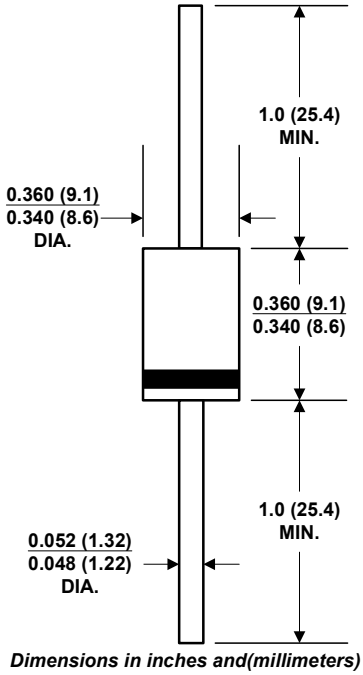
20KPA SERIES

CLASS PASSIVATED JUNCTION TRANSIENT VOLTAGE SUPRESSOR
STAND-OFF VOLTAGE-20 TO 300 Volts
20000 Watt Peak Pulse Power

Case Style P600



Dimensions in inches and(millimeters)

FEATURES

◎ Halogen-Free
◎ RoHS compliant
◎ Typical maximum temperature coefficient $\triangle V_{BR}$=0.1%xV_{BR}@25℃x$\triangle$T
◎ Plastic package
◎ Glass passivated junction
◎ 20000W Peak Pulse Power capability on 10/1000 μs 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 : 260°C / 40 seconds / .375" ,(9.5mm) lead length,51bs.(2.3kg) tension
◎ Matte Tin Lead-free plated

MECHANICAL DATA

Case: Molded plastic over glass passivated junction
Terminal: Solderable per MIL-STD-750, Method 2026
Polarity: Color band denoted positive end (cathode) except Bipolar
Mounting Position: Any
Weight: 0.07 ounce, 2.5 gram

MAXIMUM PATINGS AND CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

RATING	SYMBOL	VALUE	UNITS
Peak Pulse Power Dissipation on 10/ 1000 μs waveform	P_{PPM}	Minimum 20000	Watts
Peak Pulse Current of on 10-1000 μs waveform	I_{PPM}	SEE TABLE 1	Amps
Steady State Power Dissipation at T1= 75°C Lead Lengths. 375", (9.5mm) (Note 2)	P_M (AV)	8	Watts
Peak Forward Surge Current,8.3ms Single Half Sine-Wave Superimposed on Rated Load,(JEDEC Method) (Note 3)	I_{FSM}	400	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℃ per Fig. 2 .
2.Mounted on Copper Pad area of 0.8×0.8" (20×20mm) 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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20KPA PART NUMBER		REVERSE STAND- OFF VOLTAGE V_{RWM}(V)	BREAKDOWN VOLTAGE V_{BR}(V) MIN. @I_T	TEST CURRENT I_T (mA)	PEAK PULSE CURRENT Ipp (A)	REVERSE LEAKAGE @ V_{RWM} I_R(μA)	MAXIMUN CLAMPING VOLTAGE @I_{PP} V_C (V)
UNI-POLAR	BI-POLAR						
20KPA20A	20KPA20CA	20	22.34	50	548.9	5000	36.8
20KPA24A	20KPA24CA	24	26.81	50	490.3	5000	41.2
20KPA26A	20KPA26CA	26	29.04	50	451.9	2000	44.7
20KPA28A	20KPA28CA	28	31.28	50	420.8	1000	48.0
20KPA30A	20KPA30CA	30	33.51	5	392.2	250	51.5
20KPA32A	20KPA32CA	32	35.74	5	372.0	150	54.3
20KPA34A	20KPA34CA	34	38.0	5	351.3	50	57.5
20KPA36A	20KPA36CA	36	40.2	5	328.5	20	61.5
20KPA40A	20KPA40CA	40	44.7	5	297.9	15	67.8
20KPA44A	20KPA44CA	44	49.1	5	277.9	2	72.7
20KPA48A	20KPA48CA	48	53.6	5	254.4	2	79.4
20KPA52A	20KPA52CA	52	58.1	5	235.4	2	85.8
20KPA56A	20KPA56CA	56	62.6	5	218.1	2	92.6
20KPA60A	20KPA60CA	60	67.0	5	207.0	2	97.6
20KPA64A	20KPA64CA	64	71.5	5	194.2	2	104.0
20KPA68A	20KPA68CA	68	76.0	5	183.6	2	110.0
20KPA72A	20KPA72CA	72	80.4	5	174.1	2	116.0
20KPA80A	20KPA80CA	80	89.4	5	155.4	2	130.0
20KPA88A	20KPA88CA	88	98.3	5	142.3	2	142.0
20KPA96A	20KPA96CA	96	107.2	5	130.3	2	155.0
20KPA104A	20KPA104CA	104	116.2	5	120.2	2	168.0
20KPA112A	20KPA112CA	112	125.1	5	111.0	2	182.0
20KPA120A	20KPA120CA	120	134.0	5	104.1	2	194.0
20KPA132A	20KPA132CA	132	147.4	5	94.8	2	213.0
20KPA144A	20KPA144CA	144	160.8	5	87.1	2	232.0
20KPA160A	20KPA160CA	160	178.7	5	78.3	2	258.0
20KPA172A	20KPA172CA	172	192.1	5	72.9	2	277.0
20KPA180A	20KPA180CA	180	201.1	5	69.4	2	291.0
20KPA192A	20KPA192CA	192	214.5	5	65.4	2	309.0
20KPA204A	20KPA204CA	204	227.9	5	61.4	2	329.0
20KPA216A	20KPA216CA	216	241.3	5	58.0	2	348.0
20KPA232A	20KPA232CA	232	259.1	5	54.0	2	374.0
20KPA240A	20KPA240CA	240	268.1	5	52.2	2	387.0
20KPA256A	20KPA256CA	256	286.0	5	49.0	2	412.0
20KPA280A	20KPA280CA	280	312.8	5	44.8	2	451.0
20KPA300A	20KPA300CA	300	335.1	5	41.8	2	483.0

