

SUPER FAST RECOVERY RECTIFIER**DO-214AC PACKAGE****APPLICATIONS**

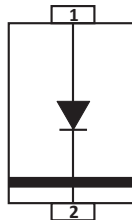
- High Frequency Rectification
- Freewheeling Application for Switch Mode Power Supplies

FEATURES

- Glass Passivated Chip Junction
- Super Fast Recovery Time For High Efficiency
- RoHS Compliant
- REACH Compliant

MECHANICAL CHARACTERISTICS

- Molded JEDEC DO-214AC Package
- Approximate Weight: 0.06 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 CONFIGURATION

TYPICAL DEVICE CHARACTERISTICS

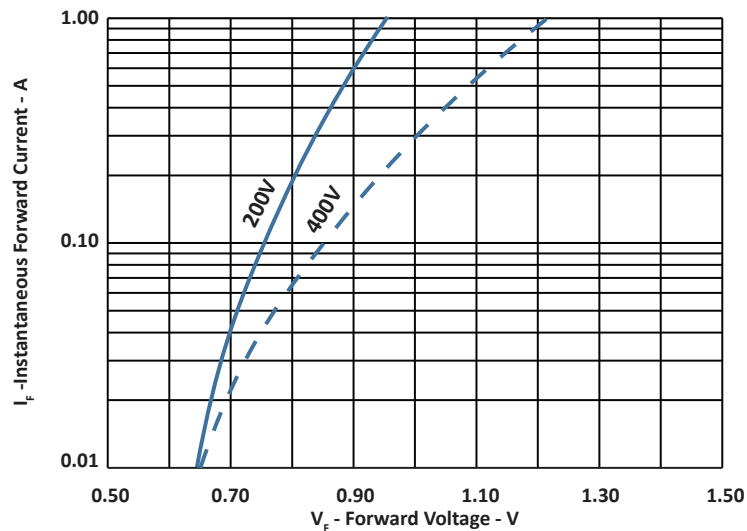
MAXIMUM RATINGS @ 25°C Unless Otherwise Specified

PARAMETER	SYMBOL	VALUE	UNITS
Operating Temperature	T_J	-65 to 150	°C
Storage Temperature	T_{STG}	-65 to 150	°C
Peak Forward Surge Current, 8.3ms single half sinewave	I_{FSM}	30	Amps
Maximum Average Forward Current at $T_J = 90^\circ\text{C}$	$I_{F(AV)}$	1.0	Amps
Maximum Reverse Recover Time: $I_F = 0.5\text{A}$, $I_R = 1\text{A}$, $I_{rr} = 0.25\text{A}$	t_{rr}	35	ns
Maximum DC Reverse Current: $T_J = 25^\circ\text{C}$	I_R	5.0	μA
Maximum DC Reverse Current: $T_J = 150^\circ\text{C}$	I_R	200	μA
Thermal Resistance - Junction to Air	$R_{\theta JA}$	85	°C/W
Thermal Resistance - Junction to Lead	$R_{\theta JL}$	35	°C/W

