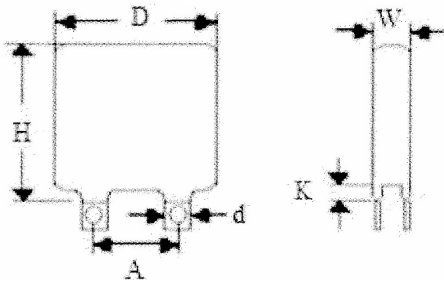
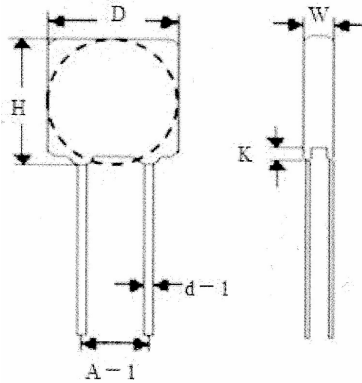


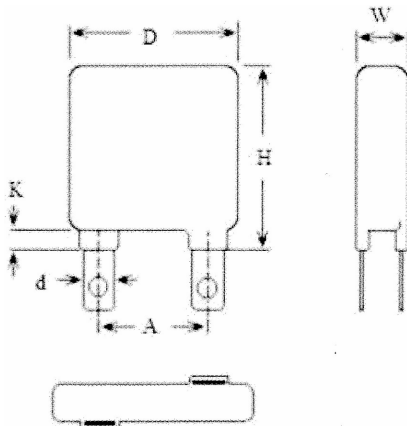
# VCR

## METAL OXIDE VARISTORS Transient Voltage Surge Suppressors

20S/22S Dimension



30S/34S Dimension



SIZE	20S	22S	30S	34S
D (max.)	22	28	35	36
H (max.)	25	28	28	40
d	4*0.3	4*0.4	4*0.5	6*0.5/7*0.5
d-1(±0.1)	1	1	1.5	1.5
A	22±1.0	22±1.0	22±1.0/25.4±1.0	22±1.0/25.4±1.0
A-1	10±1.0	10±1/12.5±1	22±1.0	22±1.0
K (max.)	3	5	5	5

Finished Product Thickness (W)


Unit: mm

Product	20S	22S	30S	34S
220K		4.7		
240K		4.8		
270K		4.8		
330K		5.0		
390K		5.2		
470K		5.5		6.5
560K		5.8		6.8
680K		6.2		7.2
820K	4.7	4.7	4.9	5.9
101K	4.9	4.9	5.1	6.1
111K	5.0	5.0	5.2	6.2
121K	5.0	5.0	5.2	6.3
131K	5.2	5.2	5.4	6.4
151K	5.4	5.4	5.6	6.6
181K	5.1	5.1	5.3	6.3
201K	5.3	5.3	5.5	6.4
221K	5.4	5.4	5.6	6.6
241K	5.5	5.5	5.7	6.7
271K	5.7	5.7	5.9	6.9
301K	5.9	5.9	6.1	7.1
331K	6.1	6.1	6.3	7.3
361K	6.4	6.4	6.6	7.6
391K	6.6	6.6	6.8	7.8
431K	6.9	6.9	7.1	8.0
471K	7.2	7.2	7.4	8.3
511K	7.6	7.6	7.8	8.7
561K	7.9	7.9	8.1	9.0
621K	8.3	8.3	8.5	9.4
681K	8.4	8.4	8.6	9.5
751K	8.9	8.9	9.1	10.0
781K	9.1	9.1	9.3	10.2
821K	9.4	9.4	9.6	10.8
911K	10.0	10.0	10.2	11.2
951K	10.0	10.0	10.2	11.0
102K	10.6	10.6	10.8	11.2
112K	11.3	11.3	11.5	12.3
122K		12.0	12.2	13.0
132K		13.0		13.6
142K		13.9		14.3
152K		11.8		12.6
162K		12.2		13.3
182K		13.2		14.2

