

# Metal Oxide Varistor Large Size, 32~53mm

MVR Series

MERITEK

## FEATURE

- Operating / Storage Temperature: -40°C ~ +105°C / -40°C +125°C
- Varistor Voltage: 82V to 1600V
- Withstanding Surge Current Rating Up to 70KA
- Various Lead Form and Spacing Options
- UL/cUL Safety Approved: Certification No: E326004



## PART NUMBERING SYSTEM

MVR 32 D 201 K Q  
(1) (2) (3) (4) (5) (6)

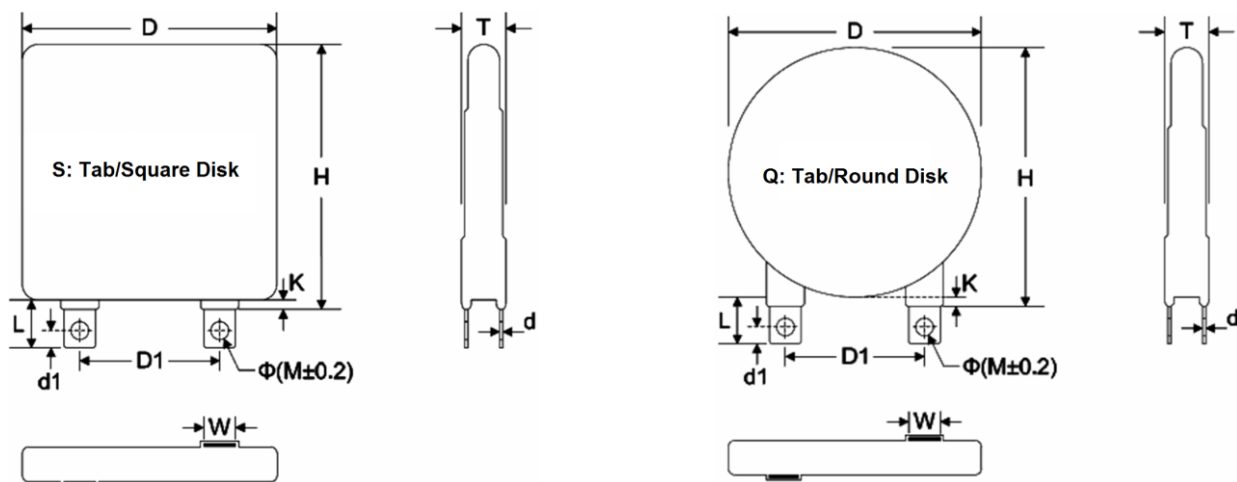


No	Item	Digit	Description	Series Reference
(1)	Meritek Series	MVR	Metal Oxide Varistor	Leaded Type
(2)	Diameter	32	32: $\phi 32\text{mm}$	32, 34, 40, 53mm
(3)	Lead/Package Type	D	D: Round Disk or Dual Square Disk	S: Single Square, A: Bare
(4)	Voltage	201	201: 200VDC	82V~1600V
(5)	Tolerance	K	K: $\pm 10\%$	-10% ~ +10%
(6)	Lead Type	Q	Q: Tab/Round Disk	S: Tab/Square Disk

## ELECTRICAL CHARACTERISTICS AND DIMENSIONS REFERENCE TABLE

MVR-S Series	Varistor Voltage @1mA DC	Max. Energy (10/1K $\mu$ s)	D max	H max	L min	D1	d $\pm 0.05$	d1	W $\pm 0.5$	$\phi M \pm 0.2$
<a href="#">MVR32D</a>	200V~1.6KV	250J~1080J	36.0	40.0	14.5	25.4 $\pm 1.0$	0.5 $\pm 0.25$	3.7 $\pm 0.3$	7.0	3.2
<a href="#">MVR34S</a>	82V~1.6KV	156J~1500J	38.0	40.0	14.5	25.4 $\pm 1.0$	0.5 $\pm 0.25$	3.7 $\pm 0.3$	7.0	3.2
<a href="#">MVR40D</a>	200V~1.6KV	370J~1700J	42.0	48	14.5	25.4 $\pm 1.0$	0.5 $\pm 0.25$	3.7 $\pm 0.3$	7.0	3.2
<a href="#">MVR53D</a>	200V~1.6KV	550J~2500J	56.5	64.0	14.5	25.4 $\pm 1.0$	0.5 $\pm 0.25$	3.6 $\pm 0.3$	9.7	3.8

