

Metal Oxide Varistor:

Series: 05D 07D 10D 14D 20D

Features

- Wide operating voltage (V 0.1mA) range from 18V to 750V. Self-Healing Property
- Fast responding to transient over-voltage. Low ESR and ESL
- Large absorbing transient energy capability
- Low clamping ratio and no follow-on current

Applications

- Transistor, Diode, IC, Thyristor or Triac semiconductor protection.
- Surge protection in consumer electronics
- Surge protection in industrial electronics
- Surge protection in electronic home appliances, gas and petroleum appliances.
- Relay and electromagnetic valve surge absorption.

General Characteristics Definition

- Operating Temperature: (-40 °C ~ +85 °C ~ +125 °C).
- Storage Temperature: (-40 °C ~ +125 °C ~ +150 °C)
- Working Surface Temperature: +115 °C
- Surge Insulation Resistance: > 100M Ω
- Coating (Epoxy Resin): Flame-Retardant to UL 94 V-0

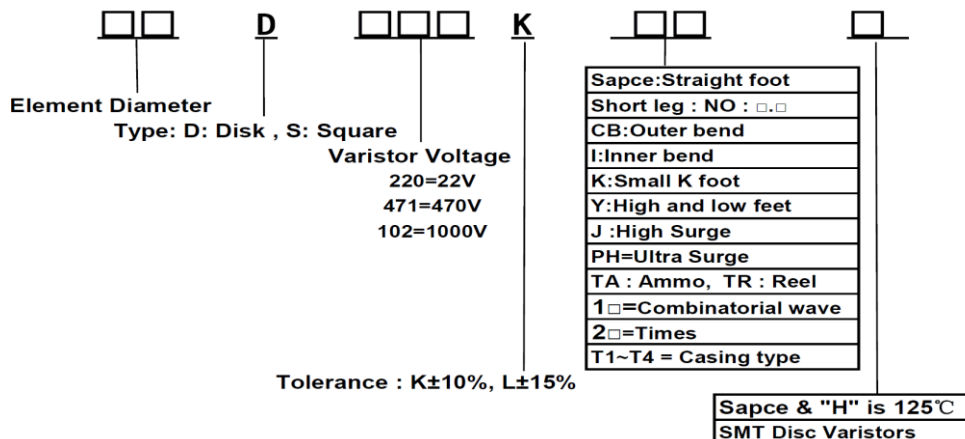
Certificates

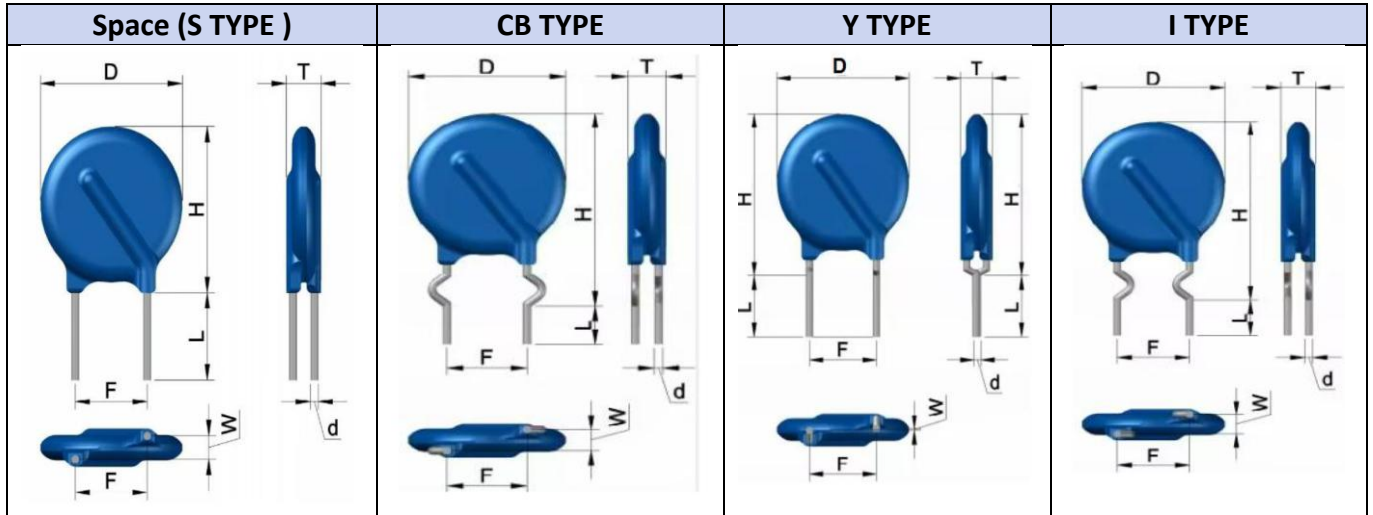


Material

- Coating: Epoxy Resin
- Lead Wire: The Copper Wire
- Electrode: Silver Solder
- Disk: Zinc Oxide