# VCR

## METAL OXIDE VARISTORS Transient Voltage Surge Suppressors

### 20S Specification


VCR	Maximum Allowable Voltage		Varistor Voltage		Clamping Voltage (Max.)		Maximum Peak Current (8/20µs)		Maximum Energy (10/1000µs) JOULE	Typical Capacitance (Reference) @1KHz (pf)	
	AC.rms (V)	DC (V)	min.	max.	VC (V)	IP (A)	In. 10 times (KA)	I Max (KA)			
19.5*19.5mm											
20S101KJ	60	85	90	110	165	125	7.5	15	84	4800	
20S820K	50	65	74	90	135		6	12	67	5880	
20S101K	60	85	90	110	165		7.5	15	84	4800	
20S121K	75	100	108	132	200				102	4000	
20S151K	95	125	135	165	250				127	3200	
20S181K	115	150	162	198	300				156	2650	
20S201K	130	170	185	225	340				170	2400	*
20S221K	140	180	198	242	360				185	2160	
20S241K	150	200	216	264	395				200	2000	*
20S271K	175	225	243	297	455				230	1800	*
20S301K	190	250	270	330	500				250	1560	
20S331K	210	275	297	363	550				270	1440	
20S361K	230	300	324	396	595				305	1320	*
20S391K	250	320	351	429	650				330	1200	*
20S431K	275	350	387	473	710				365	1160	*
20S471K	300	385	423	517	775				420	1020	*
20S511K	320	415	459	561	845				430	935	*
20S561K	350	460	504	616	925				455	850	
20S621K	385	505	558	682	1025				465	780	*
20S681K	420	560	612	748	1120				480	720	*
20S751K	460	615	678	825	1240				500	635	*
20S781K	485	640	702	858	1290				525	610	*
20S821K	510	670	738	902	1355		550	600	*		
20S911K	550	745	819	1001	1500		6	12	610	525	*
20S102K	625	825	900	1100	1650				675	480	*
20S112K	680	895	990	1210	1815				740	430	*

Clamping Voltage (±10%) V						
Model	125A	0.5KA	3KA	5KA	10KA	15KA
20S101KJ	190	200	280	305	360	390
20S101K	175	180	230	250	300	-
20S241K	360	370	450	485	615	680
20S431K	650	665	855	920	1000	1100
20S511K	780	800	1000	1050	1250	1400
20S621K	950	980	1200	1350	1500	1650
20S911K	1350	1400	1750	1900	2200	2450
20S112K	1600	1700	2115	2300	2660	2970

