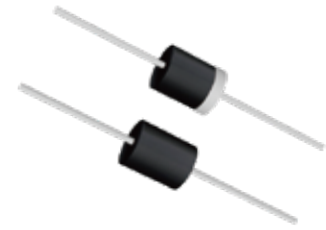


FEATURES

- | Plastic package has underwriters laboratory
- | Flammability classification 94V-0
- | Glass passivated junction
- | 12000W peak pulse power capability on 10/1000μs waveform
- | Excellent clamping capability
- | Low incremental surge resistance
- | Fast response time: typically less than 1.0ps from 0 Volts to V_{BR} Min
- | Molded plastic over glass passivated junction
- | Polarity: Color band denoted cathode except bidirec
- | Mounting Positing: Any



R-6/P-600



Schematic Symbol

APPLICATIONS

- | TVS devices are ideal for the protection of I/O interfaces, VCC bus and other vulnerable circuits used in Telecom, Computer, Industrial and Consumer electronic applications.

APPROVALS

RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003

ABSOLUTE MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$)

Parameter	Symbol	Value	Unit
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150	$^{\circ}\text{C}$
Peak pulse power dissipation at 10/1000μs waveform	P_{PP}	12000	W
Steady state power dissipation at $T_L=75^{\circ}\text{C}$	$P_{M(AV)}$	8.0	
Peak pulse current of on 10/1000μs waveform	I_{PP}	See next table	A
Peak forward surge current, 8.3ms single half sine-wave for unidirectional only	I_{FSM}	500	A

ELECTRICAL CHARACTERISTICS($T_A=25^{\circ}\text{C}$)

Part Number		Marking		V_R	$V_{BR}@I_T$		I_T	$V_C@I_{PP}$	$I_{PP}^{①}$	$I_R@V_R$
Uni-Polar	Bi-Polar	Uni-Polar	Bi-Polar	V	Min.(V)	Max.(V)	mA	V	A	Max.(μA)
12KP10A	12KP10CA	12KP10A	12KP10CA	10	11.1	12.3	50	18.4	658.68	300
12KP12A	12KP12CA	12KP12A	12KP12CA	12	13.3	14.7	50	20.6	588.36	300
12KP13A	12KP13CA	12KP13A	12KP13CA	13	14.4	15.9	50	22.4	541.08	250
12KP14A	12KP14CA	12KP14A	12KP14CA	14	15.6	17.2	50	24	504.96	50
12KP16A	12KP16CA	12KP16A	12KP16CA	16	17.8	19.7	10	27.2	445.56	10
12KP17A	12KP17CA	12KP17A	12KP17CA	17	18.9	20.9	5	27.6	439.08	5
12KP18A	12KP18CA	12KP18A	12KP18CA	18	20.0	22.1	5	29.2	415.08	2
12KP20A	12KP20CA	12KP20A	12KP20CA	20	22.2	24.5	5	32.4	374.04	1
12KP22A	12KP22CA	12KP22A	12KP22CA	22	24.4	26.9	5	35.5	341.40	1
12KP24A	12KP24CA	12KP24A	12KP24CA	24	26.7	29.5	5	38.9	311.52	1
12KP26A	12KP26CA	12KP26A	12KP26CA	26	28.9	31.9	5	42.1	287.88	1
12KP28A	12KP28CA	12KP28A	12KP28CA	28	31.1	34.4	5	45.4	267.0	1
12KP30A	12KP30CA	12KP30A	12KP30CA	30	33.3	36.8	5	48.4	250.44	1
12KP33A	12KP33CA	12KP33A	12KP33CA	33	36.7	40.6	5	53.3	227.40	1
12KP36A	12KP36CA	12KP36A	12KP36CA	36	40.0	44.2	5	58.1	208.56	1
12KP40A	12KP40CA	12KP40A	12KP40CA	40	44.4	49.1	5	64.5	187.92	1
12KP43A	12KP43CA	12KP43A	12KP43CA	43	47.8	52.8	5	69.4	174.60	1
12KP45A	12KP45CA	12KP45A	12KP45CA	45	50.0	55.3	5	72.7	166.68	1
12KP48A	12KP48CA	12KP48A	12KP48CA	48	53.3	58.9	5	77.4	156.60	1
12KP51A	12KP51CA	12KP51A	12KP51CA	51	56.7	62.7	5	82.4	147.12	1
12KP54A	12KP54CA	12KP54A	12KP54CA	54	60	66.3	5	87.1	139.20	1
12KP58A	12KP58CA	12KP58A	12KP58CA	58	64.4	71.2	5	93.6	129.48	1
12KP60A	12KP60CA	12KP60A	12KP60CA	60	66.7	73.7	5	96.8	125.16	1
12KP64A	12KP64CA	12KP64A	12KP64CA	64	71.1	78.6	5	103	117.72	1
12KP70A	12KP70CA	12KP70A	12KP70CA	70	77.8	86	5	113	107.28	1
12KP75A	12KP75CA	12KP75A	12KP75CA	75	83.3	92.1	5	121	100.2	1