Part Number Code





Part No.	Part No.	T Max. / W ±0.5	D Max.	H Max.		L min.	F ±0.8	d ± 0.05
				S	I / C / Y			
05D180L	05D180LJ	4.4/0.7	7.0	10.0	13.0	20.0	5.0	0.6
05D220K	05D220KJ	4.5/0.8	7.0	10.0	13.0	20.0	5.0	0.6
05D270K	05D270KJ	4.6/0.9	7.0	10.0	13.0	20.0	5.0	0.6
05D330K	05D330KJ	4.8/1.0	7.0	10.0	13.0	20.0	5.0	0.6
05D390K	05D390KJ	5.0/1.1	7.0	10.0	13.0	20.0	5.0	0.6
05D470K	05D470KJ	5.2/1.3	7.0	10.0	13.0	20.0	5.0	0.6
05D560K	05D560KJ	5.0/1.1	7.0	10.0	13.0	20.0	5.0	0.6
05D680K	05D680KJ	5.2/1.3	7.0	10.0	13.0	20.0	5.0	0.6
05D820K	05D820KJ	4.4/0.8	7.0	10.0	13.0	20.0	5.0	0.6
05D101K	05D101KJ	4.5/0.9	7.0	10.0	13.0	20.0	5.0	0.6
05D121K	05D121KJ	4.6/1.0	7.0	10.0	13.0	20.0	5.0	0.6
05D151K	05D151KJ	4.8/1.2	7.0	10.0	13.0	20.0	5.0	0.6
05D181K	05D181KJ	4.3/0.8	7.0	10.0	13.0	20.0	5.0	0.6
05D201K	05D201KJ	4.4/1.0	7.0	10.0	13.0	20.0	5.0	0.6
05D221K	05D221KJ	4.4/1.1	7.0	10.0	13.0	20.0	5.0	0.6
05D241K	05D241KJ	4.5/1.2	7.0	10.0	13.0	20.0	5.0	0.6
05D271K	05D271KJ	4.6/1.1	7.0	10.0	13.0	20.0	5.0	0.6
05D301K	05D301KJ	4.8/1.3	7.0	10.0	13.0	20.0	5.0	0.6
05D331K	05D331KJ	4.9/1.3	7.0	10.0	13.0	20.0	5.0	0.6
05D361K	05D361KJ	5.0/1.4	7.0	10.0	13.0	20.0	5.0	0.6
05D391K	05D391KJ	5.2/1.6	7.0	10.0	13.0	20.0	5.0	0.6
05D431K	05D431KJ	5.4/1.8	7.0	10.0	13.0	20.0	5.0	0.6
05D471K	05D471KJ	5.6/2.0	7.0	10.0	13.0	20.0	5.0	0.6
05D511K	05D511KJ	5.8/2.1	7.0	10.0	13.0	20.0	5.0	0.6
05D561K	05D561KJ	6.0/2.3	7.0	10.0	13.0	20.0	5.0	0.6
05D621K	05D621KJ	6.2/2.2	7.0	10.0	13.0	20.0	5.0	0.6
05D681K	05D681KJ	6.5/2.5	7.0	10.0	13.0	20.0	5.0	0.6
05D751K	05D751KJ	6.9/2.7	7.0	10.0	13.0	20.0	5.0	0.6
Part No.	Part No.	T Max. / W ±0.5	D Max.	H Max.		L min.	F ±0.8	d ± 0.05
				S	I / C / Y			

07D180L	07D180LJ	4.4/0.7	9.0	12.0	15.0	20.0	5.0	0.6
07D220K	07D220KJ	4.5/0.8	9.0	12.0	15.0	20.0	5.0	0.6
07D270K	07D270KJ	4.6/0.9	9.0	12.0	15.0	20.0	5.0	0.6
07D330K	07D330KJ	4.8/1.0	9.0	12.0	15.0	20.0	5.0	0.6
07D390K	07D390KJ	5.0/1.1	9.0	12.0	15.0	20.0	5.0	0.6
07D470K	07D470KJ	5.2/1.3	9.0	12.0	15.0	20.0	5.0	0.6
07D560K	07D560KJ	5.0/1.1	9.0	12.0	15.0	20.0	5.0	0.6
07D680K	07D680KJ	5.2/1.3	9.0	12.0	15.0	20.0	5.0	0.6
07D820K	07D820KJ	4.4/0.8	9.0	12.0	15.0	20.0	5.0	0.6
07D101K	07D101KJ	4.5/0.9	9.0	12.0	15.0	20.0	5.0	0.6
07D121K	07D121KJ	4.6/1.0	9.0	12.0	15.0	20.0	5.0	0.6
07D151K	07D151KJ	4.8/1.2	9.0	12.0	15.0	20.0	5.0	0.6
07D181K	07D181KJ	4.3/0.8	9.0	12.0	15.0	20.0	5.0	0.6
07D201K	07D201KJ	4.4/1.0	9.0	12.0	15.0	20.0	5.0	0.6
07D221K	07D221KJ	4.4/1.1	9.0	12.0	15.0	20.0	5.0	0.6
07D241K	07D241KJ	4.5/1.2	9.0	12.0	15.0	20.0	5.0	0.6
07D271K	07D271KJ	4.6/1.1	9.0	12.0	15.0	20.0	5.0	0.6
07D301K	07D301KJ	4.8/1.3	9.0	12.0	15.0	20.0	5.0	0.6
07D331K	07D331KJ	4.9/1.3	9.0	12.0	15.0	20.0	5.0	0.6
07D361K	07D361KJ	5.0/1.4	9.0	12.0	15.0	20.0	5.0	0.6
07D391K	07D391KJ	5.2/1.6	9.0	12.0	15.0	20.0	5.0	0.6
07D431K	07D431KJ	5.4/1.8	9.0	12.0	15.0	20.0	5.0	0.6
07D471K	07D471KJ	5.6/2.0	9.0	12.0	15.0	20.0	5.0	0.6
07D511K	07D511KJ	5.8/2.1	9.0	12.0	15.0	20.0	5.0	0.6
07D561K	07D561KJ	6.0/2.3	9.0	12.0	15.0	20.0	5.0	0.6
07D621K	07D621KJ	6.2/2.2	9.0	12.0	15.0	20.0	5.0	0.6
07D681K	07D681KJ	6.5/2.5	9.0	12.0	15.0	20.0	5.0	0.6
07D751K	07D751KJ	6.9/2.7	9.0	12.0	15.0	20.0	5.0	0.6
07D781K	07D781KJ	6.5/2.5	9.0	12.0	15.0	20.0	5.0	0.6
07D821K	07D821KJ	6.9/2.7	9.0	12.0	15.0	20.0	5.0	0.6
Part No.	Part No.	T Max. / W ±0.5	D Max.	H Max.		L min.	F ±0.8	d ± 0.05
				S	I / C / Y			
10D180L	10D180LJ	4.4/0.7	12.0	15.0	18.0	20.0	7.5	0.8
10D220K	10D220KJ	4.5/0.8	12.0	15.0	18.0	20.0	7.5	0.8
10D270K	10D270KJ	4.6/0.9	12.0	15.0	18.0	20.0	7.5	0.8
10D330K	10D330KJ	4.8/1.0	12.0	15.0	18.0	20.0	7.5	0.8
10D390K	10D390KJ	5.0/1.1	12.0	15.0	18.0	20.0	7.5	0.8
10D470K	10D470KJ	5.2/1.3	12.0	15.0	18.0	20.0	7.5	0.8
10D560K	10D560KJ	5.0/1.1	12.0	15.0	18.0	20.0	7.5	0.8
10D680K	10D680KJ	5.2/1.3	12.0	15.0	18.0	20.0	7.5	0.8
10D820K	10D820KJ	4.4/0.8	12.0	15.0	18.0	20.0	7.5	0.8
10D101K	10D101KJ	4.5/0.9	12.0	15.0	18.0	20.0	7.5	0.8
10D121K	10D121KJ	4.6/1.0	12.0	15.0	18.0	20.0	7.5	0.8
10D151K	10D151KJ	4.8/1.2	12.0	15.0	18.0	20.0	7.5	0.8
10D181K	10D181KJ	4.3/0.8	12.0	15.0	18.0	20.0	7.5	0.8
10D201K	10D201KJ	4.4/1.0	12.0	15.0	18.0	20.0	7.5	0.8
10D221K	10D221KJ	4.4/1.1	12.0	15.0	18.0	20.0	7.5	0.8
10D241K	10D241KJ	4.5/1.2	12.0	15.0	18.0	20.0	7.5	0.8
10D271K	10D271KJ	4.6/1.1	12.0	15.0	18.0	20.0	7.5	0.8
10D301K	10D301KJ	4.8/1.3	12.0	15.0	18.0	20.0	7.5	0.8
10D331K	10D331KJ	4.9/1.3	12.0	15.0	18.0	20.0	7.5	0.8
10D361K	10D361KJ	5.0/1.4	12.0	15.0	18.0	20.0	7.5	0.8
10D391K	10D391KJ	5.2/1.6	12.0	15.0	18.0	20.0	7.5	0.8
10D431K	10D431KJ	5.4/1.8	12.0	15.0	18.0	20.0	7.5	0.8

