

HOW TO ORDER Zinc Oxide Leaded Varistors

<u>FNR</u>	—	<u>05</u>	<u>K</u>	<u>180</u>	<u>B</u>
Non Linear Resistor Designation		Type & Diameter Designation	Tolerance Designation	Rated Voltage	Packaging Method
		See Table A	K = ± 10% M = ± 20%	First 2 digits are significant; Last digit is number of zeros	B = Bulk T = Tape & Reel

P/N Example: FNR – 05K180T

TYPE & DIAMETER DESIGNATION

Table A

Type Code	Varistor Type	Rated Voltage	D Max	d ± 0.1	W ± 1.0	H Max	T Max
05	General Usage	18 – 82	7.0	0.6	5.0	10.0	3.5
		100 – 470	7.5	0.6	5.0	10.0	6.0
07		18 – 470	9.0	0.6	5.0	12.0	6.0
10		18 – 330	13.5	0.8	7.5	16.5	5.4
		360 – 1100	14.0	0.8	7.5	17.0	8.5
14		18 – 330	17.0	0.8	7.5	20.0	5.4
		360 – 1100	17.5	0.8	7.5	20.5	8.5
		1800	25.0	0.8	15.0	30.0	12.0
20		18 – 330	23.0	1.0	10.0	27.0	5.5
		360 – 1100	24.0	1.0	10.0	28.0	9.0
	1800	25.0	1.0	10.0	30.0	12.0	
25	Lightning Arrestor	47 - 1100	30	1.2	15	33.0	12.0
32			38	1.5	18	41.0	13.0
40			45	1.5	20	48.0	13.0

Note: All dimensions in mm

Note: Type Codes 05, 07, 10 and 14 available on tape and in bulk; all larger sizes in bulk only.

ZINC OXIDE LEADED VARISTOR PERFORMANCE

ITEM	REQUIREMENTS	TEST CONDITION
Humidity load resistance	1. No mechanical damage 2. Varistor voltage change: within ± 10%	Temperature / Humidity: +40 ±2° C / 90—95%RH Applied Voltage: working voltage Duration: 500 hours Measured after 24 hours at room ambient temperature
Maximum surge current	Varistor voltage change: within ± 10% per IEC1000-4-5 standard; 1.2/50 μs - 8/20 μs voltage-current combination pulse	Temperature: +40 ±2° C Humidity: 90—95%RH Number of pulses: one (1) Surge pulse: 8/20 μs Applied current: maximum surge current (Is)
Maximum surge energy	Varistor voltage change within ± 10% per IEC1000-4-5 standard: 10/1000 μs current pulse	Temperature / Humidity: +40 ±2° C / 90—95%RH Number of pulses: one (1) Surge pulse: 10/1000 μs Applied current: maximum surge current (Is)
ESD life	1. No mechanical damage 2. Varistor voltage change: within ± 10%; ESD gun (IEC1000-4-2 standard) C=150pF R=330Ω	Discharge: contact discharge Voltage: 8,000V(level 4) Number of discharges: 10,000 times in 10 sec.
ESD test	1. No mechanical damage 2. Varistor voltage change: within ± 10%; use ESD gun (IEC1000-4-2 standard) C=150pF R=330Ω	Discharge: Air discharge Voltage: 25,000V(special level) Number of discharges: 10 times in 10 sec

Note: All Surge Testing to be performed in both polarities.