Part Number		Marking		V_R	$V_{BR}@I_T$		I_T	$V_C@I_{PP}$	$I_{PP}^{①}$	$I_R@V_R$
Uni-Polar	Bi-Polar	Uni-Polar	Bi-Polar	V	Min.(V)	Max.(V)	mA	V	A	Max.(μA)
12KP78A	12KP78CA	12KP78A	12KP78CA	78	86.7	95.8	5	126	96.24	1
12KP85A	12KP85CA	12KP85A	12KP85CA	85	94.4	104	5	137	88.44	1
12KP90A	12KP90CA	12KP90A	12KP90CA	90	100	111	5	146	83.04	1
12KP100A	12KP100CA	12KP100A	12KP100CA	100	111	123	5	162	74.76	1
12KP110A	12KP110CA	12KP110A	12KP110CA	110	122	135	5	177	68.52	1
12KP120A	12KP120CA	12KP120A	12KP120CA	120	133	147	5	193	62.76	1
12KP130A	12KP130CA	12KP130A	12KP130CA	130	144	159	5	209	57.96	1
12KP150A	12KP150CA	12KP150A	12KP150CA	150	167	185	5	243	49.92	1
12KP160A	12KP160CA	12KP160A	12KP160CA	160	178	197	5	259	46.80	1
12KP170A	12KP170CA	12KP170A	12KP170CA	170	189	209	5	275	44.04	1
12KP180A	12KP180CA	12KP180A	12KP180CA	180	200	221	5	289	41.88	1
12KP190A	12KP190CA	12KP190A	12KP190CA	190	211	233	5	310	39.12	1
12KP200A	12KP200CA	12KP200A	12KP200CA	200	222	246	5	329.2	36.84	1
12KP210A	12KP210CA	12KP210A	12KP210CA	210	233	258	5	349.5	34.68	1
12KP220A	12KP220CA	12KP220A	12KP220CA	220	244	270	5	371.1	32.64	1
12KP240A	12KP240CA	12KP240A	12KP240CA	240	267.4	293.9	5	386	31.32	1
12KP250A	12KP250CA	12KP250A	12KP250CA	250	277	306	5	425	28.56	1

Note:

①.Surge waveform:10/1000μs

V_R : Stand-off voltage -- Maximum voltage that can be applied

V_{BR} : Breakdown voltage

V_C : Clamping voltage -- Peak voltage measured across the suppressor at a specified I_{PP}

I_R : Reverse leakage current

RATINGS AND CHARACTERISTICS CURVES($T_A=25^{\circ}\text{C}$)

Figure 1: V- I curve characteristics
(Uni-directional)

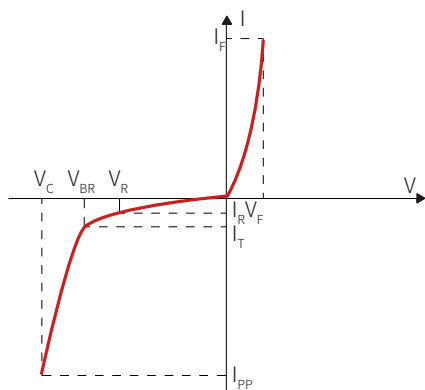


Figure 2: V- I curve characteristics
(Bi-directional)

