

Product Specification

Number: KLS6-XXD-XXXX/J

Name: Varistors DIP Dia

Specification: _____

Date: 2024-12-21

Customer Signature:



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ADD : NO. 8-1, RONGXIA RD. XIAPU SHANQIAN
INDUSTRIAL ZONE BEILUN NINGBO ZHEJIANG.

Compi	Check	Review	Approva
Jenny	Jack.C		

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1 / Features

Wide operating voltage (V 1 mA) range from 18 V to 1800 V
 Fast responding to transient over -voltage
 Large absorbing transient energy capability
 Low clamping ratio and no follow -on current

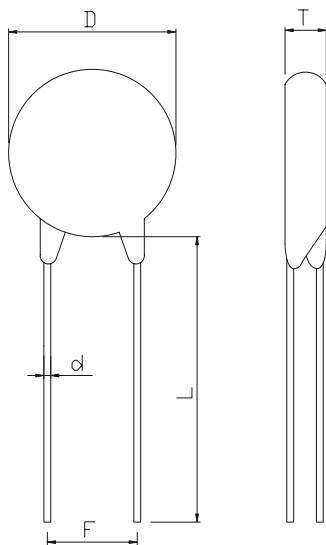
Applications

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 / Material

Operating Temperature :	(-40 °C ~ +85 °C) & (-40 °C ~ +125°C)	Coating :	Epoxy Resin
Storage Temperature :	(-40 °C ~ +125 °C~) & (-40 °C ~ +150 °C)	Lead Wire :	The Copper Wire
Working Surface Temperature :	+115 °C	Electrode :	Silver Solder
Insulation Resistance :	> 100M Ω	Disk :	Zinc Oxide
Coating (Epoxy Resin):	Flame-Retardant to UL 94 V-0		

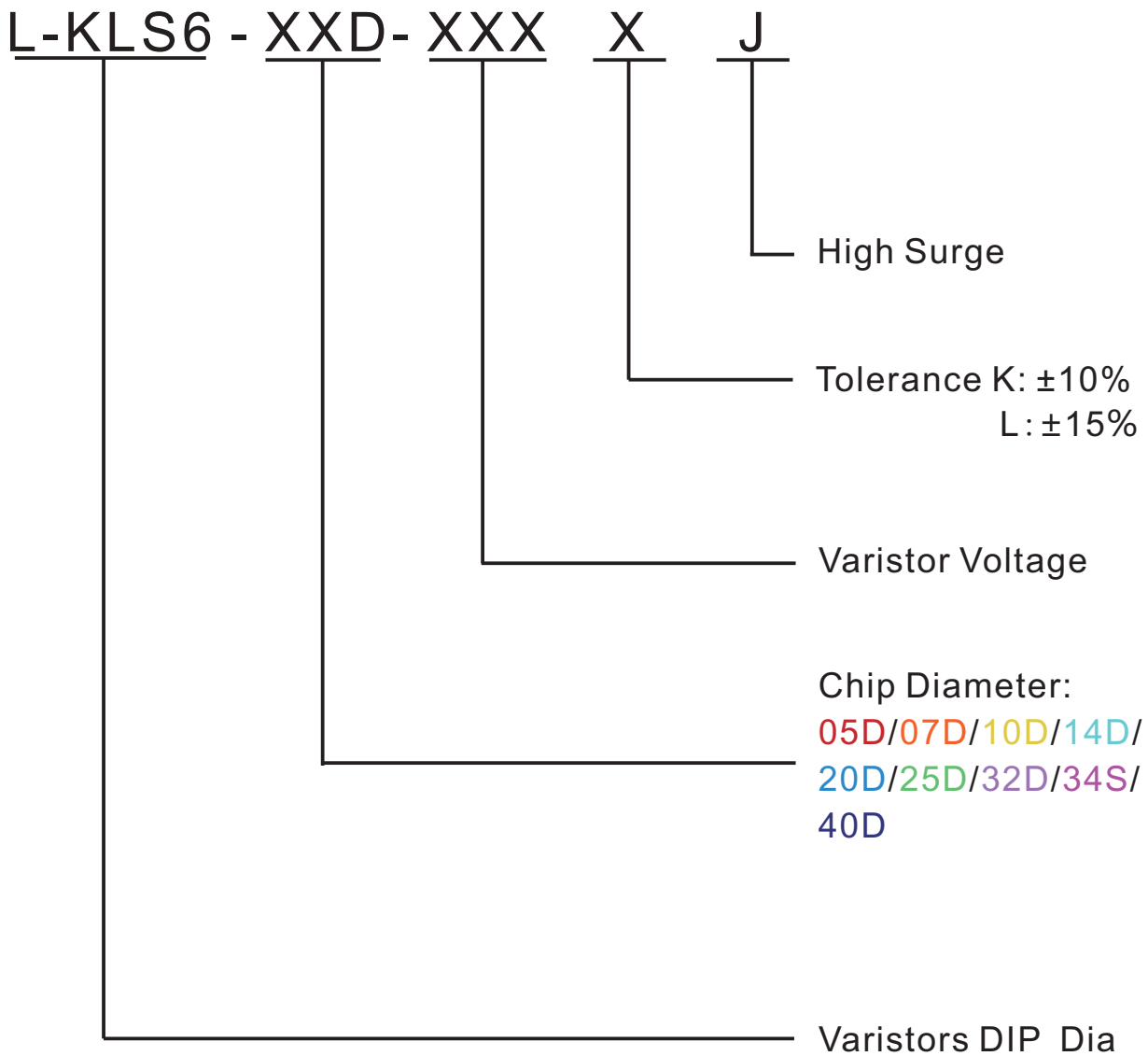
Dimension (Unit :mm)



Part No.	Dimensions (mm)				
	Dmax	Tmax	Lmin	F±1	d±0.1
05D	7.5	6	20	5	0.6
07D	9	6	20	5	0.6
10D	14	8	25	7.5	0.8
14D	17	12	25	7.5	0.8
20D	25	12	25	10	1
25D	30	12	25	12.5	1
32D	39	12	25	25	1
40D	48	12	25	25	1

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ORDER INFORMATION



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2 / Electrical Characteristics:

05D Series (Varistors)