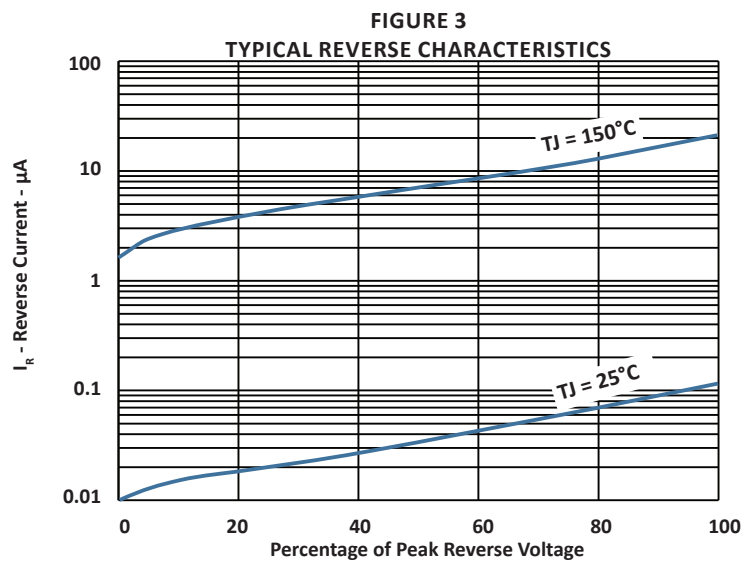
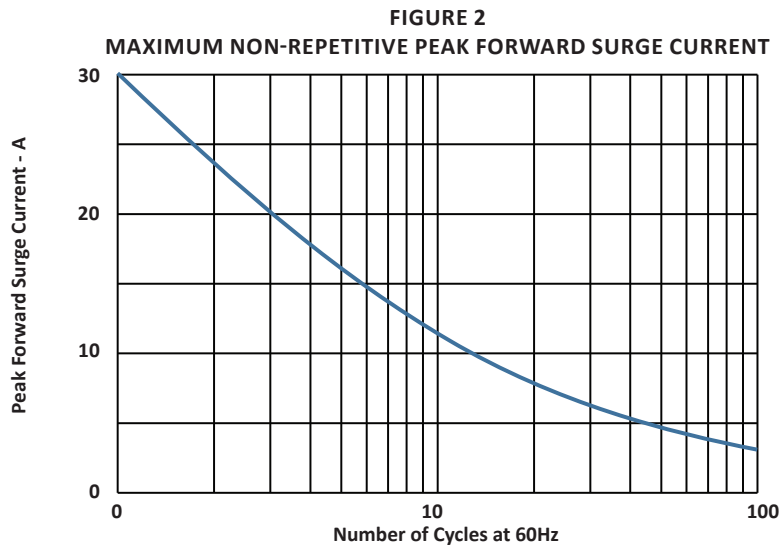
ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified

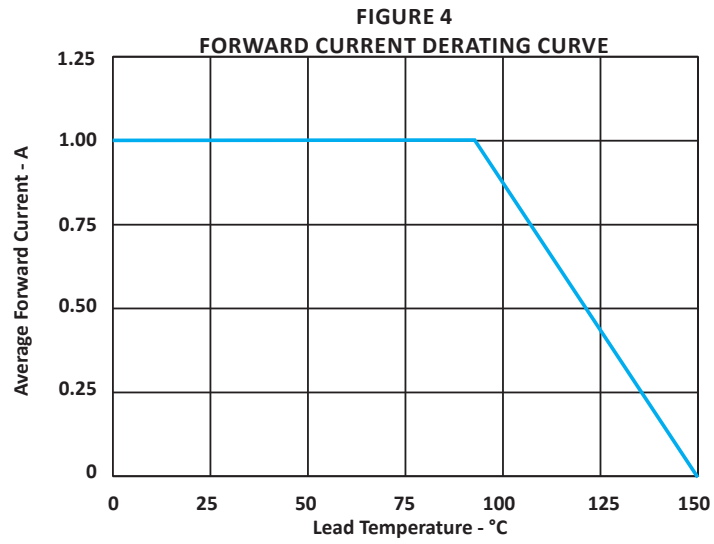
PART NUMBER	DEVICE MARKING	MAXIMUM REPETITIVE PEAK REVERSE VOLTAGE V_{RRM} VOLTS	MAXIMUM DC BLOCKING VOLTAGE V_{DC} VOLTS	MAXIMUM FORWARD VOLTAGE $I_F = 1\text{A}$ V_F VOLTS	TYPICAL JUNCTION CAPACITANCE $V_R = 4\text{V}$ $f = 1\text{MHZ}$ C_J pF
PES1D	ES1D	200	200	1.3	7
PES1G	ES1G	400	400	1.3	7