General Usage Zinc Oxide Leaded Varistors 18 – 100 VDC

Part No.	Varistor Voltage	Maximum Operating Voltage		Maximum Clamping Voltage (8 x 20 μ s)		Maximum Withstanding Surge Current (8 x 20 μ s)		Maximum Energy (J)		Rated Watts	Capacitance (Reference) 1KHz
	VDC (v)	AC (V)	DC (V)	VC (V)	IP (A)	2 Times (A)	1 Time (A)	2ms	10/1000 μ s	(W)	(Pf)
FNR-05K180	18	11	14	40	1	50	100	0.3	0.4	0.01	1600
FNR-07K180	18	11	14	36	2.5	125	250	0.8	0.9	0.02	3500
FNR-10K180	18	11	14	36	5	250	500	1.5	2.1	0.05	7500
FNR-14K180	18	11	14	36	10	500	1000	3.5	4.0	0.1	18000
FNR-20K180	18	11	14	36	20	1000	2000	10.0	11.0	0.2	37000
FNR-05K220	22	14	18	48	1	50	100	0.4	0.5	0.01	1300
FNR-07K220	22	14	18	43	2.5	125	250	0.9	1.1	0.02	2800
FNR-10K220	22	14	18	43	5	250	500	2.0	2.5	0.05	6000
FNR-14K220	22	14	18	43	10	500	1000	4.0	5.0	0.1	15000
FNR-20K220	22	14	18	43	20	1000	2000	13.0	14.0	0.2	30000
FNR-05K270	27	17	22	60	1	50	100	0.5	0.6	0.01	1050
FNR-07K270	27	17	22	53	2.5	125	250	1.0	1.4	0.02	2000
FNR-10K270	27	17	22	53	5	250	500	2.5	3.0	0.05	4000
FNR-14K270	27	17	22	53	10	500	1000	5.0	6.0	0.1	10000
FNR-20K270	27	17	22	53	20	1000	2000	15.0	18.0	0.2	20000
FNR-05K330	33	20	26	73	1	50	100	0.6	0.8	0.01	900
FNR-07K330	33	20	26	65	2.5	125	250	1.2	1.7	0.02	1500
FNR-10K330	33	20	26	65	5	250	500	3.0	4.0	0.05	3000
FNR-14K330	33	20	26	65	10	500	1000	6.0	7.5	0.1	7500
FNR-20K330	33	20	26	65	20	1000	2000	20.0	13.0	0.2	17000
FNR-05K390	39	25	31	86	1	50	100	0.8	0.9	0.01	500
FNR-07K390	39	25	31	77	2.5	125	250	1.5	2.1	0.02	1350
FNR-10K390	39	25	31	77	5	250	500	3.5	4.6	0.05	2600
FNR-14K390	39	25	31	77	10	500	1000	7.0	8.6	0.1	6500
FNR-20K390	39	25	31	77	20	1000	2000	54.0	26.0	0.2	15000
FNR-05K470	47	30	38	104	1	50	100	1.0	1.1	0.01	450
FNR-07K470	47	30	38	93	2.5	125	250	1.8	2.5	0.02	1150
FNR-10K470	47	30	38	93	5	250	500	4.5	5.5	0.05	2200
FNR-14K470	47	30	38	93	10	500	1000	8.5	10.0	0.1	5500
FNR-20K470	47	30	38	93	20	1000	2000	30.0	33.0	0.2	13000
FNR-05K560	56	35	45	123	1	50	100	1.0	1.3	0.01	400
FNR-07K560	56	35	45	110	2.5	125	250	2.2	3.1	0.02	950
FNR-10K560	56	35	45	110	5	250	500	5.5	7.0	0.05	1800
FNR-14K560	56	35	45	110	10	500	1000	10.0	11.0	0.1	4500
FNR-20K560	56	35	45	110	20	1000	2000	35.0	41.0	0.2	11000
FNR-05K680	68	40	56	150	1	50	100	1.2	1.6	0.01	350
FNR-07K680	68	40	56	135	2.5	125	250	2.5	3.6	0.02	700
FNR-10K680	68	40	56	135	5	250	500	6.5	8.2	0.05	1300
FNR-14K680	68	40	56	135	10	500	1000	12.0	14.0	0.1	3300
FNR-20K680	68	40	56	135	20	1000	2000	40.0	46.0	0.2	7000
FNR-05K820	82	50	65	145	5	200	400	1.7	2.5	0.1	250
FNR-07K820	82	50	65	135	10	600	1200	3.5	5.5	0.25	550
FNR-10K820	82	50	65	135	25	1250	2500	8.0	12.0	0.4	1800
FNR-14K820	82	50	65	135	50	2500	4500	14.0	22.0	0.6	2900
FNR-20K820	82	50	65	135	100	4000	6500	27.0	38.0	1.0	5500
FNR-05K101	100	60	85	175	5	200	400	2.0	3.0	0.1	200
FNR-07K101	100	60	85	165	10	600	1200	4.0	6.5	0.25	500
FNR-10K101	100	60	85	165	25	1250	2500	10.0	15.0	0.4	1400
FNR-14K101	100	60	85	165	50	2500	4500	18.0	28.0	0.6	2400
FNR-20K101	100	60	85	165	100	4000	6500	30.0	45.0	1.0	4800