10D471K	10D471KJ	5.6/2.0	12.0	15.0	18.0	20.0	7.5	0.8
10D511K	10D511KJ	5.8/2.1	12.0	15.0	18.0	20.0	7.5	0.8
10D561K	10D561KJ	6.0/2.3	12.0	15.0	18.0	20.0	7.5	0.8
10D621K	10D621KJ	6.2/2.2	12.0	15.0	18.0	20.0	7.5	0.8
10D681K	10D681KJ	6.5/2.5	12.0	15.0	18.0	20.0	7.5	0.8
10D751K	10D751KJ	6.9/2.7	12.0	15.0	18.0	20.0	7.5	0.8
10D781K	10D781KJ	6.5/2.5	12.0	15.0	18.0	20.0	7.5	0.8
10D821K	10D821KJ	6.5/2.5	12.0	15.0	18.0	20.0	7.5	0.8
10D911K	10D911KJ	6.9/2.7	12.0	15.0	18.0	20.0	7.5	0.8
10D102K	10D102KJ	6.5/2.5	12.0	15.0	18.0	20.0	7.5	0.8
10D112K	10D112KJ	6.9/2.7	12.0	15.0	18.0	20.0	7.5	0.8
Part No.	Part No.	T Max. / W ±0.5	D Max.	H Max.		L min.	F ±0.8	d ± 0.05
				S	I / C / Y			
14D180L	14D180LJ	4.4/0.7	16.0	19.0	22.0	20.0	7.5	0.8
14D220K	14D220KJ	4.5/0.8	16.0	19.0	22.0	20.0	7.5	0.8
14D270K	14D270KJ	4.6/0.9	16.0	19.0	22.0	20.0	7.5	0.8
14D330K	14D330KJ	4.8/1.0	16.0	19.0	22.0	20.0	7.5	0.8
14D390K	14D390KJ	5.0/1.1	16.0	19.0	22.0	20.0	7.5	0.8
14D470K	14D470KJ	5.2/1.3	16.0	19.0	22.0	20.0	7.5	0.8
14D560K	14D560KJ	5.0/1.1	16.0	19.0	22.0	20.0	7.5	0.8
14D680K	14D680KJ	5.2/1.3	16.0	19.0	22.0	20.0	7.5	0.8
14D820K	14D820KJ	4.4/0.8	16.0	19.0	22.0	20.0	7.5	0.8
14D101K	14D101KJ	4.5/0.9	16.0	19.0	22.0	20.0	7.5	0.8
14D121K	14D121KJ	4.6/1.0	16.0	19.0	22.0	20.0	7.5	0.8
14D151K	14D151KJ	4.8/1.2	16.0	19.0	22.0	20.0	7.5	0.8
14D181K	14D181KJ	4.3/0.8	16.0	19.0	22.0	20.0	7.5	0.8
14D201K	14D201KJ	4.4/1.0	16.0	19.0	22.0	20.0	7.5	0.8
14D221K	14D221KJ	4.4/1.1	16.0	19.0	22.0	20.0	7.5	0.8
14D241K	14D241KJ	4.5/1.2	16.0	19.0	22.0	20.0	7.5	0.8
14D271K	14D271KJ	4.6/1.1	16.0	19.0	22.0	20.0	7.5	0.8
14D301K	14D301KJ	4.8/1.3	16.0	19.0	22.0	20.0	7.5	0.8
14D331K	14D331KJ	4.9/1.3	16.0	19.0	22.0	20.0	7.5	0.8
14D361K	14D361KJ	5.0/1.4	16.0	19.0	22.0	20.0	7.5	0.8
14D391K	14D391KJ	5.2/1.6	16.0	19.0	22.0	20.0	7.5	0.8
14D431K	14D431KJ	5.4/1.8	16.0	19.0	22.0	20.0	7.5	0.8
14D471K	14D471KJ	5.6/2.0	16.0	19.0	22.0	20.0	7.5	0.8
14D511K	14D511KJ	5.8/2.1	16.0	19.0	22.0	20.0	7.5	0.8
14D561K	14D561KJ	6.0/2.3	16.0	19.0	22.0	20.0	7.5	0.8
14D621K	14D621KJ	6.4/2.6	16.0	19.0	22.0	20.0	7.5	0.8
14D681K	14D681KJ	6.5/2.8	16.0	19.0	22.0	20.0	7.5	0.8
14D751K	14D751KJ	6.7/2.7	16.0	19.0	22.0	20.0	7.5	0.8
14D781K	14D781KJ	6.8/2.8	16.0	19.0	22.0	20.0	7.5	0.8
14D821K	14D821KJ	6.9/2.9	16.0	19.0	22.0	20.0	7.5	0.8
14D911K	14D911KJ	7.2/3.2	16.0	19.0	22.0	20.0	7.5	0.8
14D102K	14D102KJ	7.5/3.5	16.0	19.0	22.0	20.0	7.5	0.8
14D112K	14D112KJ	7.9/3.9	16.0	19.0	22.0	20.0	7.5	0.8
14D122K	14D122KJ	9.0/4.3	16.0	19.0	22.0	20.0	7.5	0.8
14D142K	14D142KJ	10.5/5.0	16.0	19.0	22.0	20.0	7.5	0.8
14D162K	14D162KJ	11/5.8	16.0	19.0	22.0	20.0	7.5	0.8
14D182K	14D182KJ	12/6.4	16.0	19.0	22.0	20.0	7.5	0.8
Part No.	Part No.	T Max. / W ±0.5	D Max.	H Max.		L min.	F	d
				S	I / C / Y			
20D180L	20D180LJ	4.4/0.7	22.0	25.0	28.0	20.0	7.5±0.8 10±1.0	0.8 1.0

