

Surface Mount Solid Polymer Aluminum Electrolytic Capacitors

NPC Series

STANDARD PRODUCTS AND SPECIFICATIONS

NIC Part Number (+260°C Reflow)	WV	Cap.	Max. LC	Tan δ	Max. Ripple Current (mArms) @ 100KHz			Max. ESR +20°C @ 100KHz (Ω)	Height H ± 0.1
	(Vdc)	(μF)	(μA)		≤45°C	45°C < T ≤85°C	85°C < T ≤105°C		
NPC101M2.5D6ZATRF	2.5	100	10.0	0.05	6,300	4,400	3,000	0.009	1.9
NPC121M2.5D1UATRF		120	12.0	0.05	8,100	5,600	3,000	0.005	1.4
NPC121M2.5D6ZATRF		120	12.0	0.05	6,300	4,400	3,000	0.009	1.9
NPC151M2.5D5ZATRF		150	15.0	0.10	6,300	4,400	2,700	0.009	1.1
NPC151M2.5D6ZATRF		150	15.0	0.05	6,300	4,400	3,000	0.009	1.9
NPC181M2.5D5ZATRF		180	18.0	0.10	6,300	4,400	2,700	0.009	1.1
NPC181M2.5D6ZATRF		180	18.0	0.05	6,300	4,400	3,000	0.009	1.9
NPC181M2.5D7XATRF		180	18.0	0.10	6,000	4,200	3,500	0.010	2.7
NPC221M2.5D6YATRF*		220	22.0	0.05	7,500	5,200	3,500	0.006	1.9****
NPC221M2.5D6ZATRF*		220	22.0	0.05	6,300	4,400	3,000	0.009	1.9****
NPC221M2.5D8YATRF		220	22.0	0.10	7,000	4,900	3,500	0.007	2.9
NPC271M2.5D6ZATRF*		270	27.0	0.05	6,300	4,400	3,000	0.009	1.9****
NPC271M2.5D6YATRF*		270	27.0	0.05	7,500	5,200	3,500	0.006	1.9****
NPC271M2.5D8YATRF		270	27.0	0.10	7,000	4,900	3,500	0.007	2.9
NPC331M2.5D6YATRF*		330	33.0	0.05	7,500	5,200	3,500	0.006	1.9****
NPC331M2.5D8YATRF		330	33.0	0.10	7,000	4,900	3,500	0.007	2.9
NPC391M2.5D6YATRF*		390	39.0	0.05	7,500	5,200	3,500	0.006	1.9****
NPC391M2.5D8ZATRF		390	39.0	0.10	6,300	4,400	3,500	0.009	2.9
NPC471M2.5D8YATRF		470	47.0	0.10	7,000	4,900	3,500	0.007	2.9
NPC471M2.5D6UATRF***		470	47.0	0.10	8,500	5,900	3,500	0.0045	1.9****
NPC680M4D5XATRF	4.0	68	10.9	0.10	5,100	3,500	2,100	0.015	1.1
NPC680M4D1ZATRF		68	10.9	0.05	6,300	4,400	3,000	0.009	1.4
NPC680M4D6XATRF		68	10.9	0.05	5,400	3,700	3,000	0.013	1.9
NPC680M4D6ZATRF		68	10.9	0.05	6,300	4,400	3,000	0.009	1.9
NPC820M4D6XATRF		82	13.1	0.05	6,000	4,200	3,000	0.010	1.9
NPC101M4D6XATRF		100	16.0	0.05	6,000	4,200	3,000	0.010	1.9
NPC121M4D6XATRF		120	19.2	0.05	6,000	4,200	3,000	0.010	1.9
NPC151M4D6XATRF		150	24.0	0.05	6,000	4,200	3,000	0.010	1.9
NPC151M4D7XATRF		150	24.0	0.10	6,000	4,200	3,500	0.010	2.7
NPC181M4D6ZATRF*		180	28.8	0.05	6,300	4,400	3,000	0.009	1.9****
NPC181M4D8ZATRF		180	28.8	0.10	6,300	4,400	3,500	0.009	2.9
NPC221M4D6ZATRF*		220	35.2	0.05	6,300	4,400	3,000	0.009	1.9****
NPC221M4D8ZATRF		220	35.2	0.10	6,300	4,400	3,500	0.009	2.9
NPC271M4D8ZATRF		270	43.2	0.10	6,300	4,400	3,500	0.009	2.9
NPC331M4D8ZATRF		330	52.8	0.10	6,300	4,400	3,500	0.009	2.9
NPC471M4D8ZATRF		470	75.2	0.10	6,300	4,400	3,500	0.009	2.9
NPC330M6.3D6XATRF	6.3	33	8.3	0.05	5,100	3,500	3,000	0.015	1.9
NPC470M6.3D5XATRF		47	11.8	0.10	5,100	3,500	2,100	0.015	1.1
NPC470M6.3D1XATRF		47	11.8	0.05	6,000	4,200	3,000	0.010	1.4
NPC470M6.3D6XATRF		47	11.8	0.05	5,400	3,700	3,000	0.013	1.9
NPC470M6.3D6ZATRF		47	11.8	0.05	6,300	4,400	3,000	0.009	1.9
NPC560M6.3D6XATRF		56	14.1	0.05	6,000	4,400	3,000	0.010	1.9
NPC680M6.3D6XATRF		68	17.1	0.05	6,000	4,400	3,000	0.010	1.9
NPC820M6.3D6XATRF		82	20.7	0.05	6,000	4,200	3,000	0.010	1.9
NPC101M6.3D6XATRF		100	25.2	0.05	6,000	4,200	3,000	0.010	1.9
NPC101M6.3D7XATRF		100	25.2	0.10	6,000	4,200	3,500	0.010	2.7
NPC121M6.3D6ZATRF*		120	30.2	0.05	6,300	4,400	3,000	0.009	1.9****
NPC121M6.3D8ZATRF		120	30.2	0.10	6,300	4,400	3,500	0.009	2.9
NPC151M6.3D6ZATRF*		150	37.8	0.05	6,300	4,400	3,000	0.009	1.9****
NPC151M6.3D8ZATRF		150	37.8	0.10	6,300	4,400	3,500	0.009	2.9
NPC181M6.3D8ZATRF		180	45.4	0.10	6,300	4,400	3,500	0.009	2.9
NPC221M6.3D8ZATRF		220	55.4	0.10	6,300	4,400	3,500	0.009	2.9