# VCR

## METAL OXIDE VARISTORS Transient Voltage Surge Suppressors

### 22S Specification


VCR	Maximum Allowable Voltage		Varistor Voltage		Clamping Voltage (Max.)		Maximum Peak Current (8/20µs)		Maximum Energy (10/1000µs)	Typical Capacitance (Reference)	
	AC.rms	DC	V1.0mA (V)		VC	IP	In. 10 times	I Max	JOULE	@1KHz (pf)	
	(V)	(V)	min.	max.	(V)	(A)	(KA)				
22S101KJ	60	85	90	110	165	175	10	25	122	7200	
22S220K	14	18	20	25	43	35	3	6	28	37000	
22S270K	17	22	24	31	53				42	24500	
22S330K	20	26	30	37	65				49	21000	
22S390K	25	31	35	44	77				60	17250	
22S470K	30	38	42	52	93		5	10	72	14500	
22S560K	35	45	50	63	110				85	9500	
22S680K	40	56	61	75	135		175	10	18	98	8800
22S820K	50	65	74	90	135	122				7200	
22S101K	60	85	90	110	165	10		25	146	6000	
22S121K	75	100	108	132	200				185	4400	
22S151K	95	125	135	165	250				218	3650	
22S181K	115	150	162	198	300				252	3300	*
22S201K	130	170	185	225	340				280	3000	
22S221K	140	180	198	242	360				302	2800	*
22S241K	150	200	222	270	395				40	2450	*
22S271K	180	225	256	310	455				375	2200	
22S301K	190	250	270	330	500				410	2050	*
22S331K	210	275	297	363	550				465	1850	*
22S361K	230	300	324	396	595				520	1700	*
22S391K	250	320	362	440	650				575	1600	*
22S431K	275	350	387	473	710				630	1450	*
22S471K	300	385	423	517	775				665	1300	*
22S511K	320	415	459	561	845				720	1200	*
22S561K	350	460	504	616	925				790	1100	*
22S621K	385	505	558	682	1025				790	1000	*
22S681K	420	560	612	748	1120				825	900	*
22S751K	460	615	675	825	1240				860	850	*
22S781K	485	640	702	858	1290				900	810	*
22S821K	510	670	738	902	1355	950		750	*		
22S911K	550	745	819	1001	1500	950		700	*		
22S951K	575	780	855	1045	1570	1040		660	*		
22S102K	625	825	900	1100	1650	1130		605	*		
22S112K	680	895	990	1210	1815	1170		555			
22S122K	750	980	1150	1320	1980	8		16	1170	475	
22S142K	850	1120	1315	1540	2310		1300		415		
22S162K	1000	1320	1550	1760	2640		1300		400		
22S182K	1100	1485	1700	1980	2970						

Model	0.5KA	3KA	5KA	10KA	20KA	25KA
22S101KJ	180	220	240	270	320	340
22S101K	170	210	230	260	310	325
22S241K	400	450	500	600	700	750
22S431K	675	785	850	1000	1150	1250
22S511K	750	930	1000	1150	1350	1450
22S621K	900	1015	1100	1400	1600	1750
22S911K	1390	1720	1840	2100	2490	2590
22S112K	1640	1950	2150	2380	2880	3000

# VCR

## METAL OXIDE VARISTORS Transient Voltage Surge Suppressors

### 30S Specification

VCR	Maximum Allowable Voltage		Varistor Voltage		Clamping Voltage (Max.)		Maximum Peak Current (8/20µs)		Maximum Energy (10/1000µs)	Typical Capacitance (Reference)	
	AC.rms (V)	DC (V)	V1.0mA (V)		VC (V)	IP (A)	In. 10 times (KA)	I Max (KA)	JOULE	@1KHz (pf)	
22.5*33mm			min.	max.							
30S101KJ	60	85	90	110	165	200	15	30	136	10500	
30S820K	50	65	74	90	135		10	20	110	12600	
30S101K	60	85	90	110	165		16	32	136	10500	
30S121K	75	100	108	132	200				165	8600	
30S151K	95	125	135	165	250				207	7000	
30S181K	115	150	162	198	300				245	5800	
30S201K	130	170	185	225	340				280	4800	
30S221K	140	180	198	242	360				315	4500	
30S241K	150	200	216	264	395				335	4000	
30S271K	175	225	243	297	455				375	3600	
30S301K	190	250	270	330	500				420	3200	
30S331K	210	275	297	363	550				460	2950	
30S361K	230	300	324	396	595				520	2650	
30S391K	250	320	351	429	650				580	2450	
30S431K	275	350	387	473	710				640	2100	
30S471K	300	385	423	517	775				700	2020	
30S511K	320	415	459	561	845				740	1860	
30S561K	350	460	504	616	925				800	1720	
30S621K	385	505	558	682	1025				875	1540	
30S681K	420	560	612	748	1120				875	1400	
30S751K	460	615	675	825	1240	900	1280				
30S781K	485	640	702	858	1290	945	1240				
30S821K	510	670	738	902	1355	970	1160				
30S911K	550	745	819	1001	1500	1030	1050				
30S951K	575	760	855	1045	1570	1040	1000				
30S102K	625	825	900	1100	1650	1080	950				
30S112K	680	895	990	1210	1815	1190	865				
30S122K	750	980	1150	1320	1980	1225	800				