For bidirectional type having Vrwm of 40 volts and less, the IR limit is double.

For parts without A , the V_{BR} is ± 10%

VC is 10% higher than with A Parts.

RATINGS AND CHARACTERISTIC CURVES

Ratings and Characteristic Curves (T_A=25℃ unless otherwise noted)

Fig. 1 - Peak Pulse Power Rating Curve

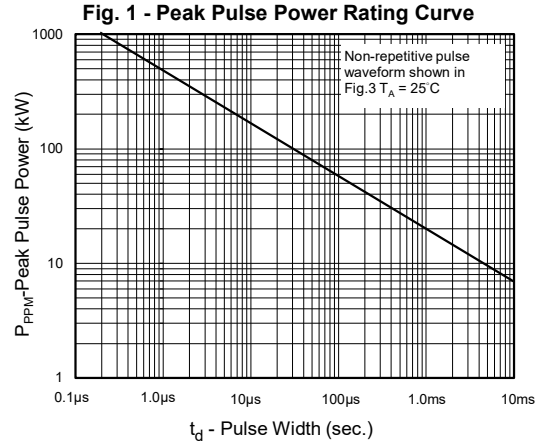


Fig.2 - Pulse Derating Curve

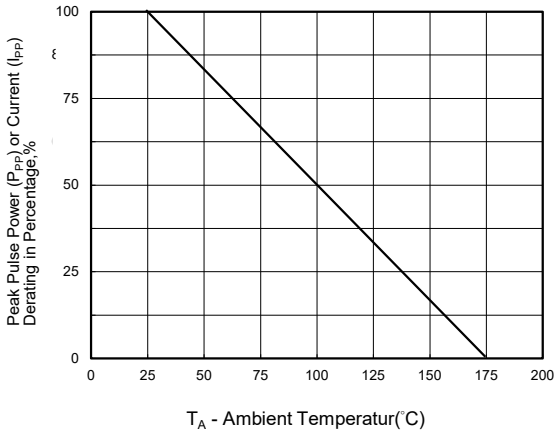


Fig.3 - Test Pulse Waveform

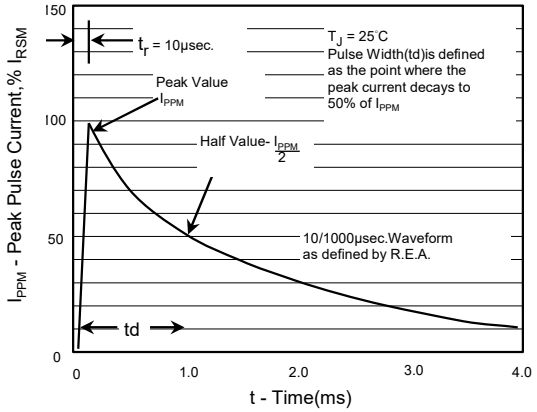


Fig. 4 - Typical Junction Capacitance

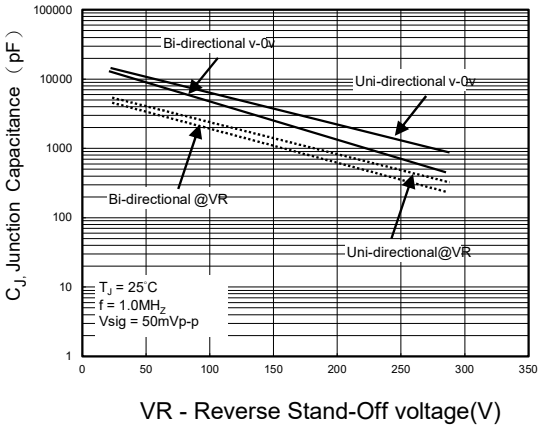


Fig. 5 - Steady State Power Derating Curve