(Unit: mm)



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## ELECTRICAL CHARACTERISTICS – MVR32D SERIES

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MVR32D-S Series	Varistor Voltage @1mA DC	Max. Allowable Voltage		Max. Clamping Voltage		Withstanding Surge Current (A)	Max. Energy (10/1K $\mu$ s) (J)	Typical Cap. @1KHz (pF)	Dimension Tmax
	V <sub>DC</sub>	V <sub>ACrms</sub>	V <sub>DC</sub>	V <sub>c</sub>	I <sub>p</sub>				
	(V)	(V)	(V)	(V)	(A)				
MVR32D201K-S	200(180~220)	130	170	340	200	25,000	250	5,200	6.2
MVR32D221K-S	220(198~242)	140	180	360			270	5,150	6.3
MVR32D241K-S	240(216~264)	150	200	395			290	5,100	6.4
MVR32D271K-S	270(243~297)	175	225	455			300	4,800	6.6
MVR32D301K-S	300(270~330)	190	250	500			330	4,550	6.8
MVR32D331K-S	330(297~363)	210	275	550			360	4,300	6.9
MVR32D361K-S	360(324~396)	230	300	595			380	3,900	7.1
MVR32D391K-S	390(351~429)	250	320	650			400	3,200	7.3
MVR32D431K-S	430(387~473)	275	350	710			430	3,100	7.5
MVR32D471K-S	470(423~517)	300	385	775			460	2,800	7.8
MVR32D511K-S	510(459~561)	320	415	845			510	2,700	8.0
MVR32D561K-S	560(504~616)	350	460	925			540	2,550	8.5
MVR32D621K-S	620(558~682)	385	505	1025			570	2,400	8.7
MVR32D681K-S	680(621~748)	420	560	1120			600	2,200	9.0
MVR32D751K-S	750(675~825)	460	615	1240			620	2,000	9.4
MVR32D781K-S	780(702~858)	485	640	1290			660	1,900	9.6
MVR32D821K-S	820(738~902)	510	670	1355			700	1,800	9.8
MVR32D911K-S	910(819~1001)	550	745	1500			750	1,300	10.4
MVR32D951K-S	950(855~1045)	575	765	1570			780	1,200	10.6
MVR32D102K-S	1000(900~1100)	625	825	1650			810	1,100	11.2
MVR32D112K-S	1100(990~1210)	680	895	1815	910	1,000	11.8		
MVR32D122K-S	1200(1080~1320)	750	990	1980	960	920	12.3		
MVR32D142K-S	1400(1260~1540)	880	1140	2310	1020	800	13.3		
MVR32D162K-S	1600(1440~1760)	1000	1280	2640	1080	700	14.3		

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## ELECTRICAL CHARACTERISTICS – MVR34S SERIES

