 2	$P_{PP}$	7000	Watts
Power Dissipation on Infinite Heatsink at $T_L = 75^\circ\text{C}$	$P_D$	6.0	Watts
Maximum Peak Surge Current (tp=10/1000µs) - Note 1	$I_{PP}$	200	Amps

**NOTE**

1. Non-repetitive current pulse per Figure 2 and derated above  $T_A = 25^\circ\text{C}$  per Figure 2.
2. Equivalent to a conventional TVS diode.

**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	MAXIMUM REVERSE SURGE CURRENT  @ $I_{PP}$ AMPS	MAXIMUM REVERSE LEAKAGE CURRENT  @ $V_{RWM}$ $I_R$ µA
			MIN	MAX				
			PAM7KSMDJ24CAP	7K24				

**FIGURE 1  
VOLTAGE AND CURRENT CHARACTERISTICS**


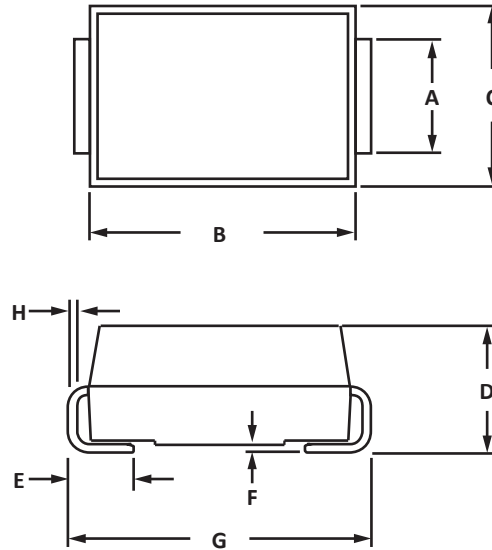
## DO-214AB PACKAGE INFORMATION

## OUTLINE DIMENSIONS

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	2.75	3.25	0.108	0.128
B	6.90	7.40	0.272	0.291
C	5.75	6.25	0.226	0.246
D	2.15	2.62	0.085	0.103
E	0.95	1.52	0.037	0.060
F	0.051	0.203	0.002	0.008
G	7.70	8.20	0.303	0.323
H	0.15	0.31	0.006	0.012

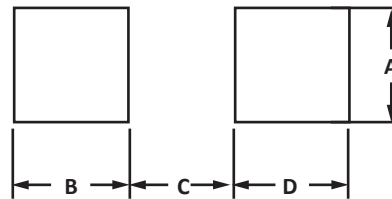
## NOTES

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

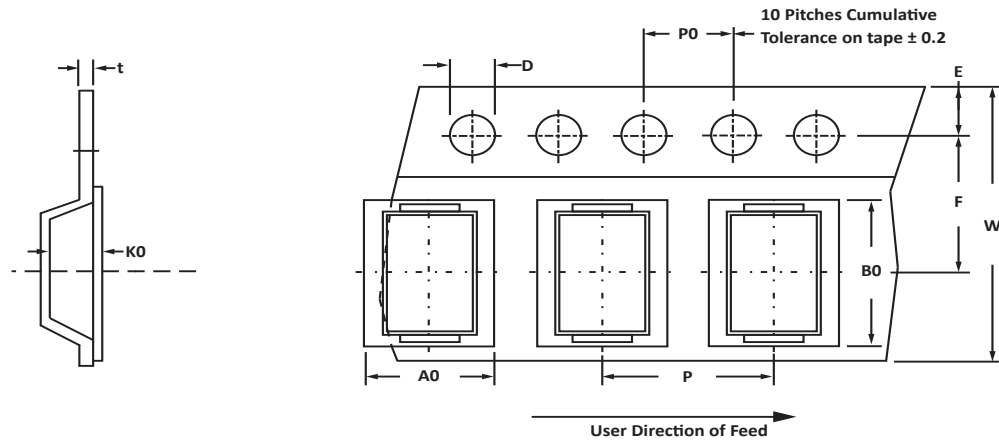


## PAD LAYOUT DIMENSIONS

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	3.30	-	0.130	-
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	6.05 ± 0.30	8.31 ± 0.30	2.54 ± 0.10	1.55 ± 0.10	1.75 ± 0.20	7.5 ± 0.20	16.00 ± 0.20	4.00 ± 0.20	8.00 ± 0.20	0.4

## NOTES

- Dimensions are in millimeters.
- Surface mount product is taped and reeled in accordance with EIA-481.
- Marking on Part - marking code (see page 2), date code, logo and cathode defined by polarity band.

## ORDERING INFORMATION

BASE PART NUMBER	LEADFREE SUFFIX	TAPE SUFFIX	QTY/REEL	REEL SIZE	TUBE QTY
PAM7KSMDJ24CAP	N/A	-T13	3,000	13"	N/A

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

## COMPANY INFORMATION

---

### COMPANY PROFILE

In business more than 30 years, ProTek Devices™ is a privately held semiconductor company. The company offers a product line of overvoltage protection that include Transient Voltage Suppressor (TVS) Arrays, Steering Diode Array Hybrids, High-power Components and Modules, as well as Steering Diodes, EMI Filter/TVS Arrays and Thyristor Surge Suppressors. These components deliver circuit protection in electronic systems from numerous overvoltage events. They include lightning; electrostatic discharge (ESD); nuclear electromagnetic pulses (NEMP); inductive switching; and electromagnetic interference (EMI) / radio frequency interference (RFI). ProTek Devices is an ISO 9001 certified company.

### CONTACT US

#### Corporate Headquarters

2929 South Fair Lane  
Tempe, Arizona 85282  
USA

#### By Telephone

General: 602-431-8101  
Sales: & Marketing: 602-414-5109  
Customer Service: 602-414-5114  
Product Technical Support: 602-414-5107

#### By Fax

General: 602-431-2288

#### By E-mail:

Asia Sales: [asiasales@protekdevices.com](mailto:asiasales@protekdevices.com)  
Europe Sales: [europesales@protekdevices.com](mailto:europesales@protekdevices.com)  
U.S. Sales: [ussales@protekdevices.com](mailto:ussales@protekdevices.com)  
Distributor Sales: [distysales@protekdevices.com](mailto:distysales@protekdevices.com)  
Customer Service: [service@protekdevices.com](mailto:service@protekdevices.com)  
Technical Support: [support@protekdevices.com](mailto:support@protekdevices.com)

#### ProTek Devices (Asia Pacific) Pte. Ltd.

8 Ubi Road 2, #06-19  
Zervex  
Singapore - 408538  
Tel: +65-67488312  
Fax: +65-67488313

#### Web

[www.protekdevices.com](http://www.protekdevices.com)

COPYRIGHT © ProTek Devices 2022 - This literature is subject to all applicable copyright laws and is not for resale in any manner.

SPECIFICATIONS: ProTek reserves the right to change the electrical and or mechanical characteristics described herein without notice.

DESIGN CHANGES: ProTek reserves the right to discontinue product lines without notice and that the final judgement concerning selection and specifications is the buyer's and that in furnishing engineering and technical assistance. ProTek assumes no responsibility with respect to the selection or specifications of such products. ProTek makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does ProTek assume any liability arising out of the application or use of any product or circuit and specifically disclaims any and all liability without limitation special, consequential or incidental damages.

LIFE SUPPORT POLICY: ProTek Devices products are not authorized for use in life support systems without written consent from the factory.