

# MDE Semiconductor, Inc.

201 Shipyard Way, Unit C, Newport Beach, CA., USA 92663 Tel : 760-564-8656 • Fax : 760-564-2414

1-800-831-4881 Email: sales@mdesemiconductor.com Web: www.mdesemiconductor.com

## 15KPA SERIES

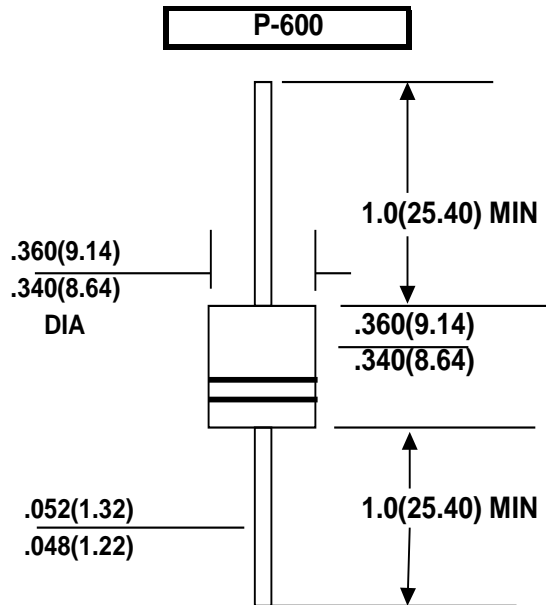
### GLASS PASSIVATED JUNCTION TRANSIENT VOLTAGE SUPPRESSOR VOLTAGE-17.0 TO 280 Volts 15000 Watt Peak Pulse Power

#### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Glass passivated junction
- 15000W Peak Pulse Power capability on 10/1000  $\mu$ s waveform
- Excellent clamping capability
- Repetition rate (duty cycle):0.05%
- Low incremental surge resistance
- Fast response time: typically less than 1.0 ps from 0 volts to BV
- High temperature soldering guaranteed: 265°C/10 seconds/.375", (9.5mm) lead length, 5lbs., (2.3kg) tension

#### MECHANICAL DATA

Case:Molded plastic over glass passivated junction  
 Terminals: Plated Axial leads, solderable per MIL-STD-750, Method 2026  
 Polarity: Color band denoted positive end (cathode) except Bipolar  
 Mounting Position: Any  
 Weight: 0.07 ounce, 2.1 gram



Dimensions in inches (millimeters)

#### DEVICES FOR BIPOLAR APPLICATIONS

For Bidirectional use C or CA Suffix for types 15KPA17 thru types 15KPA280  
 Electrical characteristics apply in both directions.

#### MAXIMUM RATINGS AND CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

RATING	SYMBOL	VALUE	UNITS
Peak Pulse Power Dissipation on 10/1000 $\mu$ s waveform (NOTE 1)	$P_{PPM}$	Minimum 15000	Watts
Peak Pulse Current of on 10-1000 $\mu$ s waveform (NOTE 1)	$I_{PPM}$	SEE TABLE 1	Amps
Steady State Power Dissipation at $T_I=75^\circ\text{C}$ Lead Lengths.375", (9.5mm)(NOTE 2)	$P_{M(AV)}$	8.0	Watts
Peak Forward Surge Current, 8.3ms Sine-Wave Superimposed on Rated Load, (JEDEC Method) (NOTE 3)	$I_{FSM}$	400.0	Amps
Operatings and Storage Temperature Range	$T_J, T_{STG}$	-55 to +175	°C

**NOTES:**

- 1.Non-repetitive current pulse, per Fig.3 and derated above  $T_a=25^\circ\text{C}$  per Fig.2.
- 2.Mounted on Copper Pad area of 0.8x0.8" (20x20mm) per Fig.5.
- 3.8.3ms single half sine-wave, or equivalent square wave, Duty cycle=4 pulses per minutes maximum

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## 15KPA Series Rating and Characteristics

