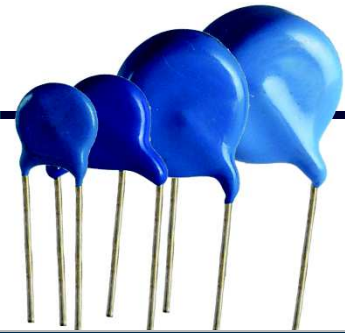




TY1 SERIES (NP0)

3 to 15kV

High Voltage Ceramic Capacitors



Features

- Radial Leaded Package
- NP0 Temperature Characteristics

Specifications

Part Number ¹	C pF	Tolerance ¹ ±%	V _{RATE} kVDC	V _{WITHSTAND} kVDC	D ² mm	H ² mm	T ² mm	L ³ mm	Ls ⁴ mm	d ⁵ mm
TY1NP03R3•3KV	3.3	K,M,Z	3.0	6.0	8.0	11.0	4.0	25.0	7.5	0.6
TY1NP04R7•3KV	4.7	K,M,Z	3.0	6.0	9.0	12.0	4.0	25.0	7.5	0.6
TY1NP05R0•3KV	5	K,M,Z	3.0	6.0	9.0	12.0	4.0	25.0	7.5	0.6
TY1NP0150•3KV	15	K,M,Z	3.0	6.0	9.0	12.0	4.0	25.0	7.5	0.6
TY1NP0180•3KV	18	K,M,Z	3.0	6.0	9.0	12.0	4.0	25.0	7.5	0.6
TY1NP0220•3KV	22	K,M,Z	3.0	6.0	9.0	12.0	4.0	25.0	7.5	0.6
TY1NP0270•3KV	27	K,M,Z	3.0	6.0	10.0	13.0	4.0	25.0	7.5	0.6
TY1NP0680•3KV	68	K,M,Z	3.0	6.0	13.0	16.0	4.0	25.0	7.5	0.6
TY1NP0820•3KV	82	K,M,Z	3.0	6.0	14.0	17.0	4.0	25.0	7.5	0.6
TY1NP0101•3KV	100	K,M,Z	3.0	6.0	15.0	18.0	4.0	25.0	7.5	0.6
TY1NP0121•3KV	120	K,M,Z	3.0	6.0	16.0	19.0	4.0	25.0	7.5	0.6
TY1NP0151•3KV	150	K,M,Z	3.0	6.0	18.0	22.0	4.5	25.0	10.0	0.6
TY1NP0181•3KV	180	K,M,Z	3.0	6.0	19.0	23.0	4.5	25.0	10.0	0.6
TY1NP0221•3KV	220	K,M,Z	3.0	6.0	21.0	24.0	4.5	25.0	10.0	0.6
TY1NP03R3•4KV	3.3	K,M,Z	4.0	8.0	8.0	11.0	4.5	25.0	10.0	0.6
TY1NP04R7•4KV	4.7	K,M,Z	4.0	8.0	8.0	11.0	4.5	25.0	10.0	0.6
TY1NP05R0•4KV	5	K,M,Z	4.0	8.0	8.0	11.0	4.5	25.0	10.0	0.6
TY1NP0150•4KV	15	K,M,Z	4.0	8.0	9.0	12.0	4.5	25.0	10.0	0.6
TY1NP0180•4KV	18	K,M,Z	4.0	8.0	9.0	12.0	4.5	25.0	10.0	0.6
TY1NP0220•4KV	22	K,M,Z	4.0	8.0	10.0	13.0	4.5	25.0	10.0	0.6
TY1NP0270•4KV	27	K,M,Z	4.0	8.0	10.0	13.0	4.5	25.0	10.0	0.6
TY1NP0680•4KV	68	K,M,Z	4.0	8.0	14.0	17.0	4.5	25.0	10.0	0.6
TY1NP0820•4KV	82	K,M,Z	4.0	8.0	15.0	18.0	4.5	25.0	10.0	0.6
TY1NP0101•4KV	100	K,M,Z	4.0	8.0	17.0	20.0	4.5	25.0	10.0	0.6
TY1NP0121•4KV	120	K,M,Z	4.0	8.0	19.0	24.0	5.0	25.0	10.0	0.7
TY1NP0151•4KV	150	K,M,Z	4.0	8.0	21.0	25.0	5.0	25.0	10.0	0.7
TY1NP0181•4KV	180	K,M,Z	4.0	8.0	22.0	26.0	5.0	25.0	10.0	0.7
TY1NP0221•4KV	220	K,M,Z	4.0	8.0	23.0	27.0	5.0	25.0	10.0	0.7
TY1NP03R3•5KV	3.3	K,M,Z	5.0	10.0	8.0	11.0	5.0	25.0	10.0	0.6
TY1NP04R7•5KV	4.7	K,M,Z	5.0	10.0	8.0	11.0	5.0	25.0	10.0	0.6
TY1NP05R0•5KV	5	K,M,Z	5.0	10.0	9.0	12.0	5.0	25.0	10.0	0.6
TY1NP0150•5KV	15	K,M,Z	5.0	10.0	10.0	13.0	5.0	25.0	10.0	0.6
TY1NP0180•5KV	18	K,M,Z	5.0	10.0	11.0	14.0	5.0	25.0	10.0	0.6
TY1NP0220•5KV	22	K,M,Z	5.0	10.0	11.0	14.0	5.0	25.0	10.0	0.6
TY1NP0270•5KV	27	K,M,Z	5.0	10.0	12.0	15.0	5.0	25.0	10.0	0.6
TY1NP0680•5KV	68	K,M,Z	5.0	10.0	16.0	20.0	5.0	25.0	10.0	0.6
TY1NP0820•5KV	82	K,M,Z	5.0	10.0	17.0	21.0	5.0	25.0	10.0	0.6
TY1NP0101•5KV	100	K,M,Z	5.0	10.0	18.0	22.0	5.5	25.0	10.0	0.7
TY1NP0121•5KV	120	K,M,Z	5.0	10.0	20.0	24.0	5.5	25.0	10.0	0.7