20D220K	20D220KJ	4.5/0.8	22.0	25.0	28.0	20.0	7.5±0.8 10±1.0	0.8 1.0
20D270K	20D270KJ	4.6/0.9	22.0	25.0	28.0	20.0	7.5±0.8 10±1.0	0.8 1.0
20D330K	20D330KJ	4.8/1.0	22.0	25.0	28.0	20.0	7.5±0.8 10±1.0	0.8 1.0
20D390K	20D390KJ	5.0/1.1	22.0	25.0	28.0	20.0	7.5±0.8 10±1.0	0.8 1.0
20D470K	20D470KJ	5.2/1.3	22.0	25.0	28.0	20.0	7.5±0.8 10±1.0	0.8 1.0
20D560K	20D560KJ	5.0/1.1	22.0	25.0	28.0	20.0	7.5±0.8 10±1.0	0.8 1.0
20D680K	20D680KJ	5.2/1.3	22.0	25.0	28.0	20.0	7.5±0.8 10±1.0	0.8 1.0
20D820K	20D820KJ	4.4/0.8	22.0	25.0	28.0	20.0	7.5±0.8 10±1.0	0.8 1.0
20D101K	20D101KJ	4.5/0.9	22.0	25.0	28.0	20.0	7.5±0.8 10±1.0	0.8 1.0
20D121K	20D121KJ	4.6/1.0	22.0	25.0	28.0	20.0	7.5±0.8 10±1.0	0.8 1.0
20D151K	20D151KJ	4.8/1.2	22.0	25.0	28.0	20.0	7.5±0.8 10±1.0	0.8 1.0
20D181K	20D181KJ	4.3/0.8	22.0	25.0	28.0	20.0	7.5±0.8 10±1.0	0.8 1.0
20D201K	20D201KJ	4.4/1.0	22.0	25.0	28.0	20.0	7.5±0.8 10±1.0	0.8 1.0
20D221K	20D221KJ	4.4/1.1	22.0	25.0	28.0	20.0	7.5±0.8 10±1.0	0.8 1.0
20D241K	20D241KJ	4.5/1.2	22.0	25.0	28.0	20.0	7.5±0.8 10±1.0	0.8 1.0
20D271K	20D271KJ	4.6/1.1	22.0	25.0	28.0	20.0	7.5±0.8 10±1.0	0.8 1.0
20D301K	20D301KJ	4.8/1.3	22.0	25.0	28.0	20.0	7.5±0.8 10±1.0	0.8 1.0
20D331K	20D331KJ	4.9/1.3	22.0	25.0	28.0	20.0	7.5±0.8 10±1.0	0.8 1.0
20D361K	20D361KJ	5.0/1.4	22.0	25.0	28.0	20.0	7.5±0.8 10±1.0	0.8 1.0
20D391K	20D391KJ	5.2/1.6	22.0	25.0	28.0	20.0	7.5±0.8 10±1.0	0.8 1.0
20D431K	20D431KJ	5.4/1.8	22.0	25.0	28.0	20.0	7.5±0.8 10±1.0	0.8 1.0
20D471K	20D471KJ	5.6/2.0	22.0	25.0	28.0	20.0	7.5±0.8 10±1.0	0.8 1.0
20D511K	20D511KJ	5.8/2.1	22.0	25.0	28.0	20.0	7.5±0.8 10±1.0	0.8 1.0
20D561K	20D561KJ	6.0/2.3	22.0	25.0	28.0	20.0	7.5±0.8 10±1.0	0.8 1.0
20D621K	20D621KJ	6.4/2.6	22.0	25.0	28.0	20.0	7.5±0.8 10±1.0	0.8 1.0
20D681K	20D681KJ	6.5/2.8	22.0	25.0	28.0	20.0	7.5±0.8 10±1.0	0.8 1.0
20D751K	20D751KJ	6.7/2.7	22.0	25.0	28.0	20.0	7.5±0.8 10±1.0	0.8 1.0

