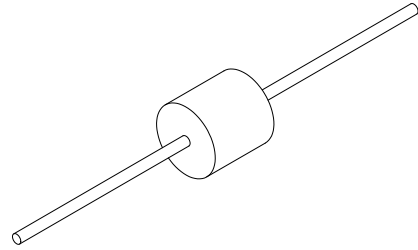


FEATURES

- ◆ Glass passivated chip
- ◆ Low leakage
- ◆ Uni and Bidirectional unit
- ◆ Excellent clamping capability
- ◆ The plastic material has U/L recognition 94V-0
- ◆ Fast response time
- ◆ AEC-Q101 qualified



MECHANICAL DATA

- ◆ Case : Molded Plastic
- ◆ Marking : Unidirectional - type number and cathode
 Band Bidirectional - type number only

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

Parameter	Symbol	Value	Units
Peak Pulse Power dissipation (NOTE 1)	P _{PK}	15000	Watts
Storage Temperature Range	T _{STG}	-50~150	°C
Operating Junction Temperature Range	T _J	-50~150	°C
Power Dissipation on Infinite Heat Sink at T _L =75°C (NOTE 2)	P _{M(AV)}	8.0	W
Peak Forward Surge Current (NOTE 3)	I _F	400	A
Maximum Instantaneous forward voltage at 25A for unidirectional devices only (NOTE 4)	V _F	3.5/6.5	V

NOTE :

1. Non-repetitive current pulse@10/1000μs and derated above T_A=25°C
2. Mounted on 5.0x5.0mm copper pad to each terminal.
3. Measured on 8.3ms single half sine wave or equivalent square wave for unidirectional device only.
4. V_F < 3.5V for V_{BR} ≤ 200V and V_F < 6.5V for V_{BR} ≥ 201V.