Part Number	Maximum Allowable Voltage		Varistor Voltage V0.1mA(V)	Maximum Clamping Voltage		Withstanding Surge Current		Energy 10/1000µS		Rated Power (W)	Typical Capacitance (Reference) @1KHzPF
	AC (V)	DC (V)		IP (A)	VC(V)	I(A) Standard	I(A) High Surge	(J) Standard	(J) High Surge		
KLS6-05D180L / LJ	11	14	18(15.3~20.7)	1	40	100	250	0.4	0.6	0.01	1400
KLS6-05D220K / KJ	14	18	22(19.8~24.2)	1	48	100	250	0.5	0.7	0.01	1150
KLS6-05D270K / KJ	17	22	27(24.3~29.7)	1	60	100	250	0.6	0.9	0.01	930
KLS6-05D330K / KJ	20	26	33(29.7~36.3)	1	73	100	250	0.8	1.1	0.01	760
KLS6-05D390K / KJ	25	31	39(35.1~42.9)	1	80	100	250	0.9	1.2	0.01	640
KLS6-05D470K / KJ	30	38	47(42.3~51.7)	1	104	100	250	1.1	1.5	0.01	530
KLS6-05D560K / KJ	35	45	56(50.4~61.6)	1	123	100	250	1.3	1.8	0.01	450
KLS6-05D680K / KJ	40	56	68(61.2~74.8)	1	145	100	250	1.6	2.2	0.01	370
KLS6-05D820K / KJ	50	65	82(73.8~90.2)	5	150	400	800	2.5	4.0	0.1	300
KLS6-05D101K / KJ	60	85	100(90~110)	5	177	400	800	3.0	4.1	0.1	250
KLS6-05D121K / KJ	75	100	120(108~132)	5	210	400	800	4.0	4.9	0.1	210
KLS6-05D151K / KJ	95	125	150(135~165)	5	260	400	800	4.1	6.5	0.1	165
KLS6-05D181K / KJ	115	150	180(162~198)	5	320	400	800	4.9	7.5	0.1	140
KLS6-05D201K / KJ	130	170	200(185~225)	5	340	400	800	6.5	8.5	0.1	125
KLS6-05D221K / KJ	140	180	220(198~242)	5	380	400	800	7.5	9.0	0.1	110
KLS6-05D241K / KJ	150	200	240(216~264)	5	415	400	800	8.0	10.5	0.1	100
KLS6-05D271K / KJ	175	225	270(243~297)	5	475	400	800	8.5	11.0	0.1	95
KLS6-05D301K / KJ	190	250	300(270~330)	5	520	400	800	9.0	12.0	0.1	85
KLS6-05D331K / KJ	210	275	330(297~363)	5	570	400	800	9.5	13.0	0.1	75
KLS6-05D361K / KJ	230	300	360(324~396)	5	620	400	800	10.0	16.0	0.1	70
KLS6-05D391K / KJ	250	320	390(351~429)	5	675	400	800	12.0	17.0	0.1	65
KLS6-05D431K / KJ	275	350	430(387~473)	5	745	400	800	13.0	20.0	0.1	60
KLS6-05D471K / KJ	300	385	470(423~517)	5	810	400	800	15.0	21.0	0.1	55
KLS6-05D511K / KJ	320	415	510(459~561)	5	845	400	800	16.0	22.5	0.1	50
KLS6-05D561K / KJ	350	460	560(504~616)	5	920	400	800	16.5	24.0	0.1	45
KLS6-05D621K / KJ	385	505	620(558~682)	5	1025	400	800	21.0	25.0	0.1	40
KLS6-05D681K / KJ	420	560	680(612~748)	5	1120	400	800	22.0	29.0	0.1	35
KLS6-05D751K / KJ	460	615	750(675~825)	5	1240	400	800	22.4	32.0	0.1	30

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2 / Electrical Characteristics:

07D Series (Varistors)

Part Number	Maximum Allowable Voltage		Varistor Voltage	Maximum Clamping Voltage		Withstanding Surge Current		Energy 10/1000µS		Rated Power (W)	Typical Capacitance (Reference) @1KHzPF
	AC (V)	DC (V)		V1mA(V)	IP (A)	VC(V)	I(A) Standard	I(A) High Surge	(J) Standard		
KLS6-07D180L / LJ	11	14	18(15.3~20.7)	2.5	36	250	500	0.9	2.0	0.02	2800
KLS6-07D220K / KJ	14	18	22(19.8~24.2)	2.5	43	250	500	1.1	2.4	0.02	2300
KLS6-07D270K / KJ	17	22	27(24.3~29.7)	2.5	53	250	500	1.4	3.0	0.02	1800
KLS6-07D330K / KJ	20	26	33(29.7~36.3)	2.5	65	250	500	1.7	3.5	0.02	1500
KLS6-07D390K / KJ	25	31	39(35.1~42.9)	2.5	77	250	500	2.1	4.0	0.02	1300
KLS6-07D470K / KJ	30	38	47(42.3~51.7)	2.5	93	250	500	2.5	5.0	0.02	1100
KLS6-07D560K / KJ	35	45	56(50.4~61.6)	2.5	110	250	500	3.1	6.0	0.02	890
KLS6-07D680K / KJ	40	56	68(61.2~74.8)	2.5	135	250	500	3.6	7.0	0.02	740
KLS6-07D820K / KJ	50	65	82(73.8~90.2)	10	135	1200	1750	5.5	10	0.25	600
KLS6-07D101K / KJ	60	85	100(90~110)	10	165	1200	1750	6.5	12	0.25	500
KLS6-07D121K / KJ	75	100	120(108~132)	10	200	1200	1750	7.8	12	0.25	420
KLS6-07D151K / KJ	95	125	150(135~165)	10	250	1200	1750	9.7	13	0.25	330
KLS6-07D181K / KJ	115	150	180(162~198)	10	300	1200	1750	11.7	16	0.25	280
KLS6-07D201K / KJ	130	170	200(185~225)	10	340	1200	1750	13	17	0.25	250
KLS6-07D221K / KJ	140	180	220(198~242)	10	360	1200	1750	14	19	0.25	230
KLS6-07D241K / KJ	150	200	240(216~264)	10	395	1200	1750	15	21	0.25	210
KLS6-07D271K / KJ	175	225	270(243~297)	10	455	1200	1750	18	24	0.25	185
KLS6-07D301K / KJ	190	250	300(270~330)	10	505	1200	1750	20	26	0.25	165
KLS6-07D331K / KJ	210	275	330(297~363)	10	550	1200	1750	23	28	0.25	150
KLS6-07D361K / KJ	230	300	360(324~396)	10	595	1200	1750	25	32	0.25	140
KLS6-07D391K / KJ	250	320	390(351~429)	10	650	1200	1750	25	35	0.25	130
KLS6-07D431K / KJ	275	350	430(387~473)	10	710	1200	1750	28	40	0.25	115
KLS6-07D471K / KJ	300	385	470(423~517)	10	775	1200	1750	30	42	0.25	105
KLS6-07D511K / KJ	320	415	510(459~561)	10	845	1200	1750	30	45	0.25	100
KLS6-07D561K / KJ	350	460	560(504~616)	10	920	1200	1750	30	49	0.25	90
KLS6-07D621K / KJ	385	505	620(558~682)	10	1025	1200	1750	33	55	0.25	80
KLS6-07D681K / KJ	420	560	680(612~748)	10	1120	1200	1750	33	60	0.25	75
KLS6-07D751K / KJ	460	615	750(675~825)	10	1240	1200	1750	65	67	0.25	70
KLS6-07D781K / KJ	485	640	780(702~858)	10	1290	1200	1750	65	67	0.25	70
KLS6-07D821K / KJ	510	670	820(738~902)	10	1355	1200	1750	65	70	0.25	60

