Low ESR Tantalum Chip Capacitors

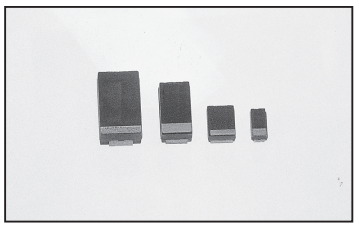
NTC-L Series

FEATURES

- Low ESR and High Ripple Current Ratings
- Values from 10µF to 470µF
- 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	10µF to 470µF		
Capacitance Tolerance	±10% (K)		
Operating Temperature Range	-55°C ~ +125°C (voltage derating above 85°C, see table below)		
Dissipation Factor @ 120Hz/25°C	See Part Number & Specifications Table		
Capacitance Change Versus Temperature	-55°C	+85°C	+125°C
	ΔC -10%	ΔC +10%	ΔC +12%
Soldering Heat Resistance (+260°C for 5~10 sec.)	ΔC ±10% Max., Leakage Current and Dissipation Factor will be less than value specified below.		
Moisture Resistance (500 hours; 90~95% RH @ 40°C			
Load Life Test @at Rated Voltage 2,000 hours @ 85°C			
Base Failure Rate (1.0Ω/Volt)	1%/1000 hours at 60% confidence level (+85°C)		

STANDARD RATINGS AND CASE SIZE

Rated Voltage @ 85°C		6.3Vdc	10Vdc	16Vdc	20Vdc	25Vdc	35Vdc
Surge Voltage @ 85°C		8	13	20	26	32	45
Derated Voltage @125°C		4	6.3	10	13	16	22
Capacitance (µF)	Code	Case Size	Case Size	Case Size	Case Size	Case Size	Case Size
10	106	-	-	B	C	-	D
15	156	-	B	-	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	-	-	-
100	107	D	D	D	-	-	-
150	157	D	D	-	-	-	-
220	227	D	D	-	-	-	-
330	337	D	D	-	-	-	-
470	477	D	-	-	-	-	-

PART NUMBER SYSTEM

NTC-L 106 K 16 TR B F

- F — RoHS Compliant
- B — Case Code
- TR — Packaging: TR=Tape/Reel
- 16 — Voltage
- K — Tolerance Code: K=±10%
- 106 — Capacitance Code
- NTC-L — Series

PRECAUTIONS

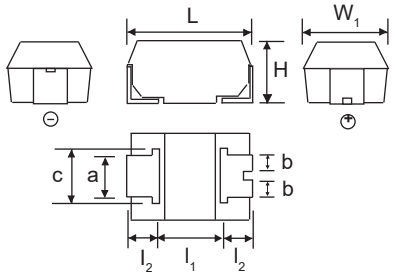
Please review the notes on correct use, safety and precautions found on our website at **www.niccomp.com/tantpc**
If in doubt or uncertainty, please review your specific application - process details with NIC's technical support personnel: **tpmg@niccomp.com**

PART NUMBER AND SPECIFICATIONS TABLE

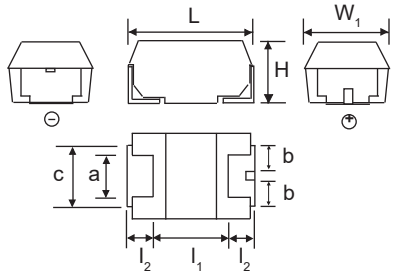
Part Number	Cap. (μF)	Voltage (Vdc)	Dissipation Factor @ 120Hz/20°C	Leakage Current (μA) @ 25°C	ESR (ohms) @ 100KHz/20°C	Ripple Current Rating (mA) @ 100KHz/25°C
NTC-L226K6.3TRBF	22	6.3	0.06	1.4	0.50	440
NTC-L336K6.3TRCF	33		0.06	2.1	0.35	530
NTC-L476K6.3TRCF	47		0.06	3.0	0.35	530
NTC-L107K6.3TRDF	100		0.08	6.3	0.15	890
NTC-L157K6.3TRDF	150		0.08	9.5	0.10	1,100
NTC-L227K6.3TRDF	220		0.10	14	0.10	1,100
NTC-L337K6.3TRDF	330		0.10	20.8	0.10	1,100
NTC-L477K6.3TRDF	470		0.18	32.9	0.20	770
NTC-L156K10TRBF	15	10	0.06	1.5	0.60	400
NTC-L226K10TRCF	22		0.06	2.2	0.50	440
NTC-L336K10TRCF	33		0.06	3.3	0.35	530
NTC-L476K10TRDF	47		0.06	4.7	0.25	690
NTC-L686K10TRDF	68		0.06	6.8	0.20	770
NTC-L107K10TRDF	100		0.08	10	0.10	1,100
NTC-L157K10TRDF	150		0.08	15	0.10	1,100
NTC-L227K10TRDF	220		0.10	22	0.10	1,100
NTC-L337K10TRDF	330		0.18	33	0.15	890
NTC-L106K16TRBF	10	16	0.06	1.6	0.60	400
NTC-L226K16TRCF	22		0.06	3.5	0.40	500
NTC-L336K16TRDF	33		0.06	5.3	0.25	690
NTC-L476K16TRDF	47		0.06	7.5	0.20	770
NTC-L686K16TRDF	68		0.06	11	0.15	890
NTC-L107K16TRDF	100		0.08	16	0.10	1,100
NTC-L106K20TRCF	10	20	0.06	2.0	0.60	400
NTC-L156K20TRCF	15		0.06	3.0	0.50	440
NTC-L226K20TRDF	22		0.06	4.4	0.35	580
NTC-L336K20TRDF	33		0.06	6.6	0.30	630
NTC-L476K20TRDF	47		0.06	9.4	0.20	830
NTC-L156K25TRDF	15	25	0.06	3.8	0.30	630
NTC-L226K25TRDF	22		0.06	5.5	0.30	630
NTC-L336K25TRDF	33		0.06	8.3	0.30	630
NTC-L106K35TRDF	10	35	0.06	3.5	0.30	630
NTC-L156K35TRDF	15		0.06	5.3	0.30	630
NTC-L226K35TRDF	22		0.06	7.7	0.50	490

