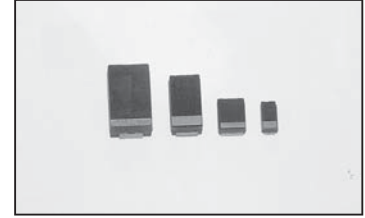


FEATURES

- Low ESR and High Ripple Current Ratings
- Values from 10 μ F to 470 μ F
- Suitable for Flow and Reflow Soldering Processes
- Available in EIA B, C and D Case Sizes

**RoHS
Compliant**
includes all homogeneous materials

*See Part Number System for Details



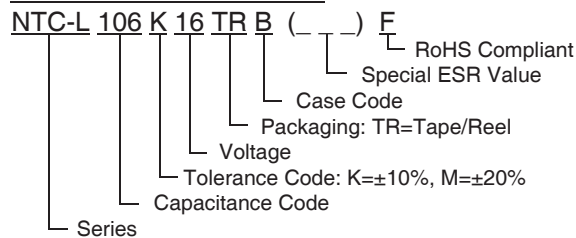
SPECIFICATIONS

Capacitance Range	10 μ F to 470 μ F		
Capacitance Tolerance	\pm 20% (M), \pm 10% (K)		
Operating Temperature Range	-55 $^{\circ}$ C ~ +125 $^{\circ}$ C (voltage derating above 85 $^{\circ}$ C, see table below)		
Dissipation Factor @ 120Hz/25 $^{\circ}$ C	See Specifications Table		
Capacitance Change Versus Temperature	-55 $^{\circ}$ C	+85 $^{\circ}$ C	+125 $^{\circ}$ C
	Δ C -10%	Δ C +10%	Δ C +12%
Soldering Heat Resistance (+260 $^{\circ}$ C for 5-10 sec.)	Δ C \pm 10% Max., Leakage Current and Dissipation Factor will be less than value specified below.		
Moisture Resistance (500 hours; 90-95% RH @ 40 $^{\circ}$ C)			
Load Life Test @at Rated Voltage 2,000 hours @ 85 $^{\circ}$ C			
Base Failure Rate (1.0 Ω /Volt)			

STANDARD RATINGS AND CASE SIZE

Rated Voltage @ 85 $^{\circ}$ C	6.3Vdc	10Vdc	16Vdc	20Vdc	25Vdc	35Vdc	
Surge Voltage @ 85 $^{\circ}$ C	8	13	20	26	32	45	
Derated Voltage @ 125 $^{\circ}$ C	4	6.3	10	13	16	22	
Capacitance (μ F)	Code	Case Size	Case Size	Case Size	Case Size	Case Size	Case Size
10	106	B	B	B	C	C/D	D
15	156	B	B	C	C	D	D
22	226	B	C	C	D	D	D
33	336	C	C	D	D	D	-
47	476	C	D	D	D	-	-
68	686	D	D	D	-	-	-
100	107	D	D	D	-	-	-
150	157	D	D	-	-	-	-
220	227	C/D	D	-	-	-	-
330	337	D	D	-	-	-	-
470	477	D	-	-	-	-	-

PART NUMBER SYSTEM



PRECAUTIONS

Please review the notes on correct use, safety and precautions found on our website at www.niccomp.com/tantpc
If in doubt or uncertainty, please review your specific application - process details with NIC's technical support personnel: tpmg@niccomp.com