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2 / Electrical Characteristics:

10D Series (Varistors)

Part Number	Maximum Allowable Voltage		Varistor Voltage V1mA(V)	Maximum Clamping Voltage		Withstanding Surge Current		Energy 10/1000µS		Rated Power (W)	Typical Capacitance (Reference) @1KHzPF
	AC (V)	DC (V)		IP (A)	VC (V)	I(A) Standard	I(A) High Surge	(J) Standard	(J) High Surge		
KLS6-10D180L / LJ	11	14	18(15.3~20.7)	5	36	500	1000	2.1	3	0.05	5600
KLS6-10D220K / KJ	14	18	22(19.8~24.2)	5	43	500	1000	2.5	5	0.05	4500
KLS6-10D270K / KJ	17	22	27(24.3~29.7)	5	53	500	1000	3.0	6	0.05	3700
KLS6-10D330K / KJ	20	26	33(29.7~36.3)	5	65	500	1000	4.0	7	0.05	3000
KLS6-10D390K / KJ	25	31	39(35.1~42.9)	5	77	500	1000	4.6	9	0.05	2400
KLS6-10D470K / KJ	30	38	47(42.3~51.7)	5	93	500	1000	5.5	11	0.05	2100
KLS6-10D560K / KJ	35	45	56(50.4~61.6)	5	110	500	1000	7.0	13	0.05	1800
KLS6-10D680K / KJ	40	56	68(61.2~74.8)	5	135	500	1000	8.2	15	0.05	1500
KLS6-10D820K / KJ	50	65	82(73.8~90.2)	25	135	2500	3500	12	17	0.4	1200
KLS6-10D101K / KJ	60	85	100(90~110)	25	165	2500	3500	15	18	0.4	1000
KLS6-10D121K / KJ	75	100	120(108~132)	25	200	2500	3500	18	21	0.4	830
KLS6-10D151K / KJ	95	125	150(135~165)	25	250	2500	3500	22	25	0.4	670
KLS6-10D181K / KJ	115	150	180(162~198)	25	300	2500	3500	27	30	0.4	560
KLS6-10D201K / KJ	130	170	200(185~225)	25	340	2500	3500	30	35	0.4	500
KLS6-10D221K / KJ	140	180	220(198~242)	25	360	2500	3500	32	39	0.4	450
KLS6-10D241K / KJ	150	200	240(216~264)	25	395	2500	3500	35	42	0.4	420
KLS6-10D271K / KJ	175	225	270(243~297)	25	455	2500	3500	37	49	0.4	370
KLS6-10D301K / KJ	190	250	300(270~330)	25	505	2500	3500	40	54	0.4	330
KLS6-10D331K / KJ	210	275	330(297~363)	25	550	2500	3500	43	58	0.4	300
KLS6-10D361K / KJ	230	300	360(324~396)	25	595	2500	3500	47	65	0.4	280
KLS6-10D391K / KJ	250	320	390(351~429)	25	650	2500	3500	60	70	0.4	260
KLS6-10D431K / KJ	275	350	430(387~473)	25	710	2500	3500	65	80	0.4	230
KLS6-10D471K / KJ	300	385	470(423~517)	25	775	2500	3500	67	85	0.4	210
KLS6-10D511K / KJ	320	415	510(459~561)	25	845	2500	3500	69	90	0.4	200
KLS6-10D561K / KJ	350	460	560(504~616)	25	920	2500	3500	70	92	0.4	180
KLS6-10D621K / KJ	385	505	620(558~682)	25	1025	2500	3500	72	95	0.4	160
KLS6-10D681K / KJ	420	560	680(612~748)	25	1120	2500	3500	75	98	0.4	150
KLS6-10D751K / KJ	460	615	750(675~825)	25	1240	2500	3500	77	100	0.4	140
KLS6-10D781K / KJ	485	640	780(702~858)	25	1290	2500	3500	80	105	0.4	130
KLS6-10D821K / KJ	510	670	820(738~902)	25	1355	2500	3500	85	110	0.4	120
KLS6-10D911K / KJ	550	745	910(819~1001)	25	1500	2500	3500	93	130	0.4	110
KLS6-10D102K / KJ	625	825	1000(900~1100)	25	1650	2500	3500	102	140	0.4	100
KLS6-10D112K / KJ	680	895	1100(990~1210)	25	1815	2500	3500	115	150	0.4	90

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2 / Electrical Characteristics:

14D Series (Varistors)