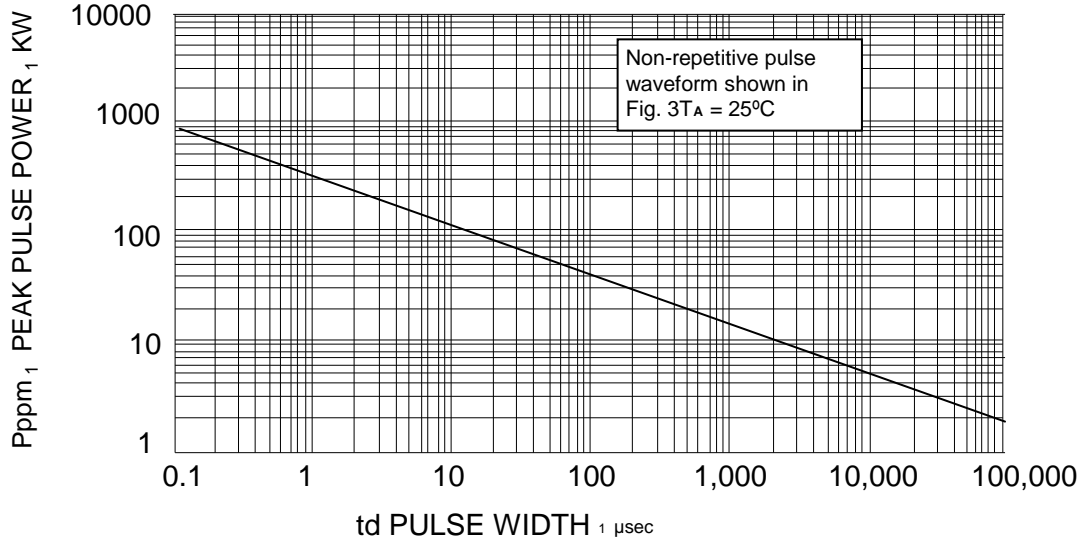


FIG. 1 PEAK PULSE POWER RATING

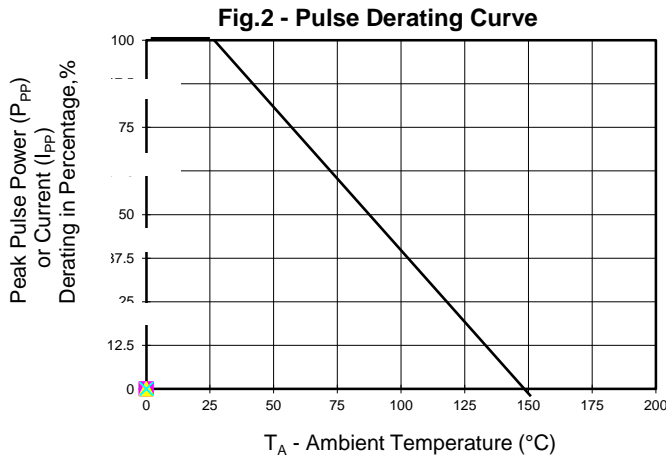
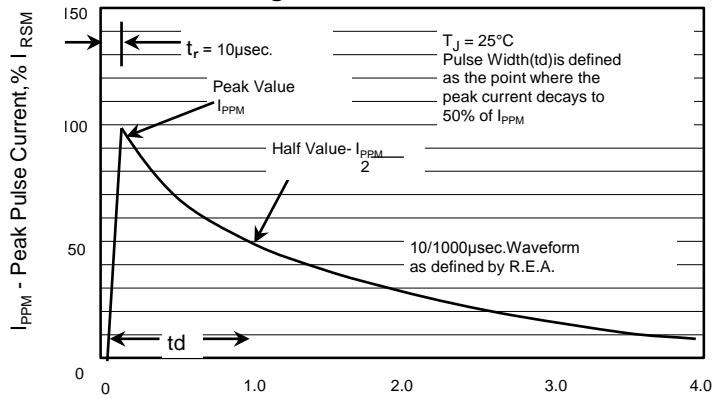


