

# 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

## M15KP SERIES

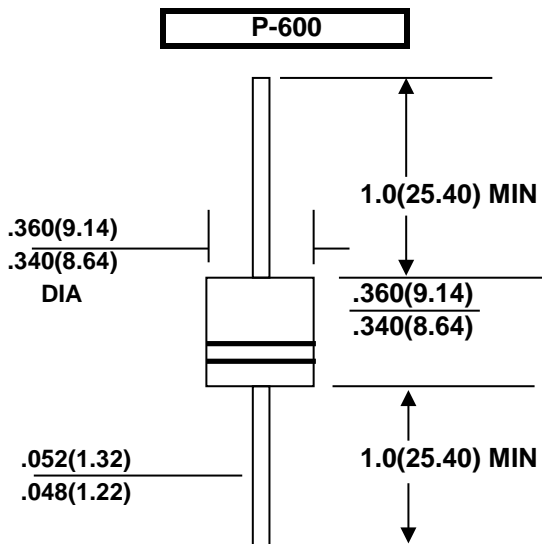
### GLASS PASSIVATED JUNCTION TRANSIENT VOLTAGE SUPPRESSOR VOLTAGE-17.0 TO 280 Volts 15000 Watt Peak Pulse Power

#### 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 M15KP17 thru types M15KP280 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:**

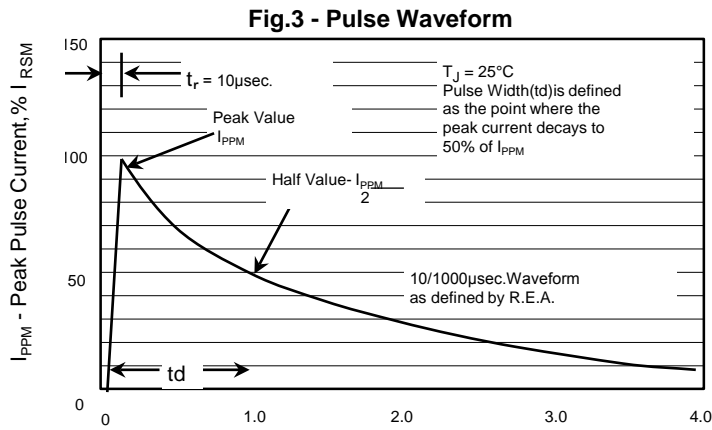
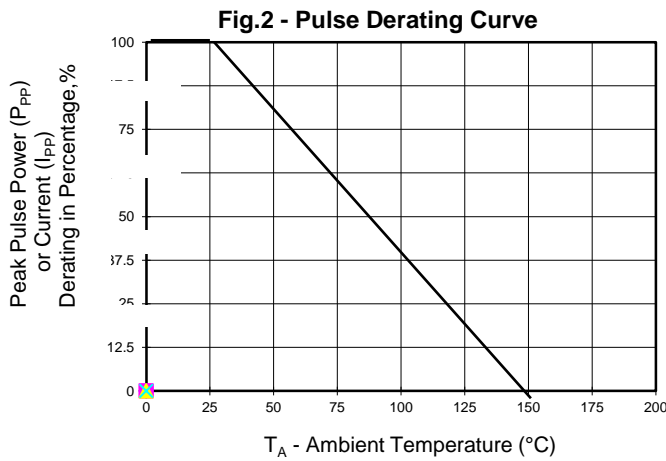
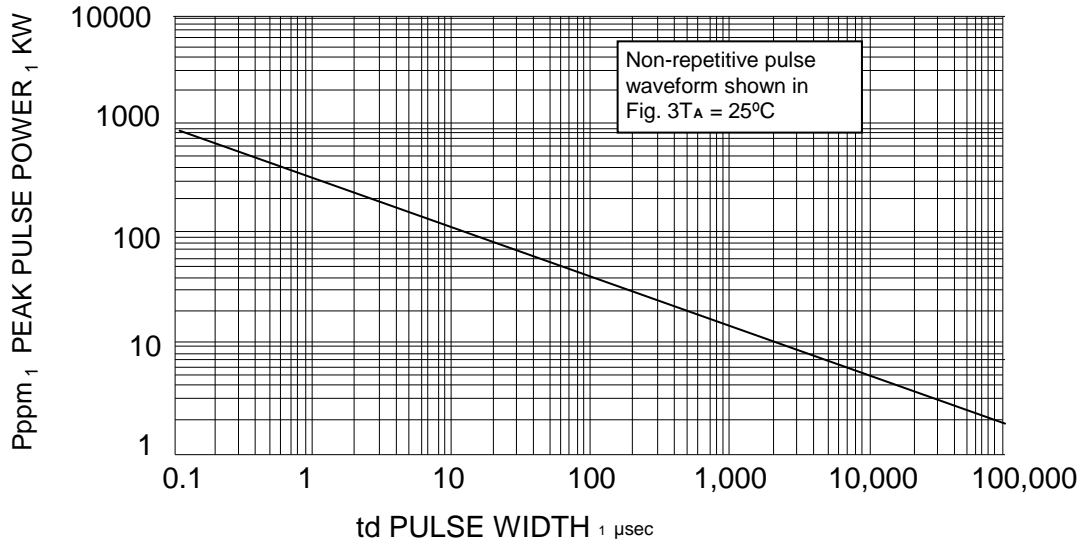
1. Non-repetitive current pulse, per Fig.3 and derated above  $T_a=25^\circ\text{C}$  per Fig.2.
2. Mounted on Copper Pad area of 0.8x0.8" (20x20mm) per Fig.5.
3. 8.3ms single half sine-wave, or equivalent square wave, Duty cycle=4 pulses per minutes maximum