SPECIFICATIONS TABLE

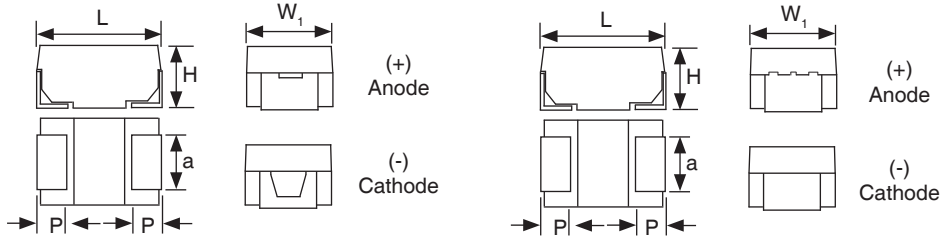
Part Number	Capacitance (μF)	Voltage (Vdc)	Dissipation Factor @120KHz/+25°C	Leakage Current After 5 Minutes (μA)	ESR @100KHz/+25°C	Ripple Current Rating @100K/+25°C	
NTC-L106K6.3TRBF	10	6.3	6%	0.7	0.70	370	
NTC-L156K6.3TRBF	15		6%	1.0	0.60	400	
NTC-L226K6.3TRBF	22		6%	1.4	0.50	440	
NTC-L336K6.3TRCF	33		6%	2.1	0.35	530	
NTC-L476K6.3TRCF	47		6%	3.0	0.35	530	
NTC-L686K6.3TRDF	68		6%	4.3	0.20	770	
NTC-L107K6.3TRDF	100		8%	6.3	0.15	890	
NTC-L157K6.3TRDF	150		8%	9.5	0.10	1100	
NTC-L227K6.3TRCF	220		10%	14	0.125	938	
NTC-L227K6.3TRDF	220		10%	14	0.10	1100	
NTC-L337K6.3TRDF	330		10%	20.8	0.10	1100	
NTC-L477K6.3TRDF	470		18%	32.9	0.20	770	
NTC-L106K10TRBF	10	10	6%	1.0	0.70	370	
NTC-L156K10TRBF	15		6%	1.5	0.60	400	
NTC-L226K10TRCF	22		6%	2.2	0.50	440	
NTC-L336K10TRCF	33		6%	3.3	0.35	530	
NTC-L476K10TRDF	47		6%	4.7	0.25	690	
NTC-L686K10TRDF	68		6%	6.8	0.20	770	
NTC-L107K10TRDF	100		8%	10	0.10	1100	
NTC-L157K10TRDF	150		8%	15	0.10	1100	
NTC-L227K10TRCF	220		10%	22	0.10	1100	
NTC-L337K10TRDF	330		18%	33	0.15	890	
NTC-L106K16TRBF	10		16	6%	1.6	0.60	400
NTC-L156K16TRBF	15			6%	2.4	0.50	440
NTC-L226K16TRCF	22	6%		3.5	0.40	500	
NTC-L336K16TRCF	33	6%		5.3	0.25	690	
NTC-L476K16TRDF	47	6%		7.5	0.20	770	
NTC-L686K16TRDF	68	6%		11	0.15	890	
NTC-L107K16TRDF	100	8%		16	0.10	1100	
NTC-L106K20TRBF	10	20		6%	2.0	0.60	400
NTC-L156K20TRBF	15			6%	3.0	0.50	440
NTC-L226K20TRCF	22			6%	4.4	0.35	580
NTC-L336K20TRCF	33			6%	6.6	0.30	630
NTC-L476K20TRDF	47			6%	9.4	0.20	830
NTC-L106K25TRBF	10		25	6%	2.5	0.50	469
NTC-L106K25TRCF	10	6%		2.5	0.30	630	
NTC-L156K25TRBF	15	6%		3.8	0.30	630	
NTC-L226K25TRCF	22	6%		5.5	0.30	630	
NTC-L336K25TRCF	33	6%		8.3	0.30	630	
NTC-L106K35TRDF	10	35		6%	3.5	0.30	630
NTC-L156K35TRDF	15		6%	5.3	0.30	630	
NTC-L226K35TRDF	22		6%	7.7	0.50	490	



DIMENSIONS (mm)

Case Code	Metric Code	English Code	L	W	H	P	a
B	3528	1411	3.5 ± 0.2	2.8 ± 0.2	1.9 ± 0.2	0.8 ± 0.3	2.2 ± 0.1
C	6032	2412	6.0 ± 0.3	3.2 ± 0.3	2.6 ± 0.4	1.3 ± 0.3	2.2 ± 0.1
D	7343	2916	7.3 ± 0.2	4.3 ± 0.2	2.9 ± 0.3	1.3 ± 0.3	2.4 ± 0.1

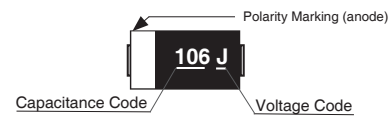
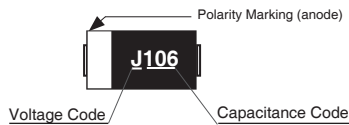
LEAD-FRAME FORMAT*



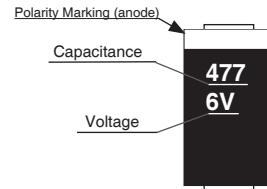
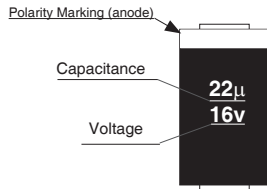
*Parts will be supplied with one of the above lead-frame formats.

Terminations:
100% Sn (Lead-Free)
Standard

B Size 6.3V marked 6



C & D Case Size 6.3V marked 6



Note: Component body color may be Black(white marking) or Gold (black marking).