Fig.3 - Pulse Waveform



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## 15000 Watt TVS

UNI-POLAR	BI-POLAR	REVERSE STANDOFF VOLTAGE V <sub>RWM</sub> (V)	BREAKDOWN VOLTAGE V <sub>BR</sub> (V) MIN. @ I <sub>T</sub>	TEST CURRENT (I <sub>T</sub> ) mA	MAXIMUM CLAMPING VOLTAGE @I <sub>PP</sub> V <sub>C</sub> (V)	PEAK PULSE CURRENT I <sub>PP</sub> (A)	REVERSE LEAKAGE @ V <sub>RWM</sub> I <sub>R</sub> (µA)
15KPA17A	15KPA17CA	17	18.99	50	29.3	515.4	5000
15KPA18A	15KPA18CA	18	20.11	50	30.9	488.7	5000
15KPA20A	15KPA20CA	20	22.34	20	34.3	440.2	1500
15KPA22A	15KPA22CA	22	24.57	10	37.1	407.0	500
15KPA24A	15KPA24CA	24	26.81	5	40.7	371.0	150
15KPA26A	15KPA26CA	26	29.04	5	44.0	343.2	50
15KPA28A	15KPA28CA	28	31.28	5	47.5	317.9	25
15KPA30A	15KPA30CA	30	33.51	5	50.7	297.8	15
15KPA33A	15KPA33CA	33	36.90	5	54.7	276.1	5
15KPA36A	15KPA36CA	36	40.20	5	59.8	252.5	5
15KPA40A	15KPA40CA	40	44.70	5	65.8	229.5	5
15KPA43A	15KPA43CA	43	48.00	5	69.8	216.3	5
15KPA45A	15KPA45CA	45	50.30	5	72.8	207.4	5
15KPA48A	15KPA48CA	48	53.60	5	77.7	194.3	5
15KPA51A	15KPA51CA	51	57.00	5	82.8	182.1	5
15KPA54A	15KPA54CA	54	60.30	5	87.7	172.2	5
15KPA58A	15KPA58CA	58	64.80	5	93.8	161.0	5
15KPA60A	15KPA60CA	60	67.00	5	97.4	155.0	5
15KPA64A	15KPA64CA	64	71.50	5	104.2	144.9	5
15KPA70A	15KPA70CA	70	78.20	5	113.6	132.9	5
15KPA75A	15KPA75CA	75	83.80	5	122.0	123.8	5
15KPA78A	15KPA78CA	78	87.10	5	126.1	119.7	5
15KPA85A	15KPA85CA	85	94.90	5	137.6	109.7	5
15KPA90A	15KPA90CA	90	100.50	5	145.6	103.7	5
15KPA100A	15KPA100CA	100	111.70	5	161.3	93.6	5
15KPA110A	15KPA110CA	110	122.90	5	178.6	84.5	5
15KPA120A	15KPA120CA	120	134.00	5	192.3	78.5	5
15KPA130A	15KPA130CA	130	145.20	5	208.3	72.5	5
15KPA150A	15KPA150CA	150	167.60	5	241.9	62.4	5
15KPA160A	15KPA160CA	160	178.70	5	258.6	58.4	5
15KPA170A	15KPA170CA	170	189.90	5	272.7	55.4	5
15KPA180A	15KPA180CA	180	201.10	5	288.5	52.3	5
15KPA200A	15KPA200CA	200	223.40	5	319.1	47.3	5
15KPA220A	15KPA220CA	220	245.70	5	356.0	42.0	5
15KPA240A	15KPA240CA	240	268.10	5	384.6	39.3	5
15KPA260A	15KPA260CA	260	290.40	5	416.7	36.2	5
15KPA280A	15KPA280CA	280	312.80	5	454.5	33.2	5

BLANK INDICATES UNIPOLAR DEVICE ±10% ON VBR

A INDICATES UNIPOLAR DEVICE ±5% ON VBR

C INDICATES BIPOLAR DEVICE ±10% ON VBR

CA INDICATES BIPOLAR DEVICE ±5% ON VBR

UL File # E223026