Part Number	Maximum Allowable Voltage		Varistor Voltage V1mA(V)	Maximum Clamping Voltage		Withstanding Surge Current		Energy 10/1000µS		Rated Power (W)	Typical Capacitance (Reference) @1KHzPF
	AC (V)	DC (V)		IP(A)	VC(V)	I(A) Standard	(A) High Surge	I(J) Standard	I(J) High Surge		
KLS6-14D180L / LJ	11	14	18(15.3~20.7)	10	36	1000	2000	4	7	0.1	11000
KLS6-14D220K / KJ	14	18	22(19.8~24.2)	10	43	1000	2000	5	8	0.1	9100
KLS6-14D270K / KJ	17	22	27(24.3~29.7)	10	53	1000	2000	6	10	0.1	7400
KLS6-14D330K / KJ	20	26	33(29.7~36.3)	10	65	1000	2000	8	12	0.1	6100
KLS6-14D390K / KJ	25	31	39(35.1~42.9)	10	77	1000	2000	9	13	0.1	5100
KLS6-14D470K / KJ	30	38	47(42.3~51.7)	10	93	1000	2000	10	17	0.1	4300
KLS6-14D560K / KJ	35	45	56(50.4~61.6)	10	110	1000	2000	11	20	0.1	3600
KLS6-14D680K / KJ	40	56	68(61.2~74.8)	10	135	1000	2000	14	24	0.1	2900
KLS6-14D820K / KJ	50	65	82(73.8~90.2)	50	135	4500	6000	22	27	0.6	2400
KLS6-14D101K / KJ	60	85	100(90~110)	50	165	4500	6000	28	33	0.6	2000
KLS6-14D121K / KJ	75	100	120(108~132)	50	200	4500	6000	32	40	0.6	1700
KLS6-14D151K / KJ	95	125	150(135~165)	50	250	4500	6000	40	53	0.6	1300
KLS6-14D181K / KJ	115	150	180(162~198)	50	300	4500	6000	50	60	0.6	1100
KLS6-14D201K / KJ	130	170	200(185~225)	50	340	4500	6000	57	70	0.6	1000
KLS6-14D221K / KJ	140	180	220(198~242)	50	360	4500	6000	60	78	0.6	830
KLS6-14D241K / KJ	150	200	240(216~264)	50	395	4500	6000	63	84	0.6	740
KLS6-14D271K / KJ	175	225	270(243~297)	50	455	4500	6000	70	99	0.6	670
KLS6-14D301K / KJ	190	250	300(270~330)	50	505	4500	6000	77	108	0.6	610
KLS6-14D331K / KJ	210	275	330(297~363)	50	550	4500	6000	85	115	0.6	560
KLS6-14D361K / KJ	230	300	360(324~396)	50	595	4500	6000	93	130	0.6	510
KLS6-14D391K / KJ	250	320	390(351~429)	50	650	4500	6000	100	140	0.6	460
KLS6-14D431K / KJ	275	350	430(387~473)	50	710	4500	6000	115	155	0.6	230
KLS6-14D471K / KJ	300	385	470(423~517)	50	775	4500	6000	125	175	0.6	430
KLS6-14D511K / KJ	320	415	510(459~561)	50	845	4500	6000	126	180	0.6	390
KLS6-14D561K / KJ	350	460	560(504~616)	50	920	4500	6000	127	185	0.6	360
KLS6-14D621K / KJ	385	505	620(558~682)	50	1025	4500	6000	128	190	0.6	320
KLS6-14D681K / KJ	420	560	680(612~748)	50	1120	4500	6000	130	200	0.6	290
KLS6-14D751K / KJ	460	615	750(675~825)	50	1240	4500	6000	143	210	0.6	270
KLS6-14D781K / KJ	485	640	780(702~858)	50	1290	4500	6000	148	220	0.6	260
KLS6-14D821K / KJ	510	670	820(738~902)	50	1355	4500	6000	157	235	0.6	240
KLS6-14D911K / KJ	550	745	910(819~1001)	50	1500	4500	6000	175	255	0.6	220
KLS6-14D102K / KJ	625	825	1000(900~1100)	50	1650	4500	6000	190	280	0.6	200
KLS6-14D112K / KJ	680	895	1100(990~1210)	50	1815	4500	6000	213	310	0.6	180
KLS6-14D122K / KJ	750	990	1200(1080~1320)	50	1980	4500	6000	232	324	0.6	160
KLS6-14D142K / KJ	880	1140	1400(1260~1540)	50	2310	4500	6000	238	327	0.6	150
KLS6-14D162K / KJ	1000	1280	1600(1400~1760)	50	2640	4500	6000	243	331	0.6	140
KLS6-14D182K / KJ	1100	1465	1800(1620~1980)	50	2970	4500	6000	250	335	0.6	130

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2 / Electrical Characteristics:

20D Series (Varistors)

Part Number	Maximum Allowable Voltage		Varistor Voltage V1mA(V)	Maximum Clamping Voltage		Withstanding Surge Current		Energy 10/1000µS		Rated Power (W)	Typical Capacitance (Reference) @1KHzPF
	AC (V)	DC (V)		IP (A)	VC (V)	I(A) Standard	I(A) High Surge	(J) Standard	(J) High Surge		
KLS6-20D180L / LJ	11	14	18(15.3~20.7)	20	36	2000	3000	11	13	0.2	28500
KLS6-20D220K / KJ	14	18	22(19.8~24.2)	20	43	2000	3000	14	16	0.2	18500
KLS6-20D270K / KJ	17	22	27(24.3~29.7)	20	53	2000	3000	16	19	0.2	13000
KLS6-20D330K / KJ	20	26	33(29.7~36.3)	20	65	2000	3000	23	24	0.2	11500
KLS6-20D390K / KJ	25	31	39(35.1~42.9)	20	77	2000	3000	26	28	0.2	8500
KLS6-20D470K / KJ	30	38	47(42.3~51.7)	20	93	2000	3000	30	34	0.2	7400
KLS6-20D560K / KJ	35	45	56(50.4~61.6)	20	110	2000	3000	41	46	0.2	6500
KLS6-20D680K / KJ	40	56	68(61.2~74.8)	20	135	2000	3000	46	49	0.2	5800
KLS6-20D820K / KJ	50	65	82(73.8~90.2)	100	135	6500	10000	38	56	1.0	4900
KLS6-20D101K / KJ	60	85	100(90~110)	100	165	6500	10000	45	70	1.0	4000
KLS6-20D121K / KJ	75	100	120(108~132)	100	200	6500	10000	55	85	1.0	3300
KLS6-20D151K / KJ	95	125	150(135~165)	100	250	6500	10000	70	106	1.0	2700
KLS6-20D181K / KJ	115	150	180(162~198)	100	300	6500	10000	85	130	1.0	2200
KLS6-20D201K / KJ	130	170	200(185~225)	100	340	6500	10000	95	140	1.0	2000
KLS6-20D221K / KJ	140	180	220(198~242)	100	360	6500	10000	100	155	1.0	1800
KLS6-20D241K / KJ	150	200	240(216~264)	100	395	6500	10000	108	168	1.0	1650
KLS6-20D271K / KJ	175	225	270(243~297)	100	455	6500	10000	127	190	1.0	1500
KLS6-20D301K / KJ	190	250	300(270~330)	100	505	6500	10000	136	210	1.0	1300
KLS6-20D331K / KJ	210	275	330(297~363)	100	550	6500	10000	150	228	1.0	1200
KLS6-20D361K / KJ	230	300	360(324~396)	100	595	6500	10000	163	255	1.0	1100
KLS6-20D391K / KJ	250	320	390(351~429)	100	650	6500	10000	180	275	1.0	1000
KLS6-20D431K / KJ	275	350	430(387~473)	100	710	6500	10000	190	305	1.0	930
KLS6-20D471K / KJ	300	385	470(423~517)	100	775	6500	10000	220	350	1.0	850
KLS6-20D511K / KJ	320	415	510(459~561)	100	845	6500	10000	225	360	1.0	780
KLS6-20D561K / KJ	350	460	560(504~616)	100	920	6500	10000	230	380	1.0	710
KLS6-20D621K / KJ	385	505	620(558~682)	100	1025	6500	10000	235	390	1.0	650
KLS6-20D681K / KJ	420	560	680(612~748)	100	1120	6500	10000	240	400	1.0	600
KLS6-20D751K / KJ	460	615	750(675~825)	100	1240	6500	10000	255	420	1.0	530
KLS6-20D781K / KJ	485	640	780(702~858)	100	1290	6500	10000	265	440	1.0	510
KLS6-20D821K / KJ	510	670	820(738~902)	100	1355	6500	10000	282	460	1.0	500
KLS6-20D911K / KJ	550	745	910(819~1001)	100	1500	6500	10000	310	510	1.0	440
KLS6-20D102K / KJ	625	825	1000(900~1100)	100	1650	6500	10000	342	565	1.0	400
KLS6-20D112K / KJ	680	895	1100(990~1210)	100	1815	6500	10000	383	620	1.0	360
KLS6-20D122K / KJ	750	990	1200(1080~1320)	100	1980	6500	10000	408	660	1.0	350
KLS6-20D142K / KJ	880	1140	1400(1260~1540)	100	2310	6500	10000	532	784	1.0	340
KLS6-20D162K / KJ	1000	1280	1600(1400~1760)	100	2640	6500	10000	606	896	1.0	330
KLS6-20D182K / KJ	1100	1465	1800(1620~1980)	100	2970	6500	10000	625	990	1.0	320