CAPACITANCE CODES

Cap. (µF)	STD EIA Code
10	106
22	226
33	336
47	476
68	686
100	107
150	157
220	227
330	337
470	477

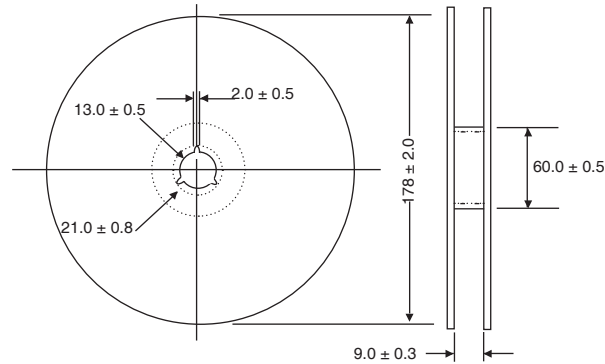
VOLTAGE CODES

Voltage	Code
6.3	J
10	A
16	C
20	D
25	E
35	V



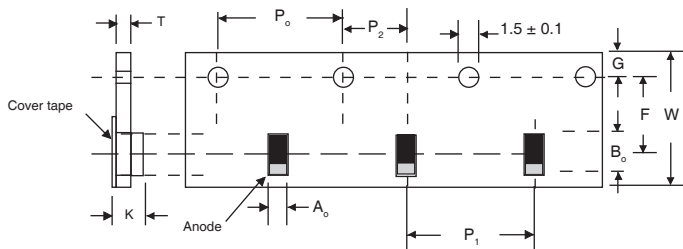
TAPING SPECIFICATIONS (mm)

Case Code	A ±0.1	B ±0.1	C ±0.3	D ±0.1	E ±0.1	F ±0.1	G ±0.1	H ±0.1	J ±0.1	K max.	t max.	Reel Qty
B	3.1	3.8	8.0	3.5	1.75	4.0	2.0	4.0	1.5	2.5	0.2	2000
C	3.7	6.3	12.0	5.5	1.75	8.0	2.0	4.0	1.5	3.0	0.3	500
D	4.8	7.7	12.0	5.5	1.75	8.0	2.0	4.0	1.5	3.4	0.3	500



TAPE DIMENSIONS (mm)

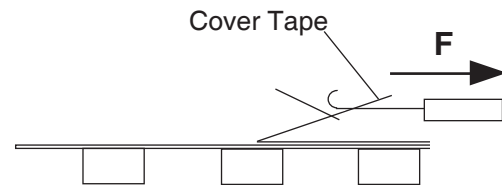
Metric Code	Case Code	A ₀ ±0.2	B ₀ ±0.2	W ±0.3	F ± 0.05	P ₀ ±0.1	P ₁ ±0.1	P ₂ ±0.05	G ±0.1	K ±0.2	T	7" Reel
3528	B	3.2	3.8	8.0	3.5	4.0	4.0	2.0	1.75	2.1	0.2	2000
6032	C	3.7	6.4	12.0	5.65	4.0	8.0	2.0	1.5	3.0	0.3	500
7343	D	4.8	7.7	12.0	5.65	4.0	8.0	2.0	1.5	3.3	0.3	500



Cover tape peel-off specification

1. Peel-off speed : 300 mm/min.
2. Peel-off force : F = 30 - 75g
3. Peel-off angle : $\Theta = 0 - 15^\circ$

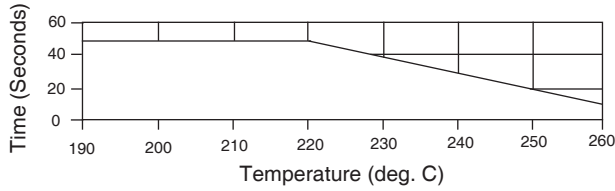
Peel-off speed
(F) = 50mm/Sec.



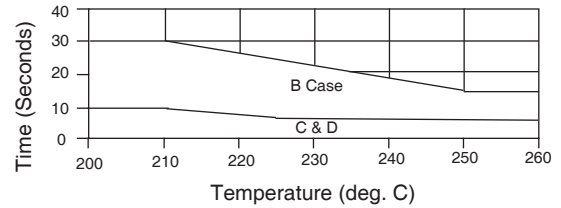
RECOMMENDED SOLDERING PROFILES

Note: To avoid thermal shock a preheating stage, 130°C ~ 160°C for 1 minute, should be incorporated into the soldering process

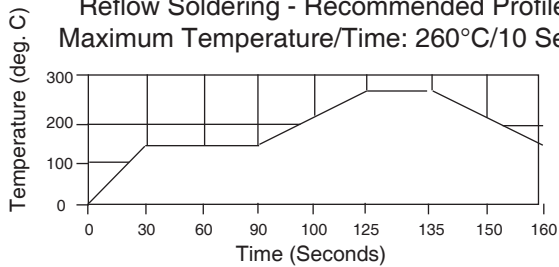
Reflow Soldering - Permitted
Temperature/Time Range



Flow Soldering - Permitted
Temperature/Time Range



Reflow Soldering - Recommended Profile
Maximum Temperature/Time: 260°C/10 Sec.



Flow Soldering - Recommended Profile
Maximum Temperature/Time: 245°C/5 Sec.