*/***See note regarding capacitance change in characteristics table (Endurance & Moisture Resistance).

****height dimension tolerance ±0.2mm



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NPC Series

STANDARD PRODUCTS AND SPECIFICATIONS

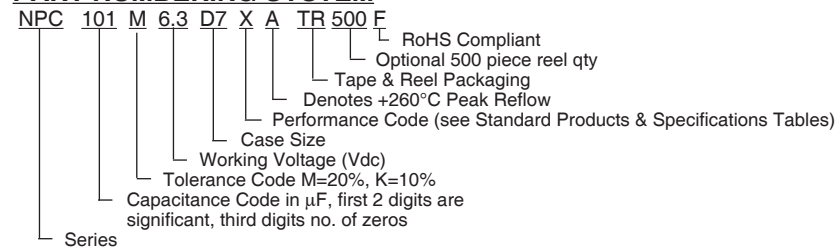
NIC Part Number (+260°C Reflow)	WV	Cap.	Max. LC	Tan δ	Max. Ripple Current (mArms) @ 100KHz			Max. ESR +20°C @ 100KHz (Ω)	Height H $\pm$ 0.1
	(Vdc)	(μ F)	(μ A)		$\leq 45^\circ\text{C}$	$45^\circ\text{C} < T \leq 85^\circ\text{C}$	$85^\circ\text{C} < T \leq 105^\circ\text{C}$		
NPC220M8D6ATRF	8	22	7.0	0.05	4,700	3,200	2,500	0.018	1.9
NPC330M8D6ATRF		33	10.6	0.05	4,700	3,200	2,500	0.018	1.9
NPC330M8D7XATRF		33	10.6	0.10	5,400	3,700	3,000	0.013	2.7
NPC470M8D6ATRF		47	15.1	0.05	4,700	3,200	2,500	0.018	1.9
NPC680M8D7ATRF		68	21.8	0.10	4,700	3,200	2,500	0.018	2.7
NPC101M8D7ATRF		100	32.0	0.10	4,700	3,200	2,500	0.018	2.7
NPC101M8D7XATRSF		100	32.0	0.10	5,600	3,900	3,300	0.012	2.7
NPC220M10D6ATRF	10	22	8.8	0.10	3,700	2,500	1,600	0.030	1.9
NPC470M10D6ATRF*		47	18.8	0.10	4,000	2,800	1,800	0.025	1.9****

