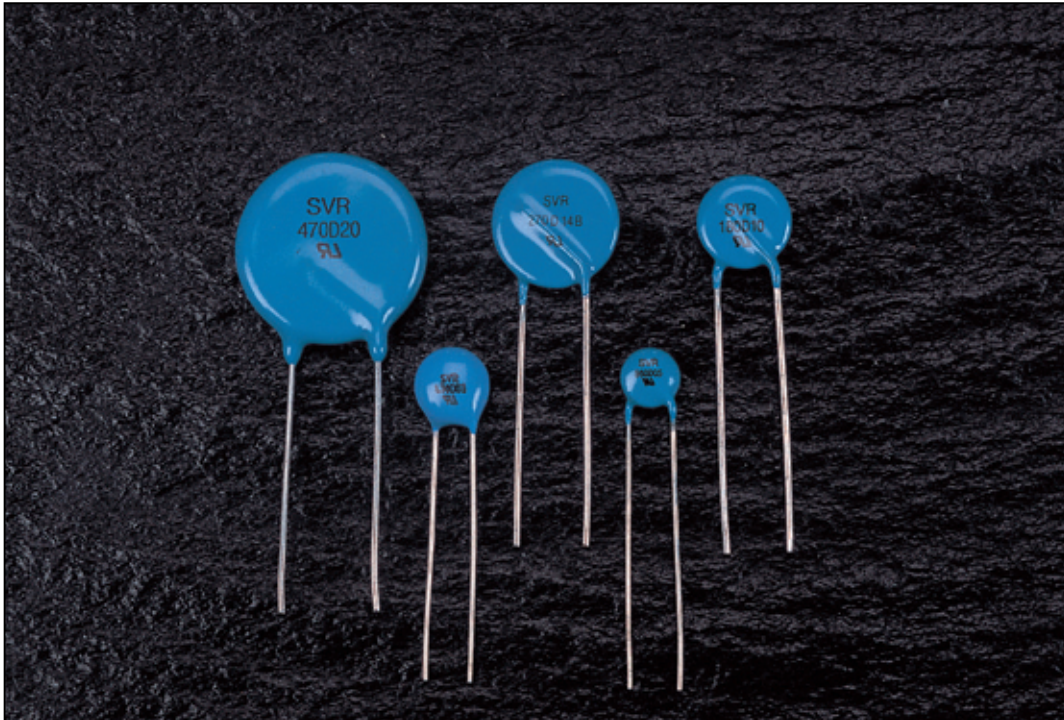


### III. General series

#### 1. SVR varistors for low voltage ratings



- Features
  - UL and VDE safety approvals.
  - Varistor voltage range : 18 to 68V (10%).
  - Lower clamping voltage for better surge protection.
- Recommended applications
  - Semiconductor device (TR, Diode, IC, Thyristor or TRIAC etc.) protection.
  - Surge protection in consumer electronics.
  - Surge protection in communication, measuring or controller electronics.
  - Surge protection in electronic home appliances, gas or petroleum appliances.
  - Motor, Relay or electromagnetic valve surge absorption.

## Electrical characteristics

### ► D 05-series

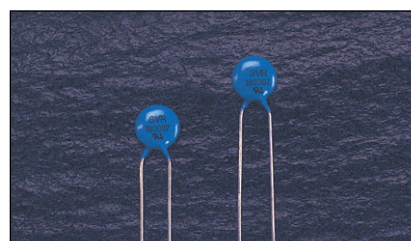
Operating temperature range : - 40 ~ 85°C  
 Storage temperature range : - 40 ~ 125°C  
 Temperature coefficient of varistor voltage : 0 ~ - 0.05%/°C