General Usage Zinc Oxide Leaded Varistors 120 – 360 VDC

Part No.	Varistor Voltage	Maximum Operating Voltage		Maximum Clamping Voltage (8 x 20 μ s)		Maximum Withstanding Surge Current (8 x 20 μ s)		Maximum Energy (J)		Rated Watts	Capacitance (Reference) 1KHz
	VDC (v)	AC (V)	DC (V)	VC (V)	IP (A)	2 Times (A)	1 Time (A)	2ms	10/1000 μ s	(W)	(Pf)
FNR-05K121	120	75	100	210	5	200	400	2.5	0.4	0.1	170
FNR-07K121	120	75	100	200	10	600	1200	5.0	7.8	0.25	450
FNR-10K121	120	75	100	200	25	1250	2500	12.0	18.0	0.4	1100
FNR-14K121	120	75	100	200	50	2500	4500	20.0	32.0	0.6	1900
FNR-20K121	120	75	100	200	100	4000	6500	40.0	55.0	1.0	3800
FNR-05K151	150	95	125	260	5	200	400	3.0	4.8	0.1	140
FNR-07K151	150	95	125	250	10	600	1200	6.0	9.7	0.25	350
FNR-10K151	150	95	125	250	25	1250	2500	16.0	22.0	0.4	900
FNR-14K151	150	95	125	250	50	2500	4500	25.0	40.0	0.6	1500
FNR-20K151	150	95	125	250	100	4000	6500	50.0	70.0	1.0	3000
FNR-05K181	180	115	150	315	5	200	400	3.5	5.5	0.1	110
FNR-07K181	180	115	150	300	10	600	1200	8.0	1.0	0.25	300
FNR-10K181	180	115	150	300	25	1250	2500	18.0	25.0	0.4	700
FNR-14K181	180	115	150	300	50	2500	4500	30.0	50.0	0.6	1250
FNR-20K181	180	115	150	300	100	4000	6500	60.0	85.0	1.0	2500
FNR-05K201	200	130	170	355	5	200	400	4.0	6.5	0.1	80
FNR-07K201	200	130	170	340	10	600	1200	10.0	13.0	0.25	250
FNR-10K201	200	130	170	340	25	1250	2500	20.0	30.0	0.4	500
FNR-14K201	200	130	170	340	50	2500	4500	35.0	57.0	0.6	1000
FNR-20K201	200	130	170	340	100	4000	6500	70.0	95.0	1.0	2000
FNR-05K221	220	140	180	380	5	200	400	4.5	7.0	0.1	70
FNR-07K221	220	140	180	360	10	600	1200	10.0	14.0	0.25	250
FNR-10K221	220	140	180	360	25	1250	2500	23.0	32.0	0.4	450
FNR-14K221	220	140	180	360	50	2500	4500	40.0	60.0	0.6	1000
FNR-20K221	220	140	180	360	100	4000	6500	75.0	100.0	1.0	2000
FNR-05K241	240	150	200	415	5	200	400	5.0	8.0	0.1	70
FNR-07K241	240	150	200	395	10	600	1200	10.0	15.0	0.25	200
FNR-10K241	240	150	200	395	25	1250	2500	25.0	35.0	0.4	400
FNR-14K241	240	150	200	395	50	2500	4500	40.0	63.0	0.6	900
FNR-20K241	240	150	200	395	100	4000	6500	80.0	108.0	1.0	1800
FNR-05K271	270	175	225	475	5	200	400	6.0	8.5	0.1	65
FNR-07K271	270	175	225	455	10	600	1200	12.0	18.0	0.25	170
FNR-10K271	270	175	225	455	25	1250	2500	30.0	40.0	0.4	350
FNR-14K271	270	175	225	455	50	2500	4500	50.0	70.0	0.6	750
FNR-20K271	270	175	225	455	100	4000	6500	90.0	127.0	1.0	1600
FNR-05K301	300	200	250	525	5	200	400	6.0	9.0	0.1	55
FNR-07K301	300	200	250	500	10	600	1200	13.0	20.8	0.25	150
FNR-10K301	300	200	250	500	25	1250	2500	27.0	42.0	0.4	325
FNR-14K301	300	200	250	500	50	2500	4500	55.0	75.0	0.6	650
FNR-20K301	300	200	250	500	100	4000	6500	105.0	135.0	1.0	1400
FNR-05K331	330	210	275	580	5	200	400	6.5	9.0	0.1	60
FNR-07K331	330	210	275	550	10	600	1200	14.5	22.0	0.25	150
FNR-10K331	330	210	275	550	25	1250	2500	30.0	44.0	0.4	325
FNR-14K331	330	210	275	550	50	2500	4500	60.0	80.0	0.6	650
FNR-20K331	330	210	275	550	100	4000	6500	105.0	155.0	1.0	1400
FNR-05K361	360	230	300	620	5	200	400	7.5	10.0	0.1	50
FNR-07K361	360	230	300	595	10	600	1200	15.0	25.0	0.25	130
FNR-10K361	360	230	300	595	25	1250	2500	25.0	47.0	0.4	300
FNR-14K361	360	230	300	595	50	2500	4500	65.0	93.0	0.6	550
FNR-20K361	360	230	300	595	100	4000	6500	120.0	163.0	1.0	1200