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MVR34S-S Series	Varistor Voltage @1mA DC	Max. Allowable Voltage		Max. Clamping Voltage		Withstanding Surge Current (A)	Max. Energy (10/1Kμs) (J)	Typical Cap. @1KHz (pF)	Dimension Tmax	
	V <sub>DC</sub>	V <sub>ACrms</sub>	V <sub>DC</sub>	V <sub>c</sub>	I <sub>p</sub>					
	(V)	(V)	(V)	(V)	(A)					
MVR34S820K-S	82(74~90)	50	65	135	300	30,000	156	17950	5.9	
MVR34S101K-S	100(90~110)	60	85	165			195	15000	6.1	
MVR34S121K-S	120(108~132)	75	100	200			40,000	235	12200	6.3
MVR34S151K-S	150(135~165)	95	125	250				296	10000	6.6
MVR34S181K-S	180(162~198)	115	150	300				350	8250	6.3
MVR34S201K-S	200(180~220)	130	170	340				330	8000	6.2
MVR34S221K-S	220(198~242)	140	180	360				360	7800	6.3
MVR34S241K-S	240(216~264)	150	200	395				390	7600	6.4
MVR34S271K-S	270(243~297)	175	225	455				420	7200	6.6
MVR34S301K-S	300(270~330)	190	250	500				460	7000	6.8
MVR34S331K-S	330(297~363)	210	275	550		500		6400	6.9	
MVR34S361K-S	360(324~396)	230	300	595		510		6000	7.1	
MVR34S391K-S	390(351~429)	250	320	650		530	4800	7.3		
MVR34S431K-S	430(387~473)	275	350	710		600	4600	7.5		
MVR34S471K-S	470(423~517)	300	385	775		650	4100	7.8		
MVR34S511K-S	510(459~561)	320	415	845		700	4000	8.0		
MVR34S561K-S	560(504~616)	350	460	925		730	3800	8.3		
MVR34S621K-S	620(558~682)	385	505	1025		780	3600	8.7		
MVR34S681K-S	680(612~748)	420	560	1120		810	3300	9.0		
MVR34S751K-S	750(765~825)	460	615	1240		850	3000	9.4		
MVR34S781K-S	780(702~858)	485	640	1290	930	2850	9.6			
MVR34S821K-S	820(738~902)	510	670	1355	970	2700	9.8			
MVR34S911K-S	910(819~1001)	550	745	1500	1050	2100	10.4			
MVR34S951K-S	950(855~1045)	575	765	1570	1080	1900	10.6			
MVR34S102K-S	1000(900~1100)	625	825	1650	1120	1700	11.2			
MVR34S112K-S	1100(990~1210)	680	895	1815	1250	1520	11.8			
MVR34S122K-S	1200(1080~1320)	750	990	1980	1340	1400	12.3			
MVR34S142K-S	1400(1260~1540)	880	1140	2310	1400	1200	13.3			
MVR34S162K-S	1600(1440~1760)	1000	1280	2640	1500	1100	14.3			

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## ELECTRICAL CHARACTERISTICS – MVR40D SERIES

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MVR40D-S Series	Varistor Voltage @1mA DC	Max. Allowable Voltage		Max. Clamping Voltage		Withstanding Surge Current (A)	Max. Energy (10/1Kµs) (J)	Typical Cap. @1KHz (pF)	Dimension Tmax
	V <sub>DC</sub>	V <sub>ACrms</sub>	V <sub>DC</sub>	V <sub>c</sub>	I <sub>p</sub>				
	(V)	(V)	(V)	(V)	(A)				
MVR40D201K-S	200(180~220)	130	170	340	300	40,000	370	8400	6.2
MVR40D221K-S	220(198~242)	140	180	360			400	8200	6.3
MVR40D241K-S	240(216~264)	150	200	395			430	8000	6.4
MVR40D271K-S	270(243~297)	175	225	455			470	7600	6.6
MVR40D301K-S	300(270~330)	190	250	500			510	7300	6.8
MVR40D331K-S	330(297~363)	210	275	550			550	6700	6.9
MVR40D361K-S	360(324~396)	230	300	595			570	6200	7.1
MVR40D391K-S	390(351~429)	250	320	650			590	5100	7.3
MVR40D431K-S	430(387~473)	275	350	710			660	4900	7.5
MVR40D471K-S	470(423~517)	300	385	775			720	4300	7.8
MVR40D511K-S	510(459~561)	320	415	845			770	4200	8.0
MVR40D561K-S	560(504~616)	350	460	925			810	4000	8.3
MVR40D621K-S	620(558~682)	385	505	1025			860	3800	8.7
MVR40D681K-S	680(612~748)	420	560	1120			900	3500	9.0
MVR40D751K-S	750(765~825)	460	615	1240			940	3200	9.4
MVR40D78K-S	780(702~858)	485	640	1290			980	3000	9.6
MVR40D821K-S	820(738~902)	510	670	1355			1080	2900	9.8
MVR40D911K-S	910(819~1001)	550	745	1500			1150	2200	10.4
MVR40D951K-S	950(855~1045)	575	765	1570			1200	2000	10.6
MVR40D102K-S	1000(900~1100)	625	825	1650			1260	1800	11.2
MVR40D112K-S	1100(990~1210)	680	895	1815	1380	1600	11.8		
MVR40D122K-S	1200(1080~1320)	750	990	1980	1460	1500	12.3		
MVR40D142K-S	1400(1260~1540)	880	1140	2310	1550	1300	13.3		
MVR40D162K-S	1600(1440~1760)	1000	1280	2640	1700	1150	14.3		