Model No.	Varistor voltage(V) (0.1mA)			Max. continuous voltage(V)		Max. clamping voltage		Power dissipation P <sub>1am</sub> (W)	Energy (10/1000μs)		Peak current (8/20μs)	
	Min.	V <sub>N(DC)</sub>	Max.	V <sub>m(ac)</sub>	V <sub>m(dc)</sub>	V <sub>c</sub> (V)	I <sub>p</sub> (A)		W <sub>tm</sub> (J)		I <sub>tm</sub> (A)	
								S-series	U-series	S-series	U-series	
SVR180D05	16	18	20	11	14	40	1	0.01	0.3	0.6	100	250
SVR220D05	20	22	24	14	18	48	1	0.01	0.4	0.7	100	250
SVR270D05	24	27	30	17	22	60	1	0.01	0.5	0.9	100	250
SVR330D05	30	33	36	20	26	73	1	0.01	0.6	1.1	100	250
SVR390D05	35	39	43	25	31	86	1	0.01	0.8	1.2	100	250
SVR470D05	42	47	52	30	38	104	1	0.01	1.0	1.5	100	250
SVR560D05	50	56	62	35	45	123	1	0.01	1.0	1.8	100	250
SVR680D05	61	68	75	40	56	150	1	0.01	1.2	2.2	100	250

### ► D 07-series

Operating temperature range : - 40 ~ 85°C  
 Storage temperature range : - 40 ~ 125°C  
 Temperature coefficient of varistor voltage : 0 ~ - 0.05%/°C



Model No.	Varistor voltage(V) (1mA)			Max. continuous voltage(V)		Max. clamping voltage		Power dissipation P <sub>1am</sub> (W)	Energy (10/1000μs)		Peak current (8/20μs)	
	Min.	V <sub>N(DC)</sub>	Max.	V <sub>m(ac)</sub>	V <sub>m(dc)</sub>	V <sub>c</sub> (V)	I <sub>p</sub> (A)		W <sub>tm</sub> (J)		I <sub>tm</sub> (A)	
								S-series	U-series	S-series	U-series	
SVR180D07	16	18	20	11	14	36	2.5	0.02	0.8	1.1	250	500
SVR220D07	20	22	24	14	18	43	2.5	0.02	0.9	1.3	250	500
SVR270D07	24	27	30	17	22	53	2.5	0.02	1.0	1.6	250	500
SVR330D07	30	33	36	20	26	65	2.5	0.02	1.2	2.0	250	500
SVR390D07	35	39	43	25	31	77	2.5	0.02	1.5	2.4	250	500
SVR470D07	42	47	52	30	38	93	2.5	0.02	1.8	2.8	250	500
SVR560D07	50	56	62	35	45	100	2.5	0.02	2.2	3.4	250	500
SVR680D07	61	68	75	40	56	135	2.5	0.02	2.5	4.1	250	500

### ► D 10-series

Operating temperature range : - 40 ~ 85°C

Storage temperature range : - 40 ~ 125°C

Temperature coefficient of varistor voltage : 0 ~ - 0.05%/°C



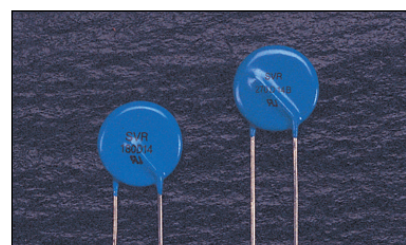
Model No.	Varistor voltage(V) (1mA)			Max. continuous voltage(V)		Max. clamping voltage		Power dissipation  P <sub>tam</sub> (W)	Energy (10/1000μs)		Peak current (8/20μs)	
	Min.	V <sub>N(DC)</sub>	Max.	V <sub>m(ac)</sub>	V <sub>m(dc)</sub>	V <sub>c</sub> (V)	I <sub>p</sub> (A)		W <sub>tm</sub> (J)		I <sub>tm</sub> (A)	
									S-series	U-series	S-series	U-series
SVR180D10	16	18	20	11	14	36	5	0.05	1.5	2.6	500	1,000
SVR220D10	20	22	24	14	18	43	5	0.05	2.0	3.2	500	1,000
SVR270D10	24	27	30	17	22	53	5	0.05	2.5	3.9	500	1,000
SVR330D10	30	33	36	20	26	65	5	0.05	3.0	4.8	500	1,000
SVR390D10	35	39	43	25	31	77	5	0.05	3.5	5.6	500	1,000
SVR470D10	42	47	52	30	38	93	5	0.05	4.5	6.8	500	1,000
SVR560D10	50	56	62	35	45	100	5	0.05	5.5	8.1	500	1,000
SVR680D10	61	68	75	40	56	135	5	0.05	6.5	9.8	500	1,000

