

## Z5D Series

### Specifications

Part No.	Varistor Voltage	Maximum Allowable Voltage		Clamping Voltage (max.)	Rated Power	Maximum Energy		Maximum Peak Current (8/20 $\mu$ s)		Capacitance (max.) 1kHz
						(10/1000 $\mu$ s)	(2ms)	1 time	2 times	
						(J)	(J)	(A)	(A)	
	V <sub>0.1mA</sub> (V)	AC <sub>rms</sub> (V)	DC(V)	V(V)	(W)					(pF)
Z5D180	18(16-20)	11	14	40 at 1A	0.01	0.6	0.4	250	125	1600
Z5D220	22(20-24)	14	18	48	0.01	0.7	0.5	250	125	1500
Z5D270	27(24-30)	17	22	60	0.01	0.9	0.7	250	125	1450
Z5D330	33(30-36)	20	26	73	0.01	1.1	0.8	250	125	1400
Z5D390	39(35-43)	25	31	86	0.01	1.2	0.9	250	125	700
Z5D470	47(42-52)	30	38	104	0.01	1.5	1.1	250	125	650
Z5D560	56(50-62)	35	45	123	0.01	1.8	1.3	250	125	600
Z5D680	68(61-75)	40	56	150	0.01	2.2	1.6	250	125	580
*1 Z5D820	82(74-90)	50	65	145 at 5A	0.1	3.5	2.5	800	600	460
*1 Z5D101	100(90-110)	60	85	175	0.1	4.0	3.0	800	600	400
*1 Z5D121	120(108-132)	75	100	210	0.1	5.0	3.5	800	600	350
*1 Z5D151	150(135-165)	95	125	260	0.1	6.5	4.5	800	600	300
*1 Z5D201	200(185-225)	130	170	355	0.1	8.5	6.0	800	600	120
*1 Z5D221	220(198-242)	140	180	380	0.1	9.0	6.5	800	600	110
*1 Z5D241	240(216-264)	150	200	415	0.1	10.5	7.5	800	600	100 *2
*1 Z5D271	270(247-303)	175	225	475	0.1	11.0	8.0	800	600	90 *2
*1 Z5D331	330(297-363)	210	270	570	0.1	13.0	9.5	800	600	80 *2
*1 Z5D361	360(324-396)	230	300	620	0.1	16.0	11.0	800	600	80 *2
*1 Z5D391	390(351-429)	250	320	675	0.1	17.0	12.0	800	600	80 *2
*1 Z5D431	430(387-473)	275	350	754	0.1	20.0	13.0	800	600	70 *2
*1 Z5D471	470(423-517)	300	385	810	0.1	21.0	15.0	800	600	60 *2

## Z7D Series

### Specifications

Part No.	Varistor Voltage	Maximum Allowable Voltage		Clamping Voltage (max.)	Rated Power	Maximum Energy		Maximum Peak Current (8/20 $\mu$ s)		Capacitance (max.) 1kHz
						(10/1000 $\mu$ s)	(2ms)	1 time	2 times	
						(J)	(J)	(A)	(A)	
	V <sub>1mA</sub> (V)	AC <sub>rms</sub> (V)	DC(V)	V(V)	(W)					(pF)
Z7D180	18(16-20)	11	14	36 at 2.5A	0.02	1.1	0.9	500	250	3800
Z7D220	22(20-24)	14	18	43	0.02	1.3	1.1	500	250	3600
Z7D270	27(24-30)	17	22	53	0.02	1.6	1.3	500	250	3400
Z7D330	33(30-36)	20	26	65	0.02	2.0	1.6	500	250	2900
Z7D390	39(35-43)	25	31	77	0.02	2.4	1.9	500	250	1600
Z7D470	47(42-52)	30	38	93	0.02	2.8	2.3	500	250	1550
Z7D560	56(50-62)	35	45	110	0.02	3.4	2.7	500	250	1500
Z7D680	68(61-75)	40	56	135	0.02	4.1	3.3	500	250	1200
*1 Z7D820	82(74-90)	50	65	135 at 10A	0.25	7	5	1750	1250	810
*1 Z7D101	100(90-110)	60	85	165	0.25	8.5	6	1750	1250	700
*1 Z7D121	120(108-132)	75	100	200	0.25	10	7	1750	1250	590
*1 Z7D151	150(135-165)	95	125	250	0.25	13	9	1750	1250	500
*1 Z7D201	200(185-225)	130	170	340	0.25	17.5	12.5	1750	1250	200
*1 Z7D221	220(198-242)	140	180	360	0.25	19	13.5	1750	1250	190
*1 Z7D241	240(216-264)	150	200	395	0.25	21	15	1750	1250	170
*1 Z7D271	270(247-303)	175	225	455	0.25	24	17	1750	1250	150
*1 Z7D331	330(297-363)	210	270	545	0.25	28	20	1750	1250	130
*1 Z7D361	360(324-396)	230	300	595	0.25	32	23	1750	1250	130
*1 Z7D391	390(351-429)	250	320	650	0.25	35	25	1750	1250	130
*1 Z7D431	430(387-473)	275	350	710	0.25	40	27.5	1750	1250	120
*1 Z7D471	470(423-517)	300	385	775	0.25	42	30	1750	1250	100 *2
*1 Z7D511	510(459-561)	320	410	845	0.25	45	32	1750	1250	90 *2

1. Operating temperature range: -40 to 85°C
  2. Storage temperature range: -40 to 125°C
- \*1 UL 1449 approved model  
\*2 Measured at 1MHz