NPC101M8D7XATRSF 1,000 hour load life

*/***See note regarding capacitance change in characteristics table (Endurance & Moisture Resistance).

****height dimension tolerance $\pm 0.2\text{mm}$

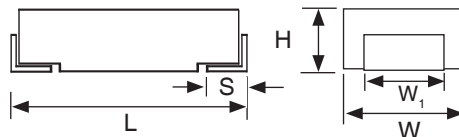
PART NUMBERING SYSTEM



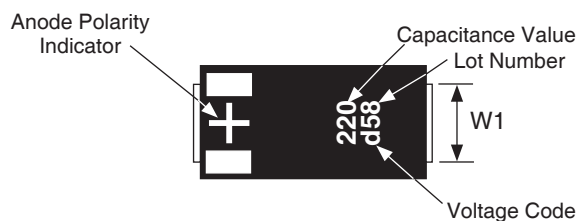
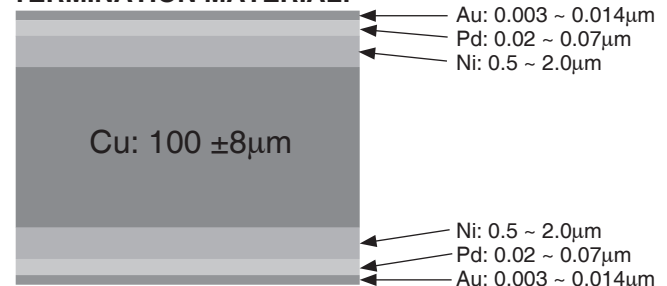
DIMENSIONS (mm)

Case Code	L ± 0.2	W ± 0.2	H ± 0.1	W1 ± 0.1	S ± 0.2
D1	7.3	4.3	1.4	2.4	1.2
D5			1.1		
D6			1.9*		
D7			2.7		
D8			2.9		

*D6 - See Standard Products & Specifications Tables for height tolerance.



TERMINATION MATERIAL:



VOLTAGE CODES

Voltage	Code
2.0VDC	d
2.5VDC	e
4.0VDC	g
6.3VDC	j
8.0VDC	k
10VDC	A



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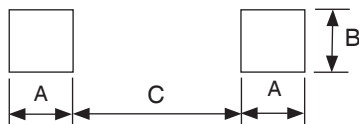
SPECIFICATIONS ARE SUBJECT TO CHANGE

Surface Mount Solid Polymer Aluminum Electrolytic Capacitors

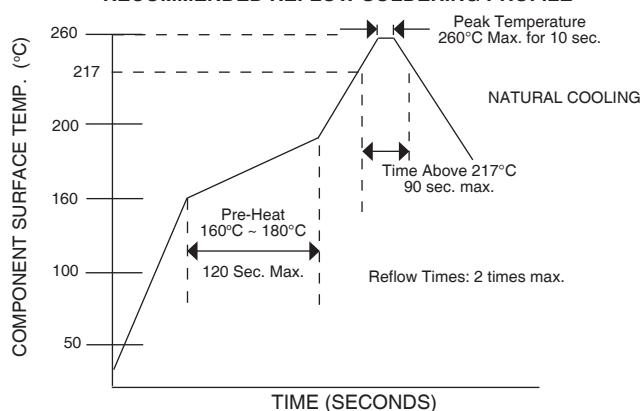
NPC Series

RECOMMENDED LAND PATTERNS (mm)