Part Number ¹	C pF	Tolerance ¹ ±%	V _{RATE} kVDC	V _{WITHSTAND} kVDC	D ² mm	H ² mm	T ² mm	L ³ mm	LS ⁴ mm	d ⁵ mm
TY1NP0151•5KV	150	K,M,Z	5.0	10.0	22.0	26.0	5.5	25.0	10.0	0.7
TY1NP0181•5KV	180	K,M,Z	5.0	10.0	24.0	28.0	5.5	25.0	10.0	0.7
TY1NP0221•5KV	220	K,M,Z	5.0	10.0	25.0	29.0	5.5	25.0	10.0	0.7
TY1NP03R3•6KV	3.3	K,M,Z	6.0	12.0	8.0	11.0	6.0	25.0	10.0	0.6
TY1NP04R7•6KV	4.7	K,M,Z	6.0	12.0	9.0	12.0	6.0	25.0	10.0	0.6
TY1NP05R0•6KV	5	K,M,Z	6.0	12.0	9.0	12.0	6.0	25.0	10.0	0.6
TY1NP0100•6KV	10	K,M,Z	6.0	12.0	9.0	12.0	6.0	25.0	10.0	0.6
TY1NP0150•6KV	15	K,M,Z	6.0	12.0	10.0	13.0	6.0	25.0	10.0	0.6
TY1NP0180•6KV	18	K,M,Z	6.0	12.0	11.0	14.0	6.0	25.0	10.0	0.6
TY1NP0220•6KV	22	K,M,Z	6.0	12.0	11.0	14.0	6.0	25.0	10.0	0.6
TY1NP0270•6KV	27	K,M,Z	6.0	12.0	12.0	15.0	6.0	25.0	10.0	0.6
TY1NP0680•6KV	68	K,M,Z	6.0	12.0	17.0	20.0	6.5	25.0	10.0	0.7
TY1NP0820•6KV	82	K,M,Z	6.0	12.0	19.0	23.0	6.5	25.0	10.0	0.7
TY1NP0101•6KV	100	K,M,Z	6.0	12.0	20.0	24.0	6.5	25.0	10.0	0.7
TY1NP0121•6KV	120	K,M,Z	6.0	12.0	22.0	26.0	6.5	25.0	10.0	0.7
TY1NP0151•6KV	150	K,M,Z	6.0	12.0	23.0	27.0	6.5	25.0	10.0	0.7
TY1NP0181•6KV	180	K,M,Z	6.0	12.0	25.0	29.0	6.5	25.0	10.0	0.7
TY1NP0221•6KV	220	K,M,Z	6.0	12.0	27.0	31.0	6.5	25.0	10.0	0.7
TY1NP03R3•8KV	3.3	K,M,Z	8.0	16.0	8.0	11.0	6.5	25.0	10.0	0.6
TY1NP04R7•8KV	4.7	K,M,Z	8.0	16.0	9.0	12.0	6.5	25.0	10.0	0.6
TY1NP05R0•8KV	5	K,M,Z	8.0	16.0	9.0	12.0	6.5	25.0	10.0	0.6
TY1NP0150•8KV	15	K,M,Z	8.0	16.0	11.0	14.0	6.5	25.0	10.0	0.6
TY1NP0180•8KV	18	K,M,Z	8.0	16.0	11.0	14.0	6.5	25.0	10.0	0.6
TY1NP0220•8KV	22	K,M,Z	8.0	16.0	12.0	15.0	6.5	25.0	10.0	0.6
TY1NP0270•8KV	27	K,M,Z	8.0	16.0	13.0	16.0	6.5	25.0	10.0	0.6
TY1NP0680•8KV	68	K,M,Z	8.0	16.0	19.0	23.0	6.5	25.0	12.5	0.7
TY1NP0820•8KV	82	K,M,Z	8.0	16.0	21.0	25.0	7.0	25.0	12.5	0.7
TY1NP0101•8KV	100	K,M,Z	8.0	16.0	22.0	26.0	7.0	25.0	12.5	0.7
TY1NP0121•8KV	120	K,M,Z	8.0	16.0	23.0	27.0	7.0	25.0	12.5	0.7
TY1NP0151•8KV	150	K,M,Z	8.0	16.0	25.0	29.0	7.0	25.0	12.5	0.7
TY1NP0181•8KV	180	K,M,Z	8.0	16.0	28.0	32.0	7.0	25.0	12.5	0.7
TY1NP0221•8KV	220	K,M,Z	8.0	16.0	30.0	34.0	7.0	25.0	12.5	0.7
TY1NP03R3•10KV	3.3	K,M,Z	10.0	20.0	10.0	13.0	7.0	25.0	10.0	0.6
TY1NP04R7•10KV	4.7	K,M,Z	10.0	20.0	10.0	13.0	7.0	25.0	10.0	0.6
TY1NP05R0•10KV	5	K,M,Z	10.0	20.0	11.0	14.0	7.0	25.0	10.0	0.6
TY1NP0150•10KV	15	K,M,Z	10.0	20.0	11.0	14.0	7.0	25.0	10.0	0.6
TY1NP0180•10KV	18	K,M,Z	10.0	20.0	12.0	15.0	7.0	25.0	10.0	0.6
TY1NP0220•10KV	22	K,M,Z	10.0	20.0	13.0	16.0	7.0	25.0	10.0	0.6
TY1NP0270•10KV	27	K,M,Z	10.0	20.0	14.0	17.0	7.0	25.0	10.0	0.6
TY1NP0680•10KV	68	K,M,Z	10.0	20.0	20.0	24	7.5	25.0	12.5	0.7
TY1NP0820•10KV	82	K,M,Z	10.0	20.0	22.0	26	7.5	25.0	12.5	0.7
TY1NP0101•10KV	100	K,M,Z	10.0	20.0	24.0	28	7.5	25.0	12.5	0.7
TY1NP0121•10KV	120	K,M,Z	10.0	20.0	25.0	29	7.5	25.0	12.5	0.7
TY1NP0151•10KV	150	K,M,Z	10.0	20.0	28.0	32	7.5	25.0	12.5	0.7
TY1NP0100•12KV	10	K,M,Z	12.0	24.0	11.0	14.0	8.0	25.0	12.5	0.7