General Usage Zinc Oxide Leaded Varistors 390 – 1800 VDC

Part No.	Varistor Voltage	Maximum Operating Voltage		Maximum Clamping Voltage (8 x 20 μ s)		Maximum Withstanding Surge Current (8 x 20 μ s)		Maximum Energy (J)		Rated Watts	Capacitance (Reference) 1KHz
	VDC (v)	AC (V)	DC (V)	VC (V)	IP (A)	2 Times (A)	1 Time (A)	2ms	10/1000 μ s	(W)	(Pf)
FNR-05K391	390	250	320	675	5	200	400	8	12	0.1	50
FNR-07K391	390	250	320	650	10	600	1200	17	25	0.25	130
FNR-10K391	390	250	320	650	25	1250	2500	40	60	0.4	270
FNR-14K391	390	250	320	650	50	2500	4500	70	100	0.6	500
FNR-20K391	390	250	320	650	100	4000	6500	130	180	1.0	1000
FNR-05K431	430	275	350	745	5	200	400	9	13	0.1	45
FNR-07K431	430	275	350	710	10	600	1200	20	28	0.25	110
FNR-10K431	430	275	350	710	25	1250	2500	45	65	0.4	250
FNR-14K431	430	275	350	710	50	2500	4500	75	115	0.6	450
FNR-20K431	430	275	350	710	100	4000	6500	140	190	1.0	900
FNR-05K471	470	300	385	810	5	200	400	10	15	0.1	40
FNR-07K471	470	300	385	775	10	600	1200	20	30	0.25	100
FNR-10K471	470	300	385	775	25	1250	2500	45	70	0.4	230
FNR-14K471	470	300	385	775	50	2500	4500	80	125	0.6	440
FNR-20K471	470	300	385	775	100	4000	6500	150	220	1.0	900
FNR-10K511	510	318	415	840	25	1250	2500	45	70	0.4	200
FNR-14K511	510	318	415	840	50	2500	4500	80	125	0.6	380
FNR-20K511	510	318	415	840	100	4000	6500	150	220	1.0	800
FNR-10K561	560	350	455	925	25	1250	2500	45	70	0.4	180
FNR-14K561	560	350	455	925	50	2500	4500	80	125	0.6	345
FNR-20K561	560	350	455	925	100	4000	6500	150	220	1.0	700
FNR-10K621	620	380	505	1025	25	1250	2500	45	70	0.4	130
FNR-14K621	620	380	505	1025	50	2500	4500	85	125	0.6	250
FNR-20K621	620	380	505	1025	100	4000	6500	150	220	1.0	500
FNR-10K681	680	420	560	1120	25	1250	2500	45	70	0.4	130
FNR-14K681	680	420	560	1120	50	2500	4500	90	130	0.6	250
FNR-20K681	680	420	560	1120	100	4000	6500	160	230	1.0	460
FNR-10K751	750	460	615	1240	25	1250	2500	50	75	0.4	120
FNR-14K751	750	460	615	1240	50	2500	4500	100	143	0.6	230
FNR-20K751	750	460	615	1240	100	4000	6500	175	255	1.0	420
FNR-10K781	780	485	640	1290	25	1250	2500	50	80	0.4	120
FNR-14K781	780	485	640	1290	50	2500	4500	105	148	0.6	230
FNR-20K781	780	485	640	1290	100	4000	6500	180	265	1.0	420
FNR-10K821	820	510	670	1355	25	1250	2500	55	85	0.4	110
FNR-14K821	820	510	670	1355	50	2500	4500	110	157	0.6	200
FNR-20K821	820	510	670	1355	100	4000	6500	190	282	1.0	400
FNR-10K911	910	550	745	1500	25	1250	2500	60	93	0.4	100
FNR-14K911	910	550	745	1500	50	2500	4500	120	175	0.6	180
FNR-20K911	910	550	745	1500	100	4000	6500	215	310	1.0	350
FNR-10K102	1000	625	825	1650	25	1250	2500	65	102	0.4	90
FNR-14K102	1000	625	825	1650	50	2500	4500	130	190	0.6	150
FNR-20K102	1000	625	825	1650	100	4000	6500	230	342	1.0	320
FNR-10K112	1100	680	895	1815	25	1250	2500	70	115	0.4	80
FNR-14K112	1100	680	895	1815	50	2500	4500	140	213	0.6	150
FNR-20K112	1100	680	895	1815	100	4000	6500	250	383	1.0	300
FNR-14K182	1800	1000	1465	2970	50	2500	4500	240	337	0.6	100
FNR-20K182	1800	1000	1465	2970	100	4000	6500	400	625	1.0	200