20D781K	20D781KJ	6.8/2.8	22.0	25.0	28.0	20.0	7.5±0.8 10±1.0	0.8 1.0
20D821K	20D821KJ	6.9/2.9	22.0	25.0	28.0	20.0	7.5±0.8 10±1.0	0.8 1.0
20D911K	20D911KJ	7.2/3.2	22.0	25.0	28.0	20.0	7.5±0.8 10±1.0	0.8 1.0
20D102K	20D102KJ	7.5/3.5	22.0	25.0	28.0	20.0	7.5±0.8 10±1.0	0.8 1.0
20D112K	20D112KJ	7.9/3.9	22.0	25.0	28.0	20.0	7.5±0.8 10±1.0	0.8 1.0
20D122K	20D122KJ	9.0/4.3	22.0	25.0	28.0	20.0	7.5±0.8 10±1.0	0.8 1.0
20D142K	20D142KJ	10.5/5.0	22.0	25.0	28.0	20.0	7.5±0.8 10±1.0	0.8 1.0
20D162K	20D162KJ	11/5.8	22.0	25.0	28.0	20.0	7.5±0.8 10±1.0	0.8 1.0
20D182K	20D182KJ	12/6.4	22.0	25.0	28.0	20.0	7.5±0.8 10±1.0	0.8 1.0

ELECTRICAL CHARACTERISTIC												
Part Number		Maximum Allowable Voltage		Varistor Voltage	Maximum Clamping Voltage		Withstanding Surge Current		Energy 10/1000 μ S		Rated Power	Typical Capacitance (Reference)
Standard	High Surge	AC (V)	DC (V)	V0.1mA(V)	IP(A)	VC(V)	I(A) Standard	I(A) High Surge	(J) Standard	(J) High Surge	(W)	@1KHzPF
05D180L	05D180LJ	11	14	18(15.3~20.7)	1	40	100	250	0.4	0.6	0.01	1400
05D220K	05D220KJ	14	18	22(19.8~24.2)	1	48	100	250	0.5	0.7	0.01	1150
05D270K	05D270KJ	17	22	27(24.3~29.7)	1	60	100	250	0.6	0.9	0.01	930
05D330K	05D330KJ	20	26	33(29.7~36.3)	1	73	100	250	0.8	1.1	0.01	760
05D390K	05D390KJ	25	31	39(35.1~42.9)	1	80	100	250	0.9	1.2	0.01	640
05D470K	05D470KJ	30	38	47(42.3~51.7)	1	104	100	250	1.1	1.5	0.01	530
05D560K	05D560KJ	35	45	56(50.4~61.6)	1	123	100	250	1.3	1.8	0.01	450
05D680K	05D680KJ	40	56	68(61.2~74.8)	1	145	100	250	1.6	2.2	0.01	370
05D820K	05D820KJ	50	65	82(73.8~90.2)	5	150	400	800	2.5	4.0	0.1	300
05D101K	05D101KJ	60	85	100(90~110)	5	177	400	800	3.0	4.1	0.1	250
05D121K	05D121KJ	75	100	120(108~132)	5	210	400	800	4.0	4.9	0.1	210
05D151K	05D151KJ	95	125	150(135~165)	5	260	400	800	4.1	6.5	0.1	165
05D181K	05D181KJ	115	150	180(162~198)	5	320	400	800	4.9	7.5	0.1	140
05D201K	05D201KJ	130	170	200(185~225)	5	355	400	800	6.5	8.5	0.1	125
05D221K	05D221KJ	140	180	220(198~242)	5	380	400	800	7.5	9.0	0.1	110
05D241K	05D241KJ	150	200	240(216~264)	5	415	400	800	8.0	10.5	0.1	100
05D271K	05D271KJ	175	225	270(243~297)	5	475	400	800	8.5	11.0	0.1	95
05D301K	05D301KJ	190	250	300(270~330)	5	520	400	800	9.0	12.0	0.1	85
05D331K	05D331KJ	210	275	330(297~363)	5	570	400	800	9.5	13.0	0.1	75
05D361K	05D361KJ	230	300	360(324~396)	5	620	400	800	10.0	16.0	0.1	70
05D391K	05D391KJ	250	320	390(351~429)	5	675	400	800	12.0	17.0	0.1	65
05D431K	05D431KJ	275	350	430(387~473)	5	745	400	800	13.0	20.0	0.1	60
05D471K	05D471KJ	300	385	470(423~517)	5	810	400	800	15.0	21.0	0.1	55
05D511K	05D511KJ	320	415	510(459~561)	5	845	400	800	16.0	22.5	0.1	50
05D561K	05D561KJ	350	460	560(504~616)	5	920	400	800	16.5	24.0	0.1	45
05D621K	05D621KJ	385	505	620(558~682)	5	1025	400	800	21.0	25.0	0.1	40
05D681K	05D681KJ	420	560	680(612~748)	5	1120	400	800	22.0	29.0	0.1	35
05D751K	05D751KJ	460	615	750(675~825)	5	1240	400	800	22.4	32.0	0.1	30
Part Number		Maximum Allowable Voltage		Varistor Voltage	Maximum Clamping Voltage		Withstanding Surge Current		Energy 10/1000 μ S		Rated Power	Typical Capacitance (Reference)
Standard	High Surge	AC (V)	DC (V)	V0.1mA(V)	IP(A)	VC(V)	I(A) Standard	I(A) High Surge	(J) Standard	(J) High Surge	(W)	@1KHzPF
07D180L	07D180LJ	11	14	18(15.3~20.7)	2.5	36	250	500	0.9	2.0	0.02	2800
07D220K	07D220KJ	14	18	22(19.8~24.2)	2.5	43	250	500	1.1	2.4	0.02	2300
07D270K	07D270KJ	17	22	27(24.3~29.7)	2.5	53	250	500	1.4	3.0	0.02	1800
07D330K	07D330KJ	20	26	33(29.7~36.3)	2.5	65	250	500	1.7	3.5	0.02	1500
07D390K	07D390KJ	25	31	39(35.1~42.9)	2.5	77	250	500	2.1	4.0	0.02	1300
07D470K	07D470KJ	30	38	47(42.3~51.7)	2.5	93	250	500	2.5	5.0	0.02	1100
07D560K	07D560KJ	35	45	56(50.4~61.6)	2.5	110	250	500	3.1	6.0	0.02	890
07D680K	07D680KJ	40	56	68(61.2~74.8)	2.5	135	250	500	3.6	7.0	0.02	740
07D820K	07D820KJ	50	65	82(73.8~90.2)	10	135	1200	1750	5.5	10	0.25	600
07D101K	07D101KJ	60	85	100(90~110)	10	165	1200	1750	6.5	12	0.25	500
07D121K	07D121KJ	75	100	120(108~132)	10	200	1200	1750	7.8	12	0.25	420
07D151K	07D151KJ	95	125	150(135~165)	10	250	1200	1750	9.7	13	0.25	330