Part Number ¹	C pF	Tolerance ¹ ±%Z	V _{RATE} kVDC	V _{WITHSTAND} kVDC	D ² mm	H ² mm	T ² mm	L ³ mm	LS ⁴ mm	d ⁵ mm
TY1NP0150•12KV	15	K,M,Z	12.0	24.0	12.0	15.0	8.0	25.0	12.5	0.7
TY1NP0180•12KV	18	K,M,Z	12.0	24.0	13.0	16.0	8.0	25.0	12.5	0.7
TY1NP0220•12KV	22	K,M,Z	12.0	24.0	14.0	17.0	8.0	25.0	12.5	0.7
TY1NP0270•12KV	27	K,M,Z	12.0	24.0	15.0	18.0	8.0	25.0	12.5	0.7
TY1NP0680•12KV	68	K,M,Z	12.0	24.0	21.0	25.0	8.0	25.0	12.5	0.7
TY1NP0820•12KV	82	K,M,Z	12.0	24.0	23.0	27.0	8.0	25.0	12.5	0.7
TY1NP0101•12KV	100	K,M,Z	12.0	24.0	25.0	29.0	8.0	25.0	12.5	0.7
TY1NP0121•12KV	120	K,M,Z	12.0	24.0	27.0	31.0	8.0	25.0	12.5	0.7
TY1NP0151•12KV	150	K,M,Z	12.0	24.0	30.0	34.0	8.0	25.0	12.5	0.7
TY1NP0150•15KV	15	K,M,Z	15.0	30.0	14.0	17.0	9.0	25.0	12.5	0.7
TY1NP0180•15KV	18	K,M,Z	15.0	30.0	14.0	17.0	9.0	25.0	12.5	0.7
TY1NP0220•15KV	22	K,M,Z	15.0	30.0	15.0	18.0	9.0	25.0	12.5	0.7
TY1NP0270•15KV	27	K,M,Z	15.0	30.0	17.0	20.0	9.0	25.0	12.5	0.7
TY1NP0680•15KV	68	K,M,Z	15.0	30.0	24.0	29.0	9.0	25.0	12.5	0.7
TY1NP0820•15KV	82	K,M,Z	15.0	30.0	26.0	32.0	9.0	25.0	12.5	0.7
TY1NP0101•15KV	100	K,M,Z	15.0	30.0	28.0	34.0	11.0	25.0	12.5	0.7
TY1NP0121•15KV	120	K,M,Z	15.0	30.0	31.0	37.0	11.0	25.0	12.5	0.7
TY1NP0151•15KV	150	K,M,Z	15.0	30.0	34.0	40.0	11.0	25.0	12.5	0.7