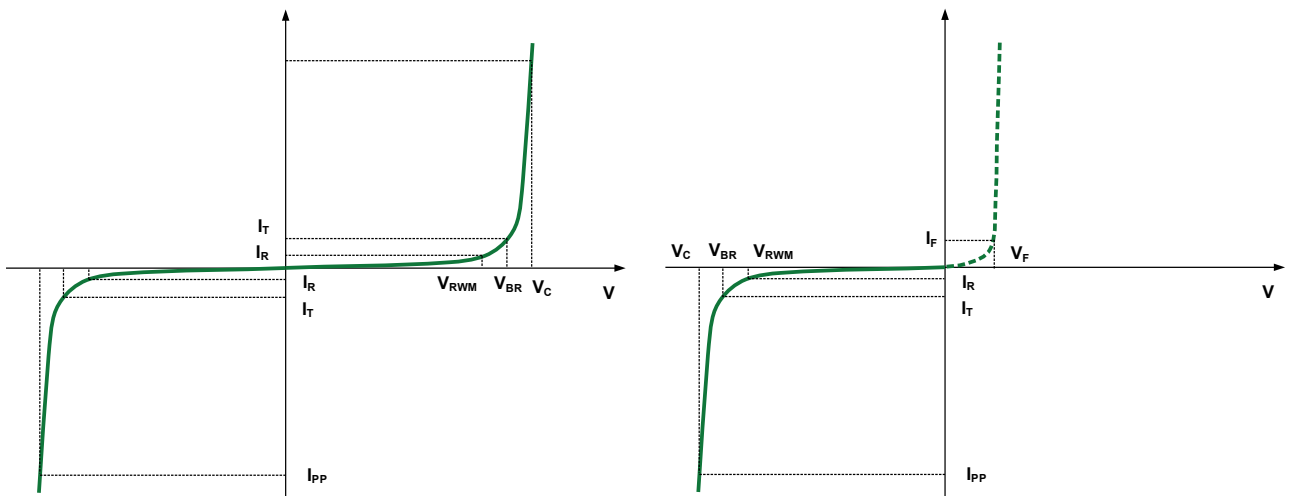
ELECTRICAL CHARACTERISTICS

Part Number		V _{BR} ⁽¹⁾ @I _T		I _T ⁽²⁾	V _{RM} ⁽³⁾	Maxi. I _R ⁽⁴⁾ @V _{RM}	Maxi. V _C ⁽⁵⁾ @I _{PP}	Maxi. I _{PP} ⁽⁶⁾
Uni	Bi	MIN (V)	MAX (V)	mA	V	μA	V	A
15KP15A	15KP15CA	16.7	18.5	5	15	800	24.4	614.8
15KP16A	15KP16CA	17.8	19.7	5	16	800	26	576.9
15KP17A	15KP17CA	18.9	20.9	5	17	800	27.6	543.5
15KP18A	15KP18CA	20	22.1	5	18	800	29.2	513.7
15KP20A	15KP20CA	22.2	24.5	5	20	200	32.4	463.0
15KP22A	15KP22CA	24	26.9	5	22	50	35.5	422.5
15KP24A	15KP24CA	26.7	29.5	5	24	50	38.9	385.6
15KP26A	15KP26CA	28.9	31.9	5	26	50	42.1	356.3
15KP28A	15KP28CA	31.1	34.4	5	28	50	45.4	330.4
15KP30A	15KP30CA	33.3	36.8	5	30	50	48.4	309.9
15KP33A	15KP33CA	36.7	40.6	5	33	2	53.3	281.4
15KP36A	15KP36CA	40	44.2	5	36	2	58.1	258.2
15KP40A	15KP40CA	44.4	49.1	5	40	2	64.5	232.6
15KP43A	15KP43CA	47.8	52.8	5	43	2	69.4	216.1
15KP45A	15KP45CA	50	55.3	5	45	2	72.7	206.3
15KP48A	15KP48CA	53.3	58.9	5	48	2	77.4	193.8
15KP51A	15KP51CA	56.7	62.7	5	51	2	82.4	182.0
15KP54A	15KP54CA	60	66.3	5	54	2	87.1	172.2
15KP58A	15KP58CA	64.4	71.2	5	58	2	93.6	160.3
15KP60A	15KP60CA	66.7	73.7	5	60	2	96.8	155.0
15KP64A	15KP64CA	71.1	78.6	5	64	2	103	145.6
15KP70A	15KP70CA	77.8	86	5	70	2	113	132.7
15KP75A	15KP75CA	83.3	92.1	5	75	2	121	124.0
15KP78A	15KP78CA	86.7	95.8	5	78	2	126	119.0
15KP85A	15KP85CA	94.4	104	5	85	2	137	109.5
15KP90A	15KP90CA	100	111	5	90	2	146	102.7
15KP100A	15KP100CA	110	123	5	100	2	162	92.6
15KP110A	15KP110CA	122	135	5	110	2	177	84.7
15KP120A	15KP120CA	133	147	5	120	2	193	77.7
15KP130A	15KP130CA	144	159	5	130	2	209	71.8
15KP150A	15KP150CA	167	185	5	150	2	243	61.7
15KP160A	15KP160CA	178	197	5	160	2	259	57.9
15KP170A	15KP170CA	189	209	5	170	2	275	54.5
15KP180A	15KP180CA	200	221	5	180	2	292	51.4
15KP190A	15KP190CA	211	233	5	190	2	310	48.4
15KP200A	15KP200CA	222	246	5	200	2	329.2	45.6
15KP210A	15KP210CA	233	258	5	210	2	349.5	42.9
15KP220A	15KP220CA	244	270	5	220	2	371.1	40.4
15KP250A	15KP250CA	277	306	5	250	2	425	35.3

NOTE :