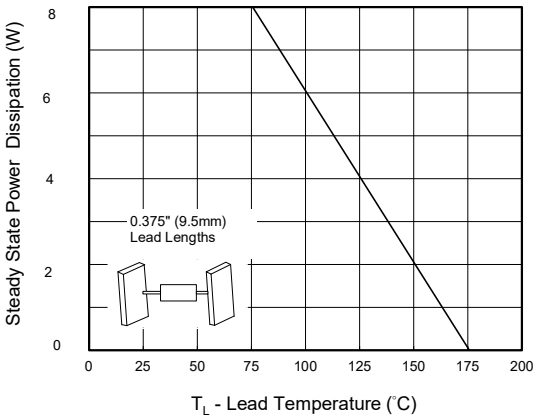
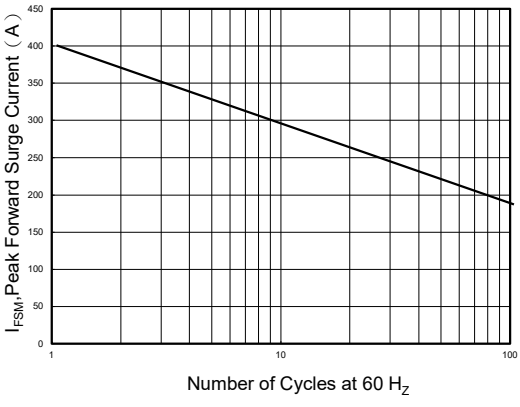


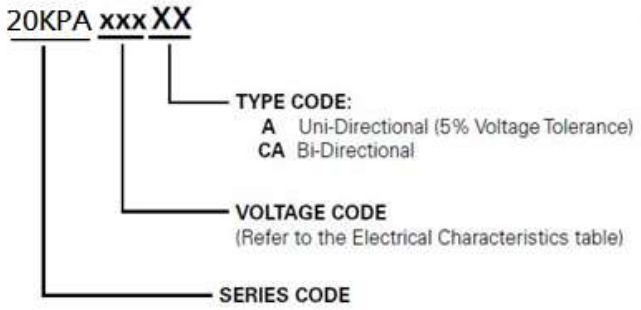
Fig.6 - Maximum Non-repetitive Forward Surge current



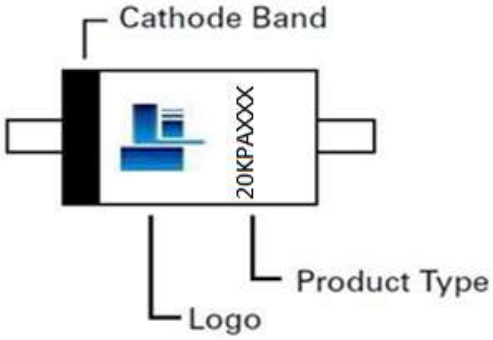
20KPA SERIES

GLASS PASSIVATED JUNCTION TRANSIENT VOLTAGE SUPPRESSOR

Part Numbering System



Part Marking System



Packaging

Part number	Component Package	Quantity	Packaging Option	Packaging Specification
20KPAxxxXX	P-600	750	Tape & Reel	EIA STD RS-296E
20KPAxxxXX	P-600	300	Tape & Box	Lucky Forests Packing Spec. DM-024
20KPAxxxXX	P-600	200	Bulk	Lucky Forests Packing Spec. DM-024