¹TY1NP0 models are offered with K (± 10%), M (± 20%), and Z (+80%, -20%) capacitance tolerances. Substitute the “•” in the part number with the preferred tolerance. Inquire for additional information.

²Maximum dimension.

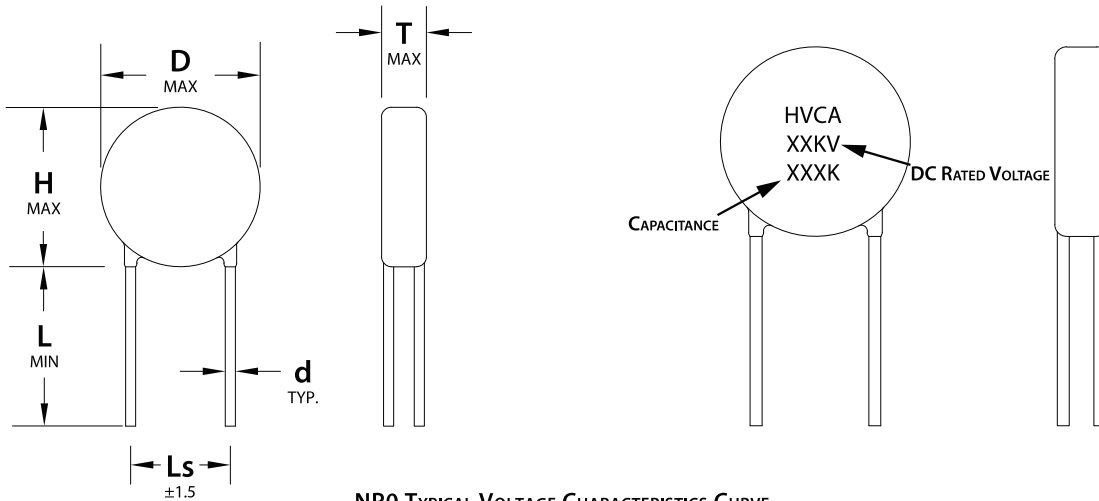
³Minimum dimension.

⁴LS has a ±1.5mm tolerance.