CASE DIMENSIONS (mm)

Case Code	L ±0.2	W ±0.2	HL ±0.2	l_1 ±0.2	l_2 ±0.2	a ±0.2	b ±0.2	c ±0.2
B	3.4	2.6	1.9	1.4	0.8	2.0	0.7	2.2
C	5.8	3.2	2.5	2.4	1.3	2.2	0.7	2.4
D	7.3	4.3±0.3	2.8	3.8	1.3	2.4	1.2	3.3



B and C
Case Size

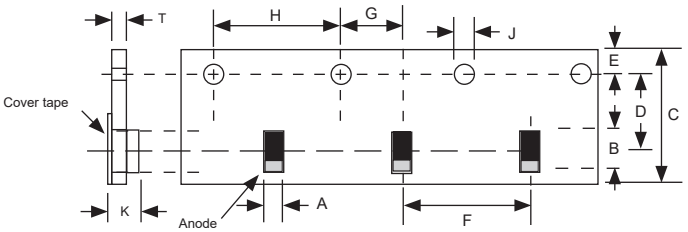


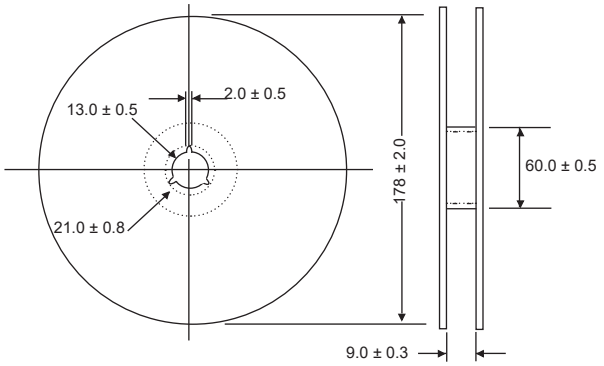
D Case Size

Terminations:
100% Sn (Lead-Free)
Standard

TAPING SPECIFICATIONS (mm)

Case Code	A ±0.1	B ±0.1	C ±03	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

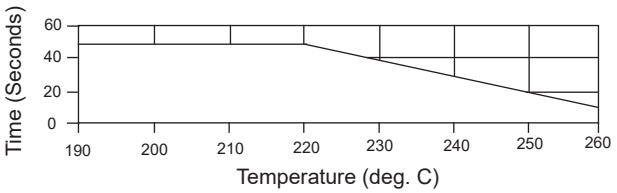




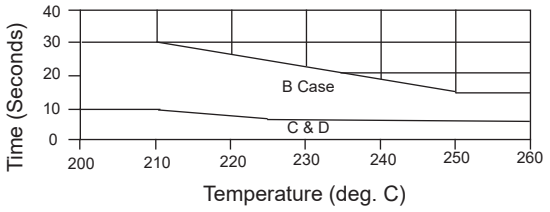
RECOMMENDED SOLDERING PROFILES

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

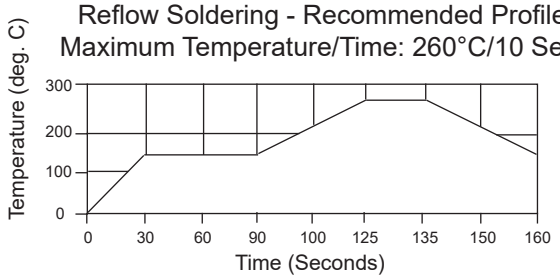
Reflow Soldering - Permitted Temperature/Time Range



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.