07D181K	07D181KJ	115	150	180(162~198)	10	300	1200	1750	11.7	16	0.25	280
07D201K	07D201KJ	130	170	200(185~225)	10	330	1200	1750	13	17	0.25	250
07D221K	07D221KJ	140	180	220(198~242)	10	360	1200	1750	14	19	0.25	230
07D241K	07D241KJ	150	200	240(216~264)	10	395	1200	1750	15	21	0.25	210
07D271K	07D271KJ	175	225	270(243~297)	10	455	1200	1750	18	24	0.25	185
07D301K	07D301KJ	190	250	300(270~330)	10	505	1200	1750	20	26	0.25	165
07D331K	07D331KJ	210	275	330(297~363)	10	550	1200	1750	23	28	0.25	150
07D361K	07D361KJ	230	300	360(324~396)	10	595	1200	1750	25	32	0.25	140
07D391K	07D391KJ	250	320	390(351~429)	10	650	1200	1750	25	35	0.25	130
07D431K	07D431KJ	275	350	430(387~473)	10	710	1200	1750	28	40	0.25	115
07D471K	07D471KJ	300	385	470(423~517)	10	775	1200	1750	30	42	0.25	105
07D511K	07D511KJ	320	415	510(459~561)	10	845	1200	1750	30	45	0.25	100
07D561K	07D561KJ	350	460	560(504~616)	10	920	1200	1750	30	49	0.25	90
07D621K	07D621KJ	385	505	620(558~682)	10	1025	1200	1750	33	55	0.25	80
07D681K	07D681KJ	420	560	680(612~748)	10	1120	1200	1750	33	60	0.25	75
07D751K	07D751KJ	460	615	750(675~825)	10	1240	1200	1750	65	67	0.25	70
07D781K	07D781KJ	485	640	780(702~858)	10	1290	1200	1750	65	67	0.25	70
07D821K	07D821KJ	510	670	820(738~902)	10	1355	1200	1750	65	70	0.25	60
Part Number		Maximum Allowable Voltage		Varistor Voltage	Maximum Clamping Voltage		Withstanding Surge Current		Energy 10/1000µS		Rated Power	Typical Capacitance (Reference)
Standard	High Surge	AC (V)	DC (V)	V0.1mA(V)	IP(A)	VC(V)	I(A) Standard	I(A) High Surge	(J) Standard	(J) High Surge	(W)	@1KHzPF
10D180L	10D180LJ	11	14	18(15.3~20.7)	5	36	500	1000	2.1	3	0.05	5600
10D220K	10D220KJ	14	18	22(19.8~24.2)	5	43	500	1000	2.5	5	0.05	4500
10D270K	10D270KJ	17	22	27(24.3~29.7)	5	53	500	1000	3.0	6	0.05	3700
10D330K	10D330KJ	20	26	33(29.7~36.3)	5	65	500	1000	4.0	7	0.05	3000
10D390K	10D390KJ	25	31	39(35.1~42.9)	5	77	500	1000	4.6	9	0.05	2400
10D470K	10D470KJ	30	38	47(42.3~51.7)	5	93	500	1000	5.5	11	0.05	2100
10D560K	10D560KJ	35	45	56(50.4~61.6)	5	110	500	1000	7.0	13	0.05	1800
10D680K	10D680KJ	40	56	68(61.2~74.8)	5	135	500	1000	8.2	15	0.05	1500
10D820K	10D820KJ	50	65	82(73.8~90.2)	25	135	2500	3500	12	17	0.4	1200
10D101K	10D101KJ	60	85	100(90~110)	25	165	2500	3500	15	18	0.4	1000
10D121K	10D121KJ	75	100	120(108~132)	25	200	2500	3500	18	21	0.4	830
10D151K	10D151KJ	95	125	150(135~165)	25	250	2500	3500	22	25	0.4	670
10D181K	10D181KJ	115	150	180(162~198)	25	300	2500	3500	27	30	0.4	560
10D201K	10D201KJ	130	170	200(185~225)	25	330	2500	3500	30	35	0.4	500
10D221K	10D221KJ	140	180	220(198~242)	25	360	2500	3500	32	39	0.4	450
10D241K	10D241KJ	150	200	240(216~264)	25	395	2500	3500	35	42	0.4	420
10D271K	10D271KJ	175	225	270(243~297)	25	455	2500	3500	37	49	0.4	370
10D301K	10D301KJ	190	250	300(270~330)	25	505	2500	3500	40	54	0.4	330
10D331K	10D331KJ	210	275	330(297~363)	25	550	2500	3500	43	58	0.4	300
10D361K	10D361KJ	230	300	360(324~396)	25	595	2500	3500	47	65	0.4	280
10D391K	10D391KJ	250	320	390(351~429)	25	650	2500	3500	60	70	0.4	260
10D431K	10D431KJ	275	350	430(387~473)	25	710	2500	3500	65	80	0.4	230
10D471K	10D471KJ	300	385	470(423~517)	25	775	2500	3500	67	85	0.4	210
10D511K	10D511KJ	320	415	510(459~561)	25	845	2500	3500	69	90	0.4	200
10D561K	10D561KJ	350	460	560(504~616)	25	920	2500	3500	70	92	0.4	180
10D621K	10D621KJ	385	505	620(558~682)	25	1025	2500	3500	72	95	0.4	160
10D681K	10D681KJ	420	560	680(612~748)	25	1120	2500	3500	75	98	0.4	150
10D751K	10D751KJ	460	615	750(675~825)	25	1240	2500	3500	77	100	0.4	140
10D781K	10D781KJ	485	640	780(702~858)	25	1290	2500	3500	80	105	0.4	130
10D821K	10D821KJ	510	670	820(738~902)	25	1355	2500	3500	85	110	0.4	120