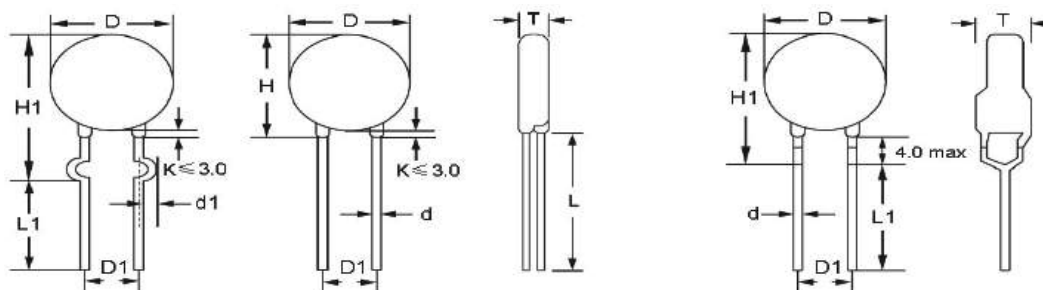
Part name	Varistors DIP Dia	Date	2024-12-21
Part number	KLS6-XXD-XXXX/J	Edition	V1
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2 / Electrical Characteristics:

25D Series (Varistors)

Part Number	Maximum Allowable Voltage		Varistor Voltage V1mA(V)	Maximum Clamping Voltage		Withstanding Surge Current		Energy 10/1000µS		Rated Power (W)	Typical Capacitance (Reference) @1KHzPF
	AC (V)	DC (V)		IP(A)	VC(V)	I(A) Standard	I(A) High Surge	(J) Standard	(J) High Surge		
KLS6-25D820K / KJ	50	65	82(73.8~90.2)	150	135	15000	18000	80	88	1.2	7700
KLS6-25D101K / KJ	60	85	100(90~110)	150	165	15000	18000	100	110	1.2	6300
KLS6-25D121K / KJ	75	100	120(108~132)	150	200	15000	18000	120	132	1.2	5200
KLS6-25D151K / KJ	95	125	150(135~165)	150	250	15000	18000	160	176	1.2	4300
KLS6-25D181K / KJ	115	150	180(162~198)	150	300	15000	18000	175	193	1.2	3500
KLS6-25D201K / KJ	130	170	200(185~225)	150	340	15000	18000	190	209	1.2	3200
KLS6-25D221K / KJ	140	180	220(198~242)	150	360	15000	18000	200	220	1.2	2900
KLS6-25D241K / KJ	150	200	240(216~264)	150	395	15000	18000	220	242	1.2	2650
KLS6-25D271K / KJ	175	225	270(243~297)	150	455	15000	18000	255	281	1.2	2400
KLS6-25D301K / KJ	190	250	300(270~330)	150	505	15000	18000	275	303	1.2	2100
KLS6-25D331K / KJ	210	275	330(297~363)	150	550	15000	18000	300	330	1.2	1900
KLS6-25D361K / KJ	230	300	360(324~396)	150	595	15000	18000	360	396	1.2	1750
KLS6-25D391K / KJ	250	320	390(351~429)	150	650	15000	18000	380	418	1.2	1600
KLS6-25D431K / KJ	275	350	430(387~473)	150	710	15000	18000	400	440	1.2	1500
KLS6-25D471K / KJ	300	385	470(423~517)	150	775	15000	18000	420	462	1.2	1400
KLS6-25D511K / KJ	320	415	510(459~561)	150	845	15000	18000	440	484	1.2	1250
KLS6-25D561K / KJ	350	460	560(504~616)	150	920	15000	18000	450	495	1.2	1150
KLS6-25D621K / KJ	385	505	620(558~682)	150	1025	15000	18000	460	506	1.2	1050
KLS6-25D681K / KJ	420	560	680(612~748)	150	1120	15000	18000	460	506	1.2	950
KLS6-25D751K / KJ	460	615	750(675~825)	150	1240	15000	18000	510	561	1.2	875
KLS6-25D781K / KJ	485	640	780(702~858)	150	1290	15000	18000	530	583	1.2	850
KLS6-25D821K / KJ	510	670	820(738~902)	150	1355	15000	18000	570	627	1.2	800
KLS6-25D9110K / KJ	550	745	910(819~1001)	150	1500	15000	18000	620	682	1.2	700
KLS6-25D102K / KJ	625	825	1000(900~1100)	150	1650	15000	18000	685	754	1.2	650
KLS6-25D112K / KJ	680	895	1100(990~1210)	150	1815	15000	18000	700	770	1.2	600
KLS6-25D122K / KJ	750	990	1200(1080~1320)	150	1980	15000	18000	720	792	1.2	550
KLS6-25D142K / KJ	880	1140	1400(1260~1540)	150	2310	15000	18000	740	814	1.2	500
KLS6-25D162K / KJ	1000	1280	1600(1400~1760)	150	2640	15000	18000	770	847	1.2	450
KLS6-25D182K / KJ	1100	1465	1800(1620~1980)	150	2970	15000	18000	850	935	1.2	400