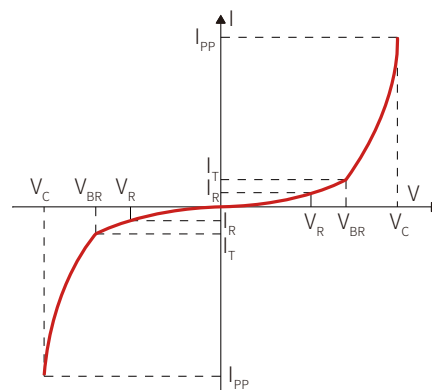


Figure 3: Pulse waveform

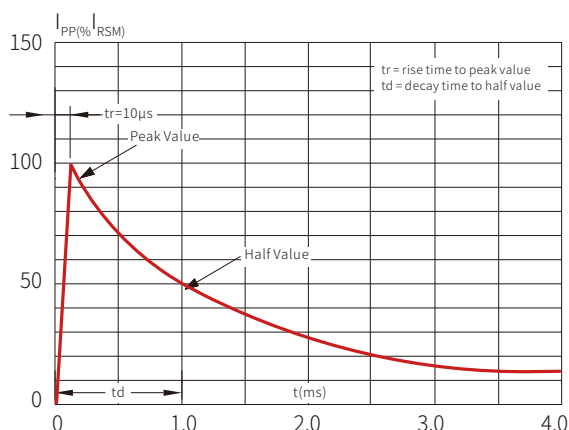
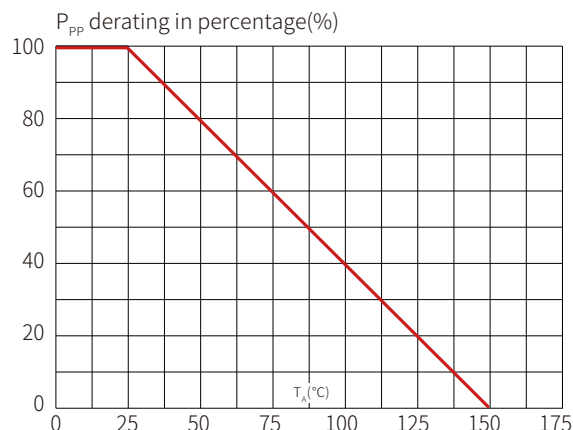
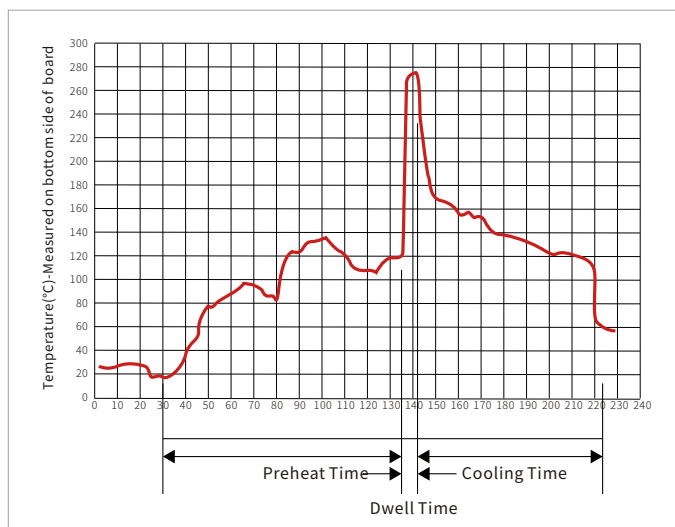


Figure 4: Power derating curve

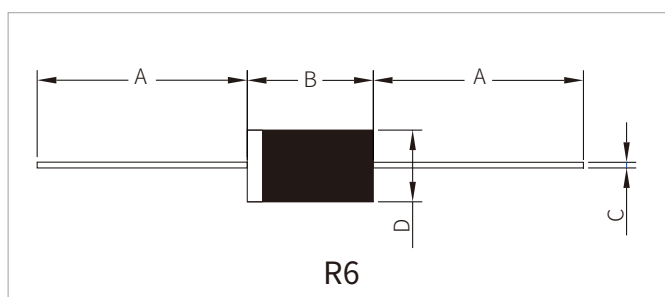


WAVE SOLDERING



Wave Parameter		Lead-free assembly
Pre Heat	Temperature Min	100°C
	Temperature Max	150°C
	Time(min to max)	60 – 180 secs
Solder pot Temperature		280°C Max
Solder Dwell Time		2-5 seconds

P600 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	25.40	-	1.000	-
B	8.60	9.40	0.339	0.370
C	1.20	1.40	0.047	0.055
D	8.60	9.10	0.339	0.358

ORDERING INFORMATION

Part Number	Component Package	Per Box (Pcs)
12KPxxA/CA	R6/P600	250

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