10D911K	10D911KJ	550	745	910(819~1001)	25	1500	2500	3500	93	130	0.4	110
10D102K	10D102KJ	625	825	1000(900~1100)	25	1650	2500	3500	102	140	0.4	100
10D112K	10D112KJ	680	895	1100(990~1210)	25	1815	2500	3500	115	150	0.4	90
Part Number		Maximum Allowable Voltage		Varistor Voltage	Maximum Clamping Voltage		Withstanding Surge Current		Energy 10/1000µS		Rated Power	Typical Capacitance (Reference)
Standard	High Surge	AC (V)	DC (V)	V0.1mA(V)	IP(A)	VC(V)	I(A) Standard	I(A) High Surge	(J) Standard	(J) High Surge	(W)	@1KHzPF
14D180L	14D180LJ	11	14	18(15.3~20.7)	10	36	1000	2000	4	7	0.1	11000
14D220K	14D220KJ	14	18	22(19.8~24.2)	10	43	1000	2000	5	8	0.1	9100
14D270K	14D270KJ	17	22	27(24.3~29.7)	10	53	1000	2000	6	10	0.1	7400
14D330K	14D330KJ	20	26	33(29.7~36.3)	10	65	1000	2000	8	12	0.1	6100
14D390K	14D390KJ	25	31	39(35.1~42.9)	10	77	1000	2000	9	13	0.1	5100
14D470K	14D470KJ	30	38	47(42.3~51.7)	10	93	1000	2000	10	17	0.1	4300
14D560K	14D560KJ	35	45	56(50.4~61.6)	10	110	1000	2000	11	20	0.1	3600
14D680K	14D680KJ	40	56	68(61.2~74.8)	10	135	1000	2000	14	24	0.1	2900
14D820K	14D820KJ	50	65	82(73.8~90.2)	50	135	4500	6000	29	30	0.6	2400
14D101K	14D101KJ	60	85	100(90~110)	50	165	4500	6000	34	35	0.6	2000
14D121K	14D121KJ	75	100	120(108~132)	50	200	4500	6000	40	42	0.6	1700
14D151K	14D151KJ	95	125	150(135~165)	50	250	4500	6000	51	53	0.6	1300
14D181K	14D181KJ	115	150	180(162~198)	50	300	4500	6000	58	74	0.6	1100
14D201K	14D201KJ	130	170	200(185~225)	50	330	4500	6000	57	70	0.6	1000
14D221K	14D221KJ	140	180	220(198~242)	50	360	4500	6000	60	78	0.6	830
14D241K	14D241KJ	150	200	240(216~264)	50	395	4500	6000	63	84	0.6	740
14D271K	14D271KJ	175	225	270(243~297)	50	455	4500	6000	70	99	0.6	670
14D301K	14D301KJ	190	250	300(270~330)	50	505	4500	6000	77	108	0.6	610
14D331K	14D331KJ	210	275	330(297~363)	50	550	4500	6000	85	115	0.6	560
14D361K	14D361KJ	230	300	360(324~396)	50	595	4500	6000	93	130	0.6	510
14D391K	14D391KJ	250	320	390(351~429)	50	650	4500	6000	100	140	0.6	460
14D431K	14D431KJ	275	350	430(387~473)	50	710	4500	6000	115	155	0.6	430
14D471K	14D471KJ	300	385	470(423~517)	50	775	4500	6000	125	175	0.6	430
14D511K	14D511KJ	320	415	510(459~561)	50	845	4500	6000	126	180	0.6	390
14D561K	14D561KJ	350	460	560(504~616)	50	920	4500	6000	127	185	0.6	360
14D621K	14D621KJ	385	505	620(558~682)	50	1025	4500	6000	128	190	0.6	320
14D681K	14D681KJ	420	560	680(612~748)	50	1120	4500	6000	130	200	0.6	290
14D751K	14D751KJ	460	615	750(675~825)	50	1240	4500	6000	143	210	0.6	270
14D781K	14D781KJ	485	640	780(702~858)	50	1290	4500	6000	148	220	0.6	260
14D821K	14D821KJ	510	670	820(738~902)	50	1355	4500	6000	157	235	0.6	240
14D911K	14D911KJ	550	745	910(819~1001)	50	1500	4500	6000	175	255	0.6	220
14D102K	14D102KJ	625	825	1000(900~1100)	50	1650	4500	6000	190	280	0.6	200
14D112K	14D112KJ	680	895	1100(990~1210)	50	1815	4500	6000	213	310	0.6	180
14D122K	14D122KJ	750	990	1200(1080~1320)	50	1980	4500	6000	232	324	0.6	160
14D142K	14D142KJ	880	1140	1400(1260~1540)	50	2310	4500	6000	238	327	0.6	150
14D162K	14D162KJ	1000	1280	1600(1400~1760)	50	2640	4500	6000	243	331	0.6	140
14D182K	14D182KJ	1100	1465	1800(1620~1980)	50	2970	4500	6000	250	335	0.6	130
Part Number		Maximum Allowable Voltage		Varistor Voltage	Maximum Clamping Voltage		Withstanding Surge Current		Energy 10/1000µS		Rated Power	Typical Capacitance (Reference)
Standard	High Surge	AC (V)	DC (V)	V0.1mA(V)	IP(A)	VC(V)	I(A) Standard	I(A) High Surge	(J) Standard	(J) High Surge	(W)	@1KHzPF
20D180L	20D180LJ	11	14	18(15.3~20.7)	20	36	2000	3000	11	13	0.2	28500
20D220K	20D220KJ	14	18	22(19.8~24.2)	20	43	2000	3000	14	16	0.2	18500
20D270K	20D270KJ	17	22	27(24.3~29.7)	20	53	2000	3000	16	19	0.2	13000