3. The standard line diameter is 1.0 mm and the foot distance is 10 mm.



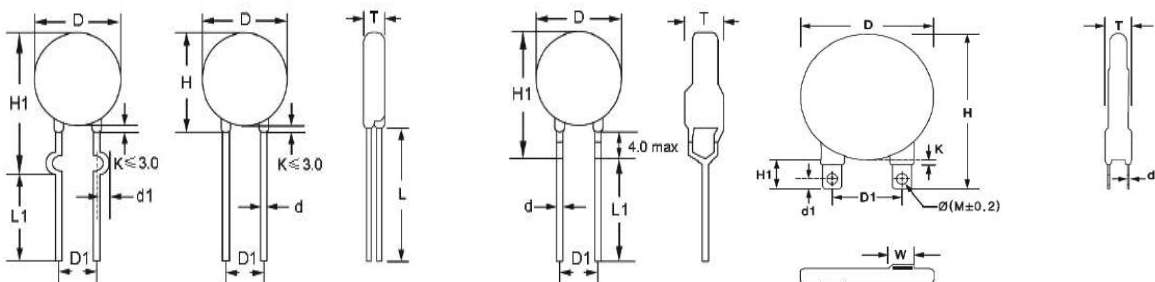
Part name	Varistors DIP Dia	Date	2024-12-21
Part number	KLS6-XXD-XXXX/J	Edition	V1
Department		Page	10/ 14

2 / Electrical Characteristics:

32D Series (Varistors)

Part Number	Maximum Allowable Voltage		Varistor Voltage V1mA(V)	Maximum Clamping Voltage		Withstanding Surge Current		Energy 10/1000µS		Rated Power (W)	Typical Capacitance (Reference) @1KHzPF
	AC (V)	DC (V)		IP(A)	VC(V)	I(A) Standard	I(A) High Surge	(J) Standard	(J) High Surge		
KLS6-32D201K / KJ	130	170	200(185-225)	200	340	25000	30000	250	275	1.6	5200
KLS6-32D221K / KJ	140	180	220(198-242)	200	360	25000	30000	270	297	1.6	5150
KLS6-32D241K / KJ	150	200	240(216-264)	200	395	25000	30000	290	319	1.6	5100
KLS6-32D271K / KJ	175	225	270(243-297)	200	455	25000	30000	300	330	1.6	4800
KLS6-32D301K / KJ	190	250	300(270-330)	200	505	25000	30000	330	363	1.6	4550
KLS6-32D331K / KJ	210	275	330(297-363)	200	550	25000	30000	360	396	1.6	4300
KLS6-32D361K / KJ	230	300	360(324-396)	200	595	25000	30000	380	418	1.6	3900
KLS6-32D391K / KJ	250	320	390(351-429)	200	650	25000	30000	400	440	1.6	3200
KLS6-32D431K / KJ	275	350	430(387-473)	200	710	25000	30000	430	473	1.6	3100
KLS6-32D471K / KJ	300	385	470(423-517)	200	775	25000	30000	460	506	1.6	2800
KLS6-32D511K / KJ	320	415	510(459-561)	200	845	25000	30000	510	561	1.6	2700
KLS6-32D561K / KJ	350	460	560(504-616)	200	920	25000	30000	540	594	1.6	2550
KLS6-32D621K / KJ	385	505	620(558-682)	200	1025	25000	30000	570	627	1.6	2400
KLS6-32D681K / KJ	420	560	680(612-748)	200	1120	25000	30000	600	660	1.6	2200
KLS6-32D751K / KJ	460	615	750(675-825)	200	1240	25000	30000	620	682	1.6	2000
KLS6-32D781K / KJ	485	640	780(702-858)	200	1290	25000	30000	660	726	1.6	1900
KLS6-32D821K / KJ	510	670	820(738-902)	200	1355	25000	30000	700	770	1.6	1800
KLS6-32D911K / KJ	550	745	910(819-1001)	200	1500	25000	30000	750	825	1.6	1300
KLS6-32D102K / KJ	625	825	1000(900-1100)	200	1650	25000	30000	780	858	1.6	1200
KLS6-32D112K / KJ	680	895	1100(990-1210)	200	1815	25000	30000	810	891	1.6	1000
KLS6-32D122K / KJ	750	990	1200(1080-1320)	200	1980	25000	30000	910	1001	1.6	920
KLS6-32D142K / KJ	880	1140	1400(1260-1540)	200	2310	25000	30000	960	1056	1.6	800
KLS6-32D162K / KJ	1000	1280	1600(1400-1760)	200	2640	25000	30000	1020	1122	1.6	700
KLS6-32D182K / KJ	1100	1465	1800(1620-1980)	200	2970	25000	30000	1080	1188	1.6	600

3. The standard line diameter is 1.2 mm and the foot distance is 20 mm.



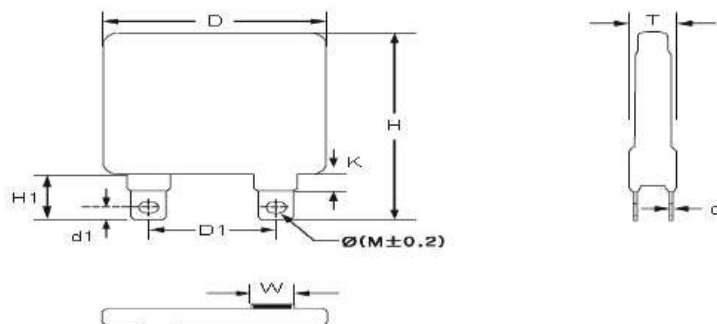
Part name	Varistors DIP Dia	Date	2024-12-21
Part number	KLS6-XXD-XXXX/J	Edition	V1
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2 / Electrical Characteristics:

34S Series (Varistors)