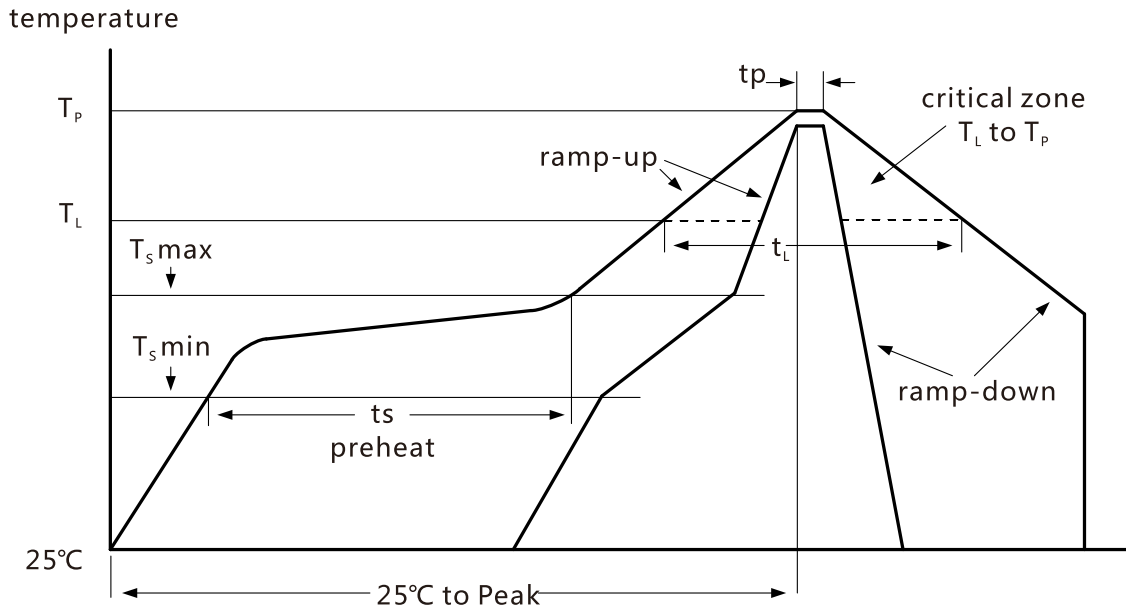
Symbol	Parameter	Description
(1) V_{BR}	Breakdown voltage	The Voltage that flows though the TVS at a specified test current (I_T)
(2) I_T	Test current	A specified test current that flows though the TVS
(3) V_{RM}	Stand-off voltage	Maximum voltage that can be applied to the TVS without operation
(4) I_R	Leakage current @ V_{RM}	Current measured at V_{RM}
(5) V_C	Clamping voltage	Peak voltage measured across the suppressor at a specified I_{PP} (peak impulse current)
(6) I_{PP}	Peak pulse current	The maximum surge current that flows though the TVS

I-V CURVE CHARACTERISTICS



15KP SERIES

REFLOW SOLDERING PROFILE



Profile Feature	SnPb eutectic assembly	Pb-free assembly
Average ramp-up rate (T_s max to T_p)	3°C/s maximum	3°C/s maximum
Preheat		
Temperature minimum (T_s min)	100°C	150°C
Temperature maximum (T_s max)	150°C	200°C
Time (T_s min to T_s max)	60 s to 120 s	60 s to 180 s
Time maintained above		
Temperature (T_l)	183°C	217°C
Time (t_l)	60 s to 150 s	60 s to 150 s
Peak/classification temperature (T_p)	235°C	260°C
Number of allowed reflow cycles	3	3
Time within 5 °C of actual peak temperature (t_p)	10 s to 30 s	20 s to 40 s
Ramp-down rate	6°C/s maximum	6°C/s maximum
Time 25 °C to peak temperature	6 minutes maximum	8 minutes maximum