Lightning Arrestor Zinc Oxide Leaded Varistors 47 - 680 VDC

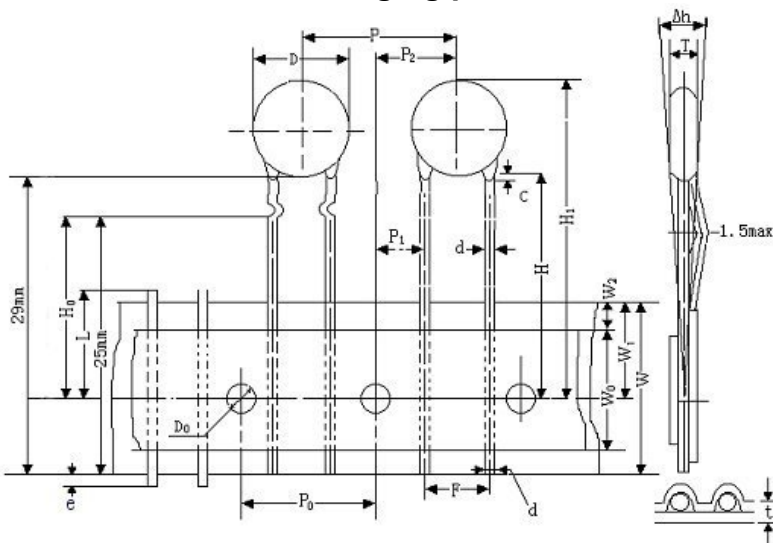
Part No.	Varistor Voltage	Maximum Operating Voltage		Maximum Clamping Voltage (8 x 20 μ s)		Maximum Withstanding Surge Current (8 x 20 μ s)	Maximum Energy (J)	Rated Watts	Capacitance (Reference) 1KHz
	VDC (v)	AC (V)	DC (V)	VC (V)	IP (A)	2 Times (A)	2ms	(W)	(Pf)
FNR-25K470	47	30	38	89	40	1250	15	1.0	10000
FNR-32K470	47	30	38	89	40	2500	25	1.2	11000
FNR-40K470	47	30	38	89	40	5000	40	1.4	15000
FNR-25K560	56	35	45	106	40	1250	18	1.0	8000
FNR-32K560	56	35	45	106	40	2500	30	1.2	10000
FNR-40K560	56	35	45	106	40	5000	45	1.4	14000
FNR-25K680	68	40	56	129	40	1250	21	1.0	7000
FNR-32K680	68	40	56	129	40	2500	32	1.2	9000
FNR-40K680	68	40	56	129	40	5000	50	1.4	13000
FNR-25K820	82	50	65	156	200	5000	23	1.0	6000
FNR-32K820	82	50	65	156	200	10000	35	1.2	8000
FNR-40K820	82	50	65	156	200	20000	60	1.4	12000
FNR-25K101	100	60	85	190	200	5000	25	1.0	5000
FNR-32K101	100	60	85	190	200	10000	38	1.2	7000
FNR-40K101	100	60	85	190	200	20000	75	1.4	11500
FNR-25K121	120	75	100	216	200	5000	28	1.0	4000
FNR-32K121	120	75	100	216	200	10000	42	1.2	6000
FNR-40K121	120	75	100	216	200	20000	90	1.4	11000
FNR-25K151	150	95	125	270	200	5000	30	1.0	3000
FNR-32K151	150	95	125	270	200	10000	50	1.2	5000
FNR-40K151	150	95	125	270	200	20000	120	1.4	10500
FNR-25K201	200	130	270	360	200	5000	35	1.0	2400
FNR-32K201	200	130	270	360	200	10000	70	1.2	4700