Clamping Voltage (±10%) V						
Model	0.5KA	3KA	5KA	10KA	15KA	30KA
30S101KJ	210	270	295	340	360	460
30S101K	155	200	215	270	305	400
30S241K	370	445	495	560	620	720
30S431K	625	760	840	950	1050	1220
30S511K	725	875	970	1100	1210	1410
30S621K	880	1060	1180	1340	1470	1715
30S911K	925	1050	1250	1345	1400	1680
30S112K	1120	1270	1510	1625	1700	2030

# VCR

## METAL OXIDE VARISTORS Transient Voltage Surge Suppressors

### 34S Specification

VCR	Maximum Allowable Voltage		Varistor Voltage		Clamping Voltage (Max.)		Maximum Peak Current (8/20μs)		Maximum Peak Current (8/20μs)	Maximum Energy (10/1000μs)	Typical Capacitance (Reference)	UL	CS
	AC.rms (V)	DC (V)	min.	max.	VC (V)	IP (A)	I <sub>n</sub> (KA)	I <sub>Max</sub> (KA)	i <sub>Max.</sub> (KA)	JOULE	@1KHz (pf)		
34S470K	30	38	42	52	93	60	10	20	20	96	35000		
34S560K	35	45	50	63	110					115	29500		
34S680K	40	56	61	75	135					136	24200		
34S820K	50	65	74	90	135					156	17950		
34S101K	60	85	90	110	165					195	15000		
34S121K	75	100	108	132	200					235	12200		
34S151K	95	125	135	165	250	300	20	45	50	296	10000		
34S181K	115	150	162	198	300					350	8250		
34S201K	130	170	185	225	340					400	6750	*	*
34S221K	140	180	198	242	360					450	6400	*	*
34S241K	150	200	222	270	395					480	5650	*	*
34S271K	180	225	256	310	455					540	5100	*	*
34S301K	190	250	270	330	500					600	4510	*	*
34S331K	210	275	297	363	550					656	4150	*	*
34S361K	230	300	324	396	595					745	3750	*	*
34S391K	250	320	362	440	650					830	3500	*	*
34S431K	275	350	387	473	710					920	2950	*	*
34S471K	300	385	423	517	775					1000	2880	*	*
34S511K	320	415	459	561	845					1060	2650	*	*
34S561K	350	460	504	616	925					1150	2450	*	*
34S621K	385	505	558	682	1025					1250	2200	*	*
34S681K	420	560	612	748	1120					1250	2000	*	*
34S751K	460	615	675	825	1240					1280	1820	*	*
34S781K	485	640	702	858	1290					1350	1750	*	*
34S821K	510	670	738	902	1355					1395	1650	*	*
34S911K	550	745	819	1001	1500					1475	1500	*	*
34S951K	575	760	855	1045	1570	1485	1430	*	*				
34S102K	625	825	900	1100	1650	1550	1350	*	*				
34S112K	680	895	990	1210	1815	1700	1230	*	*				
34S122K	750	980	1150	1320	1980	1750	1135	*	*				
34S142K	850	1120	1315	1540	2310	1750	970	*	*				
34S162K	1000	1320	1550	1760	2640	2000	840		*				
34S182K	1100	1485	1700	1980	2970	2000	800						

Clamping Voltage (±10%) V						
Model	0.5KA	3KA	5KA	10KA	20KA	40KA
34S101K	165	195	210	240	300	400
34S241K	370	385	450	500	600	750
34S431K	650	725	760	890	970	1100
34S511K	750	850	900	1015	1150	1370
34S621K	850	900	1000	1170	1450	1740
34S911K	1250	1450	1550	1750	2000	2250
34S112K	1550	1750	1850	2150	2400	2800