Figure 1. Pulse Waveform

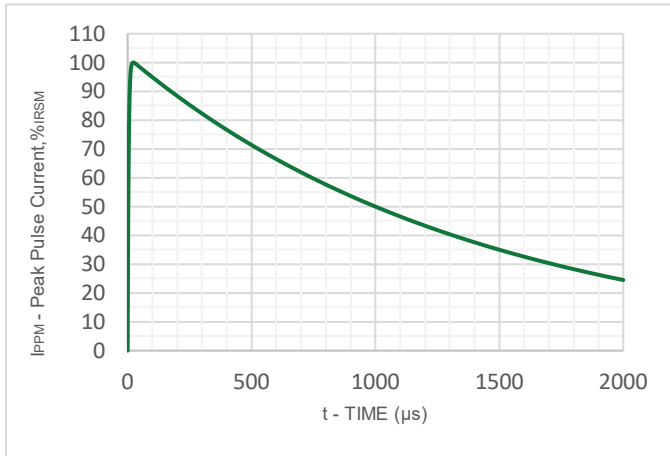


Figure 2. Pulse Derating Curve

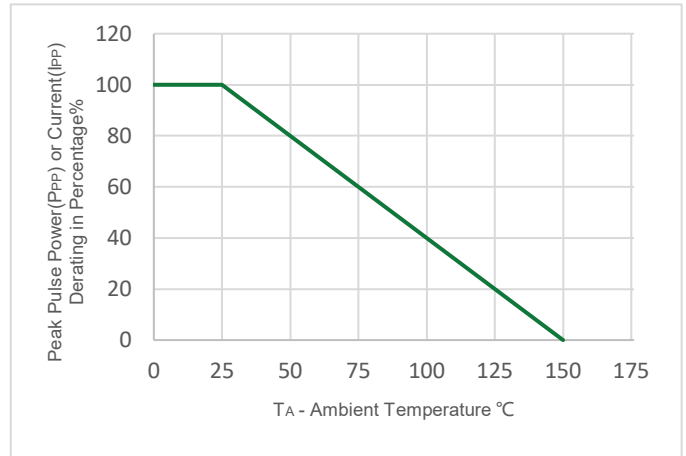


Figure 3. Steady Power Dissipation Derating Curve

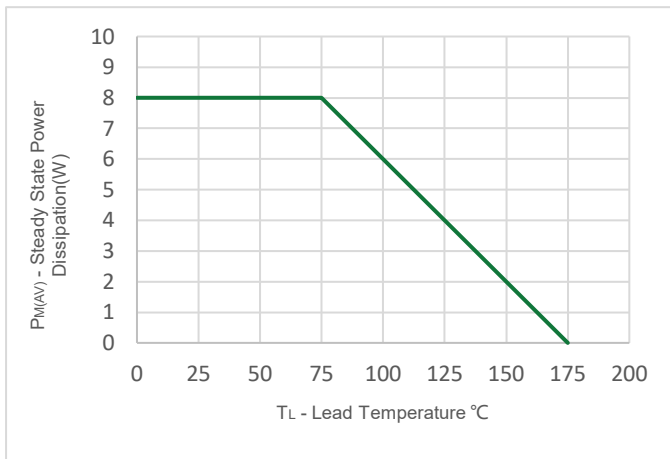


Figure 4. Peak Pulse Power Rating Curve

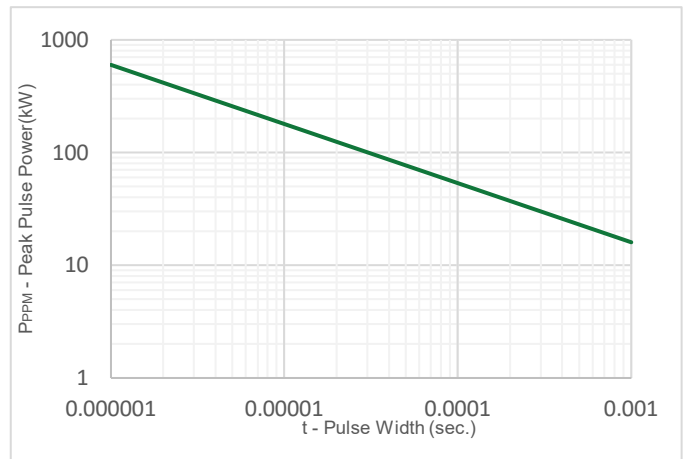
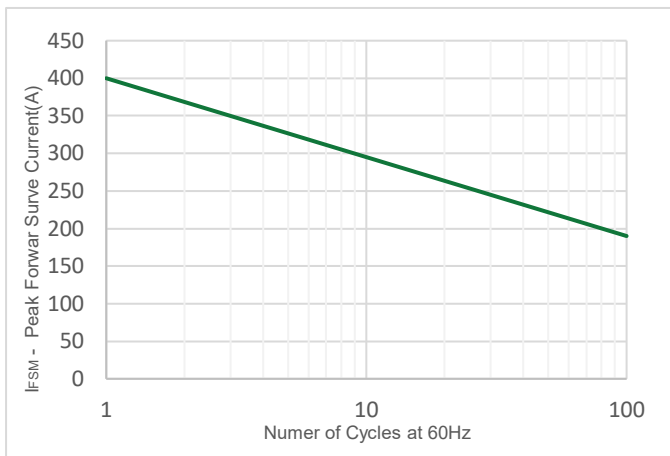
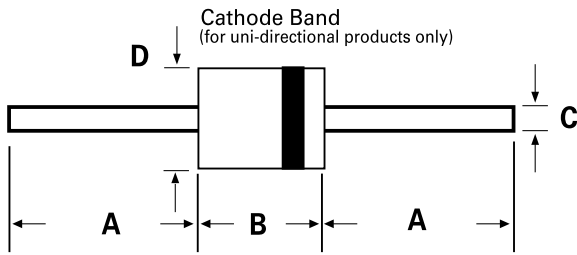


Figure 5. Maximum Non-Repetitive Surge Current