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## M15KP Series Rating and Characteristics



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## 15000 Watt TVS

UNI-POLAR	BI-POLAR	REVERSE STANDOFF VOLTAGE VRWM (V)	BREAKDOWN VOLTAGE VBR (V) MIN. @ IT	TEST CURRENT (IT) mA	MAXIMUM CLAMPING VOLTAGE @IPP Vc (V)	PEAK PULSE CURRENT IPP (A)	REVERSE LEAKAGE @ VRWM IR (µA)
M15KP17A	M15KP17CA	17	18.99	50	29.3	515.4	5000
M15KP18A	M15KP18CA	18	20.11	50	30.9	488.7	5000
M15KP20A	M15KP20CA	20	22.34	20	34.3	440.2	1500
M15KP22A	M15KP22CA	22	24.57	10	37.1	407.0	500
M15KP24A	M15KP24CA	24	26.81	5	40.7	371.0	150
M15KP26A	M15KP26CA	26	29.04	5	44.0	343.2	50
M15KP28A	M15KP28CA	28	31.28	5	47.5	317.9	25
M15KP30A	M15KP30CA	30	33.51	5	50.7	297.8	15
M15KP33A	M15KP33CA	33	36.90	5	54.7	276.1	5
M15KP36A	M15KP36CA	36	40.20	5	59.8	252.5	5
M15KP40A	M15KP40CA	40	44.70	5	65.8	229.5	5
M15KP43A	M15KP43CA	43	48.00	5	69.8	216.3	5
M15KP45A	M15KP45CA	45	50.30	5	72.8	207.4	5
M15KP48A	M15KP48CA	48	53.60	5	77.7	194.3	5
M15KP51A	M15KP51CA	51	57.00	5	82.8	182.1	5
M15KP54A	M15KP54CA	54	60.30	5	87.7	172.2	5
M15KP58A	M15KP58CA	58	64.80	5	93.8	161.0	5
M15KP60A	M15KP60CA	60	67.00	5	97.4	155.0	5
M15KP64A	M15KP64CA	64	71.50	5	104.2	144.9	5
M15KP70A	M15KP70CA	70	78.20	5	113.6	132.9	5
M15KP75A	M15KP75CA	75	83.80	5	122.0	123.8	5
M15KP78A	M15KP78CA	78	87.10	5	126.1	119.7	5
M15KP85A	M15KP85CA	85	94.90	5	137.6	109.7	5
M15KP90A	M15KP90CA	90	100.50	5	145.6	103.7	5
M15KP100A	M15KP100CA	100	111.70	5	161.3	93.6	5
M15KP110A	M15KP110CA	110	122.90	5	178.6	84.5	5
M15KP120A	M15KP120CA	120	134.00	5	192.3	78.5	5
M15KP130A	M15KP130CA	130	145.20	5	208.3	72.5	5
M15KP150A	M15KP150CA	150	167.60	5	241.9	62.4	5
M15KP160A	M15KP160CA	160	178.70	5	258.6	58.4	5
M15KP170A	M15KP170CA	170	189.90	5	272.7	55.4	5
M15KP180A	M15KP180CA	180	201.10	5	288.5	52.3	5
M15KP200A	M15KP200CA	200	223.40	5	319.1	47.3	5
M15KP220A	M15KP220CA	220	245.70	5	356.0	42.0	5
M15KP240A	M15KP240CA	240	268.10	5	384.6	39.3	5
M15KP260A	M15KP260CA	260	290.40	5	416.7	36.2	5
M15KP280A	M15KP280CA	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

Certified RoHS Compliant

UL File # E223026