Case Code	a	b	c
D1, D5, D6, D7, D8	2.4	2.9	3.7



RECOMMENDED REFLOW SOLDERING PROFILE



APPLICATION NOTES:

1. NPC Series cannot be used in coupling, time-constant or other circuits that are greatly affected by leakage current.
2. NPC parts are polarized so be sure to verify component orientation when mounting components.
3. Do not apply over voltage exceeding the rated voltage.
4. Do not apply ripple current over the specified maximum ripple current rating.

NOTES ON REFLOW SOLDERING:

1. SAC alloy (+217°C) reflow soldering compatible
2. Soldering heat limits apply to the top surface of component
3. If you have concerns about your reflow soldering profile review them with NIC to insure compatible [tpmg@niccomp.com]

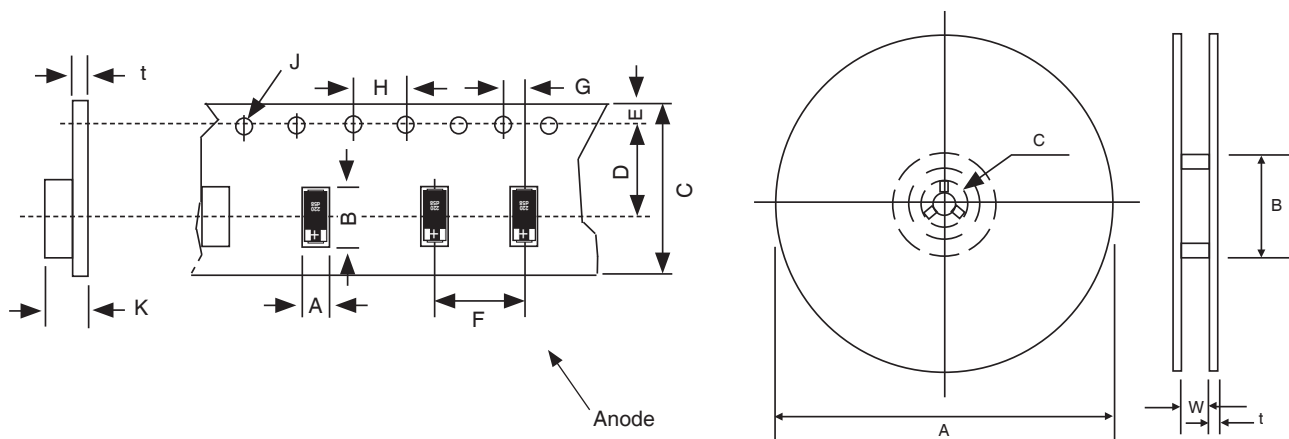
REEL TAPE DIMENSIONS (mm)

Case Code	A ±2.0	B ±1.0	C ±0.2	W ±1.0	t ±0.5	Reel Quantity
D1, D5, D6	330	80	13	13.5	2.0	3,500
D7, D8						2,000
						500*

*See part number system for details on designating reel quantity

TAPE DIMENSIONS (mm)

Case Code	A ±0.1	B ±0.2	C ±0.3	D ±0.05	E ±0.1	F ±0.1	G ±0.05	H ±0.1	J -0/+0.1	K ±0.1	t ±0.05
D1										1.6	
D5										1.5	
D6	4.50	7.70	12.0	5.5	1.75	8.0	2.0	4.0	1.5	2.3	0.3
D7										2.9	
D8										3.1	



PRECAUTIONS

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



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