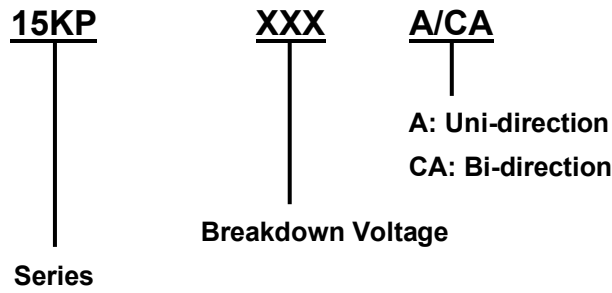
DIMENSIONS



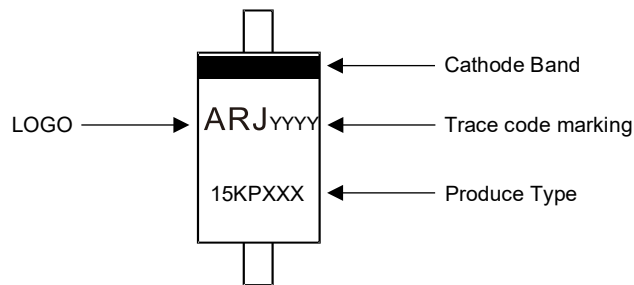
DIM	Millimeters		Inch	
	Min	Max	Min	Max
A	25.400	-	1.0000	-
B	8.600	9.100	0.340	0.360
C	1.190	1.320	0.047	0.052
D	8.600	9.100	0.340	0.360

P600

PART NUMBERING



PACKAGING



Part Number	Package	Quantity	Packaging
15KPXXX(C)A	P600	300pcs	Box

ORDERING INFORMATION

PREFERRED P/N	Trace Code Marking	Automotive Grade AEC-Q101 Qualified
15KPXXX(C)A-H	AYYYY	Yes
15KPXXX(C)A	YYYY	-