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## ELECTRICAL CHARACTERISTICS – MVR53D SERIES

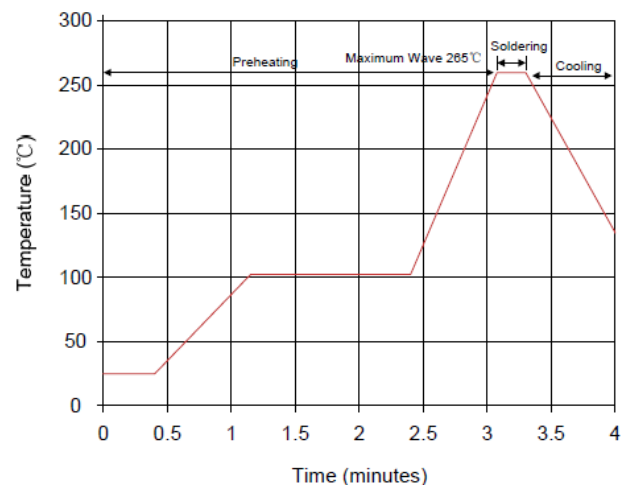
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MVR53D-S Series	Varistor Voltage @1mA DC	Max. Allowable Voltage		Max. Clamping Voltage		Withstanding Surge Current (A)	Max. Energy (10/1Kμs) (J)	Typical Cap. @1KHz (pF)	Dimension Tmax
	V <sub>DC</sub> (V)	V <sub>ACrms</sub> (V)	V <sub>DC</sub> (V)	V <sub>c</sub> (V)	I <sub>p</sub> (A)				
MVR53D201K-S	200(180~220)	130	170	340	500	70,000	550	15,000	6.3
MVR53D221K-S	220(198~242)	140	180	360			600	13,750	6.4
MVR53D241K-S	240(216~264)	150	200	395			650	12,500	6.5
MVR53D271K-S	270(243~297)	175	225	455			700	11,000	6.7
MVR53D301K-S	300(270~330)	190	250	500			760	9,000	6.9
MVR53D331K-S	330(297~363)	210	275	550			825	8,500	7.0
MVR53D361K-S	360(324~396)	230	300	595			850	7,500	7.2
MVR53D391K-S	390(351~429)	250	320	650			885	7,000	7.4
5MVR3D431K-S	430(387~473)	275	350	710			990	6,500	7.6
MVR53D471K-S	470(423~517)	300	385	775			1080	6,000	7.9
MVR53D511K-S	510(459~561)	320	415	845			1150	5,500	8.1
MVR53D561K-S	560(504~616)	350	460	925			1230	5,500	8.6
MVR53D621K-S	620(558~682)	385	505	1025			1300	5,000	8.8
MVR53D681K-S	680(621~748)	420	560	1120			1350	4,500	9.1
MVR53D751K-S	750(675~825)	460	615	1240			1400	4,000	9.5
MVR53D781K-S	780(702~858)	485	640	1290			1450	3,900	9.7
MVR53D821K-S	820(738~902)	510	670	1355			1600	3,700	9.9
MVR53D911K-S	910(819~1001)	550	745	1500			1700	3,300	10.5
MVR53D951K-S	950(855~1045)	575	765	1570			1800	3,200	10.7
MVR53D102K-S	1000(900~1100)	625	825	1650			1890	3,000	11.3
MVR53D112K-S	1100(990~1210)	680	895	1815	2050	2,700	11.9		
MVR53D122K-S	1200(1800~1320)	750	990	1980	2160	2,500	12.4		
MVR53D142K-S	1400(1260~1540)	880	1140	2310	2300	2,150	13.4		
MVR53D162K-S	1600(1440~1760)	1000	1280	2640	2500	1,900	14.4		

## SOLDERING RECOMMENDATION

Wave Soldering Process	Condition
Peak Temperature	265°C (max.)
Dipping Time	10 sec. (max.)
Soldering	1 time

Soldering Iron Process	Condition
Temperature of Soldering Iron-tip	360°C (max.)
Soldering Time	3 sec. (max.)
Distance From Varistor	2 mm (min.)



Meritek Varistor Series: <http://www.meritekusa.com/EN/productlist/node/15>

Meritek Product Series: <http://www.meritekusa.com/EN/products>

\*Specifications subject to change without notice.