FNR-40K201	200	130	270	360	200	20000	160	1.4	10000
FNR-25K221	220	140	180	385	200	5000	40	1.0	2200
FNR-32K221	220	140	180	385	200	10000	90	1.2	4300
FNR-40K221	220	140	180	385	200	20000	180	1.4	9500
FNR-25K241	240	150	200	420	200	5000	60	1.0	2000
FNR-32K241	240	150	200	420	200	10000	120	1.2	4000
FNR-40K241	240	150	200	420	200	20000	220	1.4	9000
FNR-25K271	270	175	225	473	200	5000	90	1.0	1700
FNR-32K271	270	175	225	473	200	10000	150	1.2	3500
FNR-40K271	270	175	225	473	200	20000	260	1.4	750
FNR-25K361	360	230	300	612	200	5000	120	1.0	1400
FNR-32K361	360	230	300	612	200	10000	180	1.2	3000
FNR-40K361	360	230	300	612	200	20000	300	1.4	6000
FNR-25K391	390	250	320	663	200	5000	150	1.0	1200
FNR-32K391	390	250	320	663	200	10000	220	1.2	2500
FNR-40K391	390	250	320	663	200	20000	340	1.4	5000
FNR-25K431	430	275	350	731	200	5000	180	1.0	1100
FNR-32K431	430	275	350	731	200	10000	260	1.2	2250
FNR-40K431	430	275	350	731	200	20000	380	1.4	4500
FNR-25K471	470	300	380	799	200	5000	220	1.0	1000
FNR-32K471	470	300	380	799	200	10000	300	1.2	1900
FNR-40K471	470	300	380	799	200	20000	420	1.4	3600
FNR-25K621	620	385	505	1054	200	5000	260	1.0	1500
FNR-32K621	620	385	505	1054	200	10000	340	1.2	3200
FNR-40K621	620	385	505	1054	200	20000	450	1.4	3300
FNR-25K681	680	420	560	1160	200	5000	300	1.0	1200
FNR-32K681	680	420	560	1160	200	10000	380	1.2	3000
FNR-40K681	680	420	560	1160	200	20000	500	1.4	3000

