Large Can Aluminum Electrolytic Capacitors

NRLRT Series

FEATURES

- HIGH TEMPERATURE (+125°C) AND 2,000 HOUR LOAD LIFE
- HIGH RIPPLE CURRENT & ENDURANCE IN SMALLER SIZE
- LOW PROFILE & HIGH DENSITY DESIGN OPTIONS
- DESIGNED AS INPUT FILTER OF SWITCHED MODE POWER SUPPLY

RoHS Compliant
includes all homogeneous materials

*See Part Number System for Details