### ► D 14-series

Operating temperature range : -40 ~ 85°C

Storage temperature range : -40 ~ 125°C

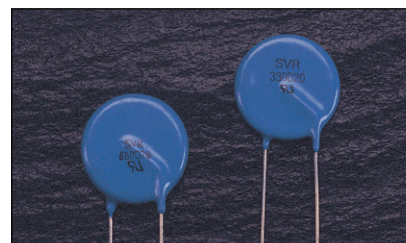
Temperature coefficient of varistor voltage : 0 ~ - 0.05%/°C



Model No.	Varistor voltage(V) (1mA)			Max. continuous voltage(V)		Max. clamping voltage		Power dissipation  P <sub>tam</sub> (W)	Energy (10/1000μs)		Peak current (8/20μs)	
	Min.	V <sub>N(DC)</sub>	Max.	V <sub>m(ac)</sub>	V <sub>m(dc)</sub>	V <sub>c</sub> (V)	I <sub>p</sub> (A)		W <sub>tm</sub> (J)		I <sub>tm</sub> (A)	
									S-series	U-series	S-series	U-series
SVR180D14	16	18	20	11	14	36	10	0.1	3.5	5.2	1,000	2,000
SVR220D14	20	22	24	14	18	43	10	0.1	4.0	6.3	1,000	2,000
SVR270D14	24	27	30	17	22	53	10	0.1	5.0	7.8	1,000	2,000
SVR330D14	30	33	36	20	26	65	10	0.1	6.0	9.5	1,000	2,000
SVR390D14	35	39	43	25	31	77	10	0.1	7.0	11.0	1,000	2,000
SVR470D14	42	47	52	30	38	93	10	0.1	8.5	14.0	1,000	2,000
SVR560D14	50	56	62	35	45	100	10	0.1	10.0	16.0	1,000	2,000
SVR680D14	61	68	75	40	56	135	10	0.1	12.0	20.0	1,000	2,000

► D 20-series

Operating temperature range : - 40 ~ 85°C  
 Storage temperature range : - 40 ~ 125°C  
 Temperature coefficient of varistor voltage : 0 ~ - 0.05%/°C



Model No.	Varistor voltage(V) (1mA)			Max. continuous voltage(V)		Max. clamping voltage		Power dissipation P <sub>1mA</sub> (W)	Energy (10/1000μs)		Peak current (8/20μs)	
	Min.	V <sub>NDCI</sub>	Max.	V <sub>m(ac)</sub>	V <sub>m(dc)</sub>	V <sub>c</sub> (V)	I <sub>p</sub> (A)		W <sub>tm</sub> (J)		I <sub>tm</sub> (A)	
	S-series		U-series		S-series		U-series					
SVR180D20	16	18	20	11	14	36	20	0.2	10.0	13.0	2,000	3,000
SVR220D20	20	22	24	14	18	43	20	0.2	13.0	16.0	2,000	3,000
SVR270D20	24	27	30	17	22	53	20	0.2	15.0	19.0	2,000	3,000
SVR330D20	30	33	36	20	26	65	20	0.2	20.0	24.0	2,000	3,000
SVR390D20	35	39	43	25	31	77	20	0.2	24.0	28.0	2,000	3,000
SVR470D20	42	47	52	30	38	93	20	0.2	30.0	34.0	2,000	3,000
SVR560D20	50	56	62	35	45	100	20	0.2	35.0	41.0	2,000	3,000
SVR680D20	61	68	75	40	56	135	20	0.2	40.0	49.0	2,000	3,000