Lightning Arrestor Zinc Oxide Leaded Varistors 750 - 1800 VDC

Part No.	Varistor Voltage	Maximum Operating Voltage		Maximum Clamping Voltage (8 x 20 μ s)		Maximum Withstanding Surge Current (8 x 20 μ s)	Maximum Energy (J)	Rated Watts	Capacitance (Reference) 1KHz
	VDC (v)	AC (V)	DC (V)	VC (V)	IP (A)	2 Times (A)	2ms	(W)	(Pf)
FNR-25K751	750	460	615	1275	200	5000	350	1.0	1100
FNR-32K751	750	460	615	1275	200	10000	430	1.2	2700
FNR-40K751	750	460	615	1275	200	20000	550	1.4	2500
FNR-25K781	780	485	640	1326	200	5000	370	1.0	1050
FNR-32K781	780	485	640	1326	200	10000	480	1.2	2600
FNR-40K781	780	485	640	1326	200	20000	600	1.4	2450
FNR-25K821	820	510	670	1400	200	5000	400	1.0	1000
FNR-32K821	820	510	670	1400	200	10000	530	1.2	2400
FNR-40K821	820	510	670	1400	200	20000	640	1.4	2400
FNR-25K911	910	550	745	1550	200	5000	420	1.0	900
FNR-32K911	910	550	745	1550	200	10000	580	1.2	2200
FNR-40K911	910	550	745	1550	200	20000	700	1.4	2200
FNR-25K102	1000	625	825	1700	200	5000	450	1.0	800
FNR-32K102	1000	625	825	1700	200	10000	630	1.2	1900
FNR-40K102	1000	625	825	1700	200	20000	800	1.4	2000
FNR-25K112	1100	680	895	1870	200	5000	500	1.0	700
FNR-32K112	1100	680	895	1870	200	10000	700	1.2	1700
FNR-40K112	1100	680	895	1870	200	20000	850	1.4	1800
FNR-32K182	1800	1000	1465	3060	200	10000	750	1.2	1600
FNR-40K182	1800	1000	1465	3060	200	20000	1000	1.4	1600

Packaging

AMMO Packaging per EIA 468



Quantity per Ammo Box		
Type Code	18 – 270 VDC	300 – 470 VDC
05	2500	2000
07	2000	1500
10	2000	1500
14	1500	1000

Note:

Type Codes 05, 07, 10 and 14 available on tape per the above table.

Symbol	Item		Dimension (in mm)			
	Type Code in Part Number		05	07	10	14
D	Body diameter		7.5 max	9.0 max	13.5 max	16.5 max
T	Body thickness		Table A		Table A	
d	Lead-wire diameter		0.6 ± 0.1		0.8 ± 0.1	
P	Pitch between capacitors		12.7 ± 1.0		25.4 ± 1.0	
P ₀	Feed hole pitch		12.7 ± 0.3		12.7 ± 0.3	
P ₁	Feed hole center to lead center *		3.85 ± 0.7		7.5 ± 0.8	
P ₂	Feed hole center to capacitor center		6.35 ± 1.3		12.7 ± 1.3	
F	Lead spacing		5.0 +0.8/-0.8		7.5 +0.8/-0.8	
Δh	Capacitor alignment F-R		0 ± 2.0		0 ± 2.0	
W	Tape width		18.0 +1.0/-0.5		18.0 +1.0/-0.5	
W ₀	Hold-down tape width		12 min		12 min	
W ₁	Hole position		9.0 ± 0.5		9.0 ± 0.5	
W ₂	Hold-down tape position		3.0 max		3.0 max	
H	Height to seating plane (See Note)	For straight Lead type	20.0 +1.5/-1.0		20.0 +1.5/-1.0	
H ₀		For Kinked Lead type	16.0 ± 0.5 Outside Kink		16.0 ± 0.5 Inside Kink	
H ₁	Capacitor height		32.25 max		40 max	
e	Lead-wire protrusion		1.0 max		1.0 max	
D ₀	Feed hole diameter		4.0 ± 0.2		4.0 ± 0.2	
t	Total tape thickness		0.7 ± 0.2		0.9 ± 0.2	
L	Length of snapped off leads		11.0 max		11.0 max	
C	Coating rundown on leads		2.0 max		2.5	

Note: OUTSIDE Kink and straight leads available on 05 and 07 Type Codes; INSIDE Kink and straight leads on 10 and 14 Type Codes; STRAIGHT LEADS only on all other Type Codes.