20D330K	20D330KJ	20	26	33(29.7~36.3)	20	65	2000	3000	23	24	0.2	11500
20D390K	20D390KJ	25	31	39(35.1~42.9)	20	77	2000	3000	26	28	0.2	8500
20D470K	20D470KJ	30	38	47(42.3~51.7)	20	93	2000	3000	30	34	0.2	7400
20D560K	20D560KJ	35	45	56(50.4~61.6)	20	110	2000	3000	41	46	0.2	6500
20D680K	20D680KJ	40	56	68(61.2~74.8)	20	135	2000	3000	46	49	0.2	5800
20D820K	20D820KJ	50	65	82(73.8~90.2)	100	135	6500	10000	38	56	1.0	4900
20D101K	20D101KJ	60	85	100(90~110)	100	165	6500	10000	45	70	1.0	4000
20D121K	20D121KJ	75	100	120(108~132)	100	200	6500	10000	55	85	1.0	3300
20D151K	20D151KJ	95	125	150(135~165)	100	250	6500	10000	70	106	1.0	2700
20D181K	20D181KJ	115	150	180(162~198)	100	300	6500	10000	85	130	1.0	2200
20D201K	20D201KJ	130	170	200(185~225)	100	330	6500	10000	95	140	1.0	2000
20D221K	20D221KJ	140	180	220(198~242)	100	360	6500	10000	100	155	1.0	1800
20D241K	20D241KJ	150	200	240(216~264)	100	395	6500	10000	108	168	1.0	1650
20D271K	20D271KJ	175	225	270(243~297)	100	455	6500	10000	127	190	1.0	1500
20D301K	20D301KJ	190	250	300(270~330)	100	505	6500	10000	136	210	1.0	1300
20D331K	20D331KJ	210	275	330(297~363)	100	550	6500	10000	150	228	1.0	1200
20D361K	20D361KJ	230	300	360(324~396)	100	595	6500	10000	163	255	1.0	1100
20D391K	20D391KJ	250	320	390(351~429)	100	650	6500	10000	180	275	1.0	1000
20D431K	20D431KJ	275	350	430(387~473)	100	710	6500	10000	190	305	1.0	930
20D471K	20D471KJ	300	385	470(423~517)	100	775	6500	10000	220	350	1.0	850
20D511K	20D511KJ	320	415	510(459~561)	100	845	6500	10000	225	360	1.0	780
20D561K	20D561KJ	350	460	560(504~616)	100	920	6500	10000	230	380	1.0	710
20D621K	20D621KJ	385	505	620(558~682)	100	1025	6500	10000	235	390	1.0	650
20D681K	20D681KJ	420	560	680(612~748)	100	1120	6500	10000	240	400	1.0	600
20D751K	20D751KJ	460	615	750(675~825)	100	1240	6500	10000	255	420	1.0	530
20D781K	20D781KJ	485	640	780(702~858)	100	1290	6500	10000	265	440	1.0	510
20D821K	20D821KJ	510	670	820(738~902)	100	1355	6500	10000	282	460	1.0	500
20D911K	20D911KJ	550	745	910(819~1001)	100	1500	6500	10000	310	510	1.0	440
20D102K	20D102KJ	625	825	1000(900~1100)	100	1650	6500	10000	342	565	1.0	400
20D112K	20D112KJ	680	895	1100(990~1210)	100	1815	6500	10000	383	620	1.0	360
20D122K	20D122KJ	750	990	1200(1080~132)	100	1980	6500	10000	408	660	1.0	350
20D142K	20D142KJ	880	1140	1400(1260~154)	100	2310	6500	10000	532	784	1.0	340
20D162K	20D162KJ	1000	1280	1600(1400~176)	100	2640	6500	10000	606	896	1.0	330
20D182K	20D182KJ	1100	1465	1800(1620~198)	100	2970	6500	10000	625	990	1.0	320

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