FIGURE 1
TYPICAL FORWARD CHARACTERISTICS



TYPICAL DEVICE CHARACTERISTICS



TYPICAL DEVICE CHARACTERISTICS

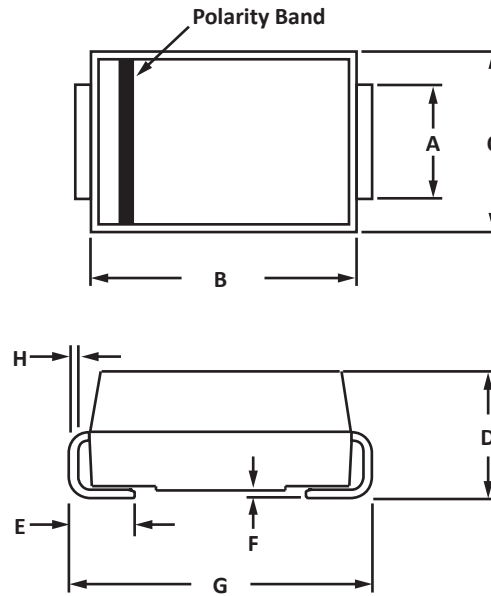
DO-214AC PACKAGE INFORMATION

OUTLINE DIMENSIONS

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.23	1.63	0.049	0.064
B	4.10	4.55	0.162	0.179
C	2.51	2.76	0.099	0.109
D	1.96	2.26	0.077	0.089
E	0.75	1.51	0.03	0.06
F	0.00	0.20	0.000	0.008
G	4.87	5.22	0.192	0.206
H	0.15	0.30	0.006	0.012

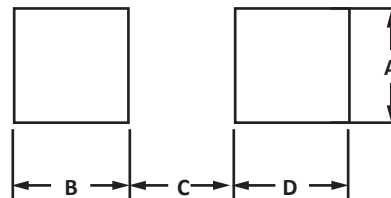
NOTES

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

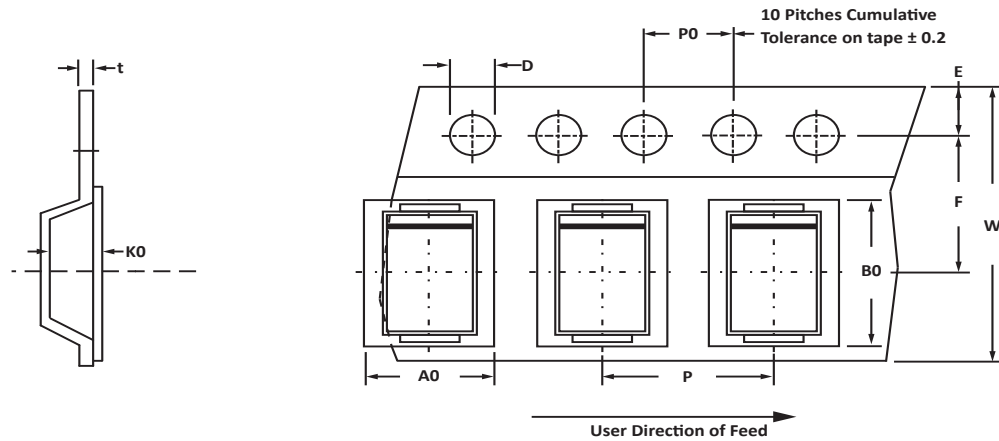


PAD LAYOUT DIMENSIONS

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.57	-	0.062	-
B	1.55	-	0.061	-
C	-	2.28	-	0.090
D	1.55	-	0.061	-



TAPE AND REEL



SPECIFICATIONS

REEL DIA.	TAPE WIDTH	A0	B0	K0	D	E	F	W	P0	P	tmax
330mm (13")	12mm	2.79 ± 0.10	5.33 ± 0.10	2.36 ± 0.10	1.55 ± 0.10	1.75 ± 0.10	5.5 ± 0.05	12.00 ± 0.30	4.00 ± 0.10	4.00 ± 0.10	0.4

NOTES

- Dimensions are in millimeters.
- Surface mount product is taped and reeled in accordance with EIA-481.
- Suffix - T13 = 13" Reel - 7,500 pieces and T500 = 7" Reel - 500 pieces per 16mm tape.
- 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
PES1x	N/A	-T500	500	13"	N/A
PES1x	N/A	-T13	7,500	13"	N/A

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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