Part Number	Maximum Allowable Voltage		Varistor Voltage	Maximum Clamping Voltage		Withstanding Surge Current		Energy 10/1000µS		Rated Power (W)	Typical Capacitance (Reference) @1KHzPF
	Standard / High Surge	AC (V)		DC (V)	V1mA(V)	IP(A)	VC(V)	I(A) Standard	I(A) High Surge		
KLS6-34S130 / J	130	170	200(185~225)	300	340	40000	50000	330	363	2.1	8000
KLS6-34S140 / J	140	180	220(198~242)	300	360	40000	50000	360	396	2.1	7800
KLS6-34S150 / J	150	200	240(216~264)	300	395	40000	50000	390	429	2.1	7600
KLS6-34S175 / J	175	225	270(243~297)	300	455	40000	50000	420	462	2.1	7200
KLS6-34S190 / J	190	250	300(270~330)	300	505	40000	50000	460	506	2.1	7000
KLS6-34S210 / J	210	275	330(297~363)	300	550	40000	50000	500	550	2.1	6400
KLS6-34S230 / J	230	300	360(324~396)	300	595	40000	50000	510	561	2.1	6000
KLS6-34S250 / J	250	320	390(351~429)	300	650	40000	50000	530	583	2.1	4800
KLS6-34S275 / J	275	350	430(387~473)	300	710	40000	50000	600	660	2.1	4600
KLS6-34S300 / J	300	385	470(423~517)	300	775	40000	50000	650	715	2.1	4100
KLS6-34S320 / J	320	415	510(459~561)	300	845	40000	50000	700	770	2.1	4000
KLS6-34S350 / J	350	460	560(504~616)	300	920	40000	50000	730	803	2.1	3800
KLS6-34S385 / J	385	505	620(558~682)	300	1025	40000	50000	780	858	2.1	3600
KLS6-34S420 / J	420	560	680(612~748)	300	1120	40000	50000	810	891	2.1	3300
KLS6-34S460 / J	460	615	750(675~825)	300	1240	40000	50000	850	935	2.1	3000
KLS6-34S485 / J	485	640	780(702~858)	300	1290	40000	50000	930	1023	2.1	2850
KLS6-34S510 / J	510	670	820(738~902)	300	1355	40000	50000	970	1067	2.1	2700
KLS6-34S550 / J	550	745	910(819~1001)	300	1500	40000	50000	1050	1155	2.1	2100
KLS6-34S625 / J	625	825	1000(900~1100)	300	1650	40000	50000	1120	1232	2.1	1700
KLS6-34S680 / J	680	895	1100(990~1210)	300	1815	40000	50000	1250	1375	2.1	1520
KLS6-34S750 / J	750	990	1200(1080~1320)	300	1980	40000	50000	1340	1474	2.1	1400
KLS6-34S880 / J	880	1140	1400(1260~1540)	300	2310	40000	50000	1400	1540	2.1	1200
KLS6-34S1000 / J	1000	1280	1600(1400~1760)	300	2640	40000	50000	1500	1650	2.1	1100
KLS6-34S1100 / J	1100	1465	1800(1620~1980)	300	2970	40000	50000	1600	1760	2.1	1000

2. 34S The standard line diameter is 1.2 mm and the foot distance is 20 mm.
3. 34S is suitable for electrodes.
4. 34S SPD is composed of two chips in parallel. The surge can reach 60KA-10KA.

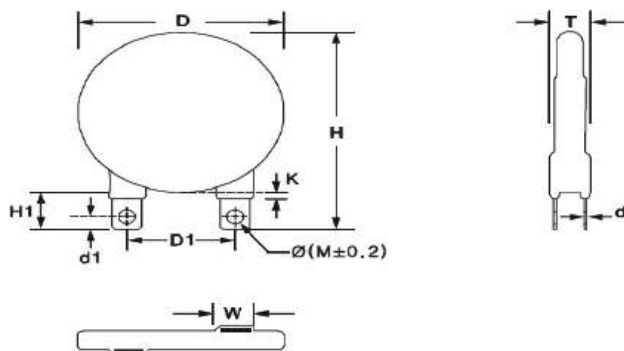


Part name	Varistors DIP Dia	Date	2024-12-21
Part number	KLS6-XXD-XXXX/J	Edition	V1
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2 / Electrical Characteristics:

40D Series (Varistors)

Part Number	Maximum Allowable Voltage		Varistor Voltage V1mA(V)	Maximum Clamping Voltage		Withstanding Surge Current		Energy 10/1000µS		Rated Powe (W)	Typical Capacitance (Reference) @1KHzPF
	AC (V)	DC (V)		IP(A)	VC(V)	I(A) Standard	I(A) High Surge	(J) Standard	(J) High Surge		
KLS6-40D201K / KJ	130	170	200(185~225)	300	340	40000	50000	370	407	2.1	8400
KLS6-40D221K / KJ	140	180	220(198~242)	300	360	40000	50000	400	440	2.1	8200
KLS6-40D241K / KJ	150	200	240(216~264)	300	395	40000	50000	430	473	2.1	8000
KLS6-40D271K / KJ	175	225	270(243~297)	300	455	40000	50000	470	517	2.1	7600
KLS6-40D301K / KJ	190	250	300(270~330)	300	505	40000	50000	510	561	2.1	7300
KLS6-40D331K / KJ	210	275	330(297~363)	300	550	40000	50000	550	605	2.1	6700
KLS6-40D361K / KJ	230	300	360(324~396)	300	595	40000	50000	570	627	2.1	6200
KLS6-40D391K / KJ	250	320	390(351~429)	300	650	40000	50000	590	649	2.1	5100
KLS6-40D431K / KJ	275	350	430(387~473)	300	710	40000	50000	660	726	2.1	4900
KLS6-40D471K / KJ	300	385	470(423~517)	300	775	40000	50000	720	792	2.1	4300
KLS6-40D511K / KJ	320	415	510(459~561)	300	845	40000	50000	770	847	2.1	4200
KLS6-40D561K / KJ	350	460	560(504~616)	300	920	40000	50000	810	891	2.1	4000
KLS6-40D621K / KJ	385	505	620(558~682)	300	1025	40000	50000	860	946	2.1	3800
KLS6-40D681K / KJ	420	560	680(612~748)	300	1120	40000	50000	900	990	2.1	3500
KLS6-40D751K / KJ	460	615	750(675~825)	300	1240	40000	50000	940	1034	2.1	3200
KLS6-40D781K / KJ	485	640	780(702~858)	300	1290	40000	50000	980	1078	2.1	3000
KLS6-40D821K / KJ	510	670	820(738~902)	300	1355	40000	50000	1080	1188	2.1	2900
KLS6-40D911K / KJ	550	745	910(819~1001)	300	1500	40000	50000	1150	1265	2.1	2200
KLS6-40D102K / KJ	625	825	1000(900~1100)	300	1650	40000	50000	1260	1386	2.1	1800
KLS6-40D112K / KJ	680	895	1100(990~1210)	300	1815	40000	50000	1380	1518	2.1	1600
KLS6-40D122K / KJ	750	990	1200(1080~1320)	300	1980	40000	50000	1460	1606	2.1	1500
KLS6-40D142K / KJ	880	1140	1400(1260~1540)	300	2310	40000	50000	1550	1705	2.1	1300
KLS6-40D162K / KJ	1000	1280	1600(1400~1760)	300	2640	40000	50000	1700	1870	2.1	1150
KLS6-40D182K / KJ	1100	1465	1800(1620~1980)	300	2970	40000	50000	1800	1980	2.1	1250



Part name	Varistors DIP Dia	Date	2024-12-21
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Reliability Test

Mechanical Ratings

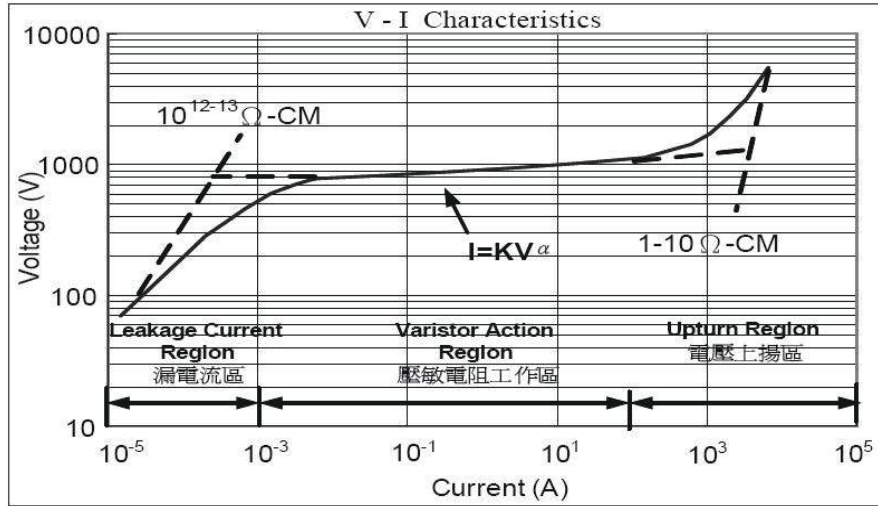
Test Parameter	Test Condition / Description			Performance Requirements
Terminal Pull Strength	After gradually applying the load specified below and keeping the unit fixed for ten seconds, the terminal shall be visually examined for any damage.	Diameter	Loading	No visible damage
		0.6mm	1.0 Kg	
		0.8mm	1.0 Kg	
		1.0mm	2.0 Kg	
Terminal Bending Strength	The unit shall be secured with its terminal kept vertical and the weight specified below be applied in the axial direction. The terminal shall gradually be bent by 90° in one direction, then 90° in the opposite direction, and again back to the original position. The damage of the terminal shall be visually examined.	Diameter	Loading	No visible damage
		0.6mm	0.5 Kg	
		0.8mm	0.5 Kg	
		1.0mm	1.0 Kg	
Vibration	The Specimen shall be vibrated by its lead wires with a total amplitude of 1.5mm and a varying frequency of 10~55~10HZ(each minutes) for a period of 2 hours respectively in each X,Yand Z directions.			No visible damage $\Delta VB/VB\% \leq \pm 5\%$
Soldering-solderability	After dipping the terminal to depth of approximately 3mm from the specimen in a soldering bath of 260°C for 10±1(D5: 5±1) seconds. Thereafter the terminal shall be visually examined.			Terminations shall be uniformly tinned
Soldering- Resistance to Solder Heat	After preheating the specimen, the specimen shall be completely immersed into a soldering bath having a temperature of 260±5°C for 10±1 (D5: 5±1) seconds or iron of 400±5°C for 3±0.5 seconds. There after the change of Vb and mechanical damage shall be examined.			No visible damage $\Delta VB/VB\% \leq \pm 5\%$

ENVIRONMENTAL RATINGS

Dry Heat Loading	The specimen shall be applied continuously the maximum allowable voltage at the specified conditions for specified period and then stored at room temperature and normal humidity over 2 hours. Thereafter, the change of Vb and mechanical damage shall be examined. Ambient temp : 125±2°C ; Period : 1000±24hours.			$\Delta VB/VB\% \leq \pm 10\%$
High Temperature Storage	In a drying oven without load. Ambient temp : 125±2°C ; period : 1000±24hours			$\Delta VB/VB\% \leq \pm 5\%$
Damp Heat Loading	The specimen shall be applied continuously the maximum allowable voltage at the specified conditions for specified period and then stored at room temperature and normal humidity over 2 hours. Thereafter, the change of Vb and mechanical damage shall be examined. Ambient condition : 40±2°C , 90 to 95%R.H. ; period : 1000±24 hours			$\Delta VB/VB\% \leq \pm 10\%$
Temperature Cycle	Condition the specimen to each temperature form step 1 to step 4 in this order for the period shown in the table of specifications. The change of Vb and mechanical damage shall be examined after 2 hours.	Temp °C	Period	No visible damage $\Delta VB/VB\% \leq \pm 10\%$
		-40±3°C	30 min.	
		Room Temp	15 min.	
		85±2°C	30 min.	
Room Temp	15 min.			
Surge Lifetime Rating	The change of Vb shall be measured after the impulse listed below is applied 10,000 times continuously with the interval of ten seconds at room temperature.			No visible damage $\Delta VB/VB\% \leq \pm 10\%$
Service temperature range	-40°C ~ + 85°C(+125°C)			No visible damage VB/VB% $\leq \pm 10\%$ Δ
Storage temperature range	-40°C ~ +125°C (+150°C)			No visible damage VB/VB% $\leq \pm 10\%$ Δ
Voltage Proof	Voltage : 2500VAC Leakage Current $\leq 0.5mA$ Time : 60 Seconds			No Breakdown

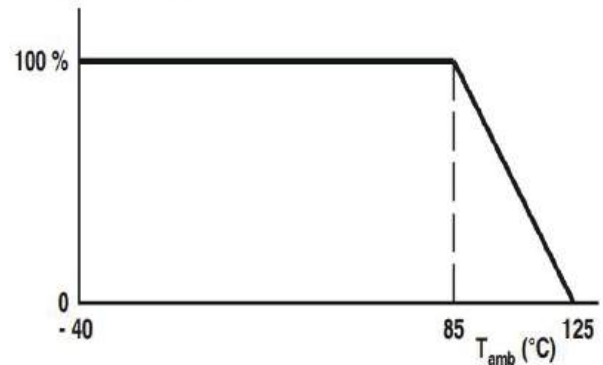
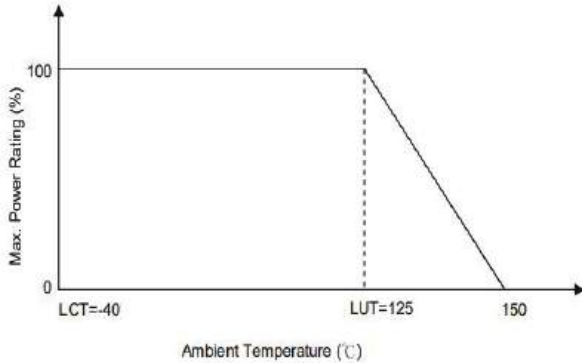
Part name	Varistors DIP Dia	Date	2024-12-21
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The maximum voltage between two terminals with the specification standard impulse current.



When operating temperature exceeds 125, the power, the Max. continuous operation Voltage, the Max. Surge Current and the Max. Energy should be derated as below figure, the derated coefficient is -4%

- Maximum Voltage
- Maximum Dissipation
- Maximum Energy
- Maximum Transient Current



Wave Soldering Profile