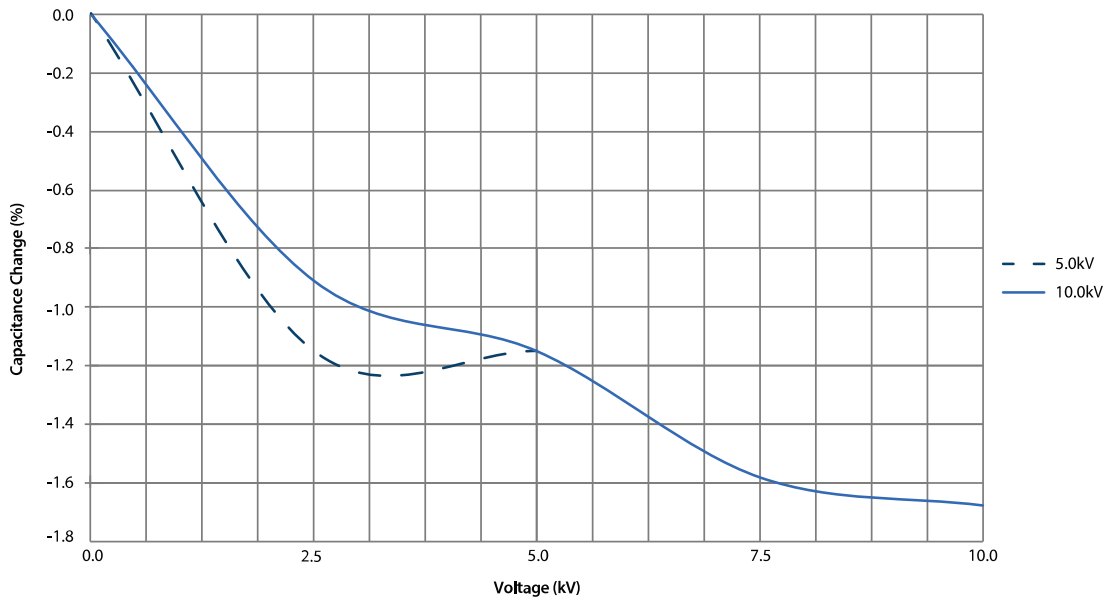
⁵Typical.



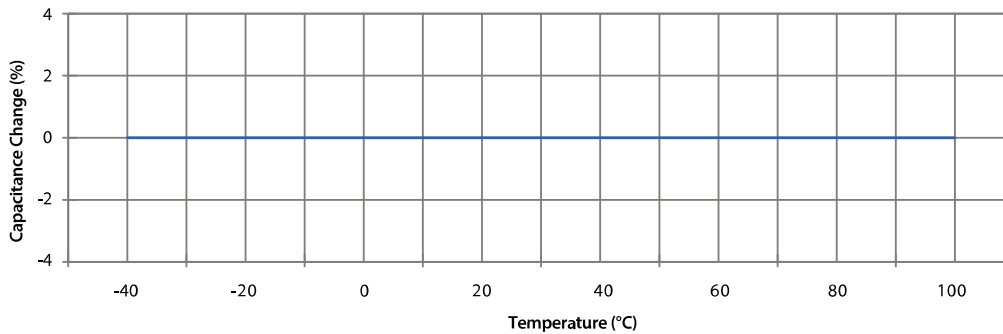
Drawings and Characteristics



NP0 TYPICAL VOLTAGE CHARACTERISTICS CURVE

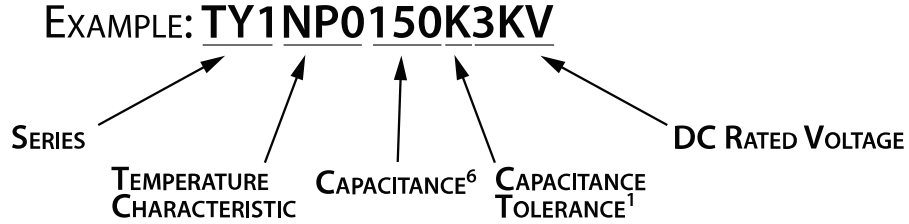


NP0 TYPICAL TEMPERATURE CHARACTERISTICS CURVE





Part Number Decoder:



⁶Capacitance decoder:

For capacitance values less than 10pF, digits before the “R” are significant digits, while digits after the “R” are the decimal values after the significant digits. For example, 4R7 = 4.7pF, since the 4 is the significant digit while the 7 is the digit after the decimal.

For capacitance values 100pF and higher, the first and second digits are significant digits, while the third digit expresses the number of zeros to follow the two significant digits. For example, 152 = 1500pF, since the 1 and the 5 are the significant digits with 2 zeros that follow.

Additional Specifications

	Specifications	Conditions
Operating Temperature Range	-25 to +100°C	-
Temperature Coefficient	-25 to +85°C	-
Dissipation Factor	Q ≥ 400	C < 30pF, +20°C
	Q ≥ 1000	C ≥ 30pF

Note: Specifications subject to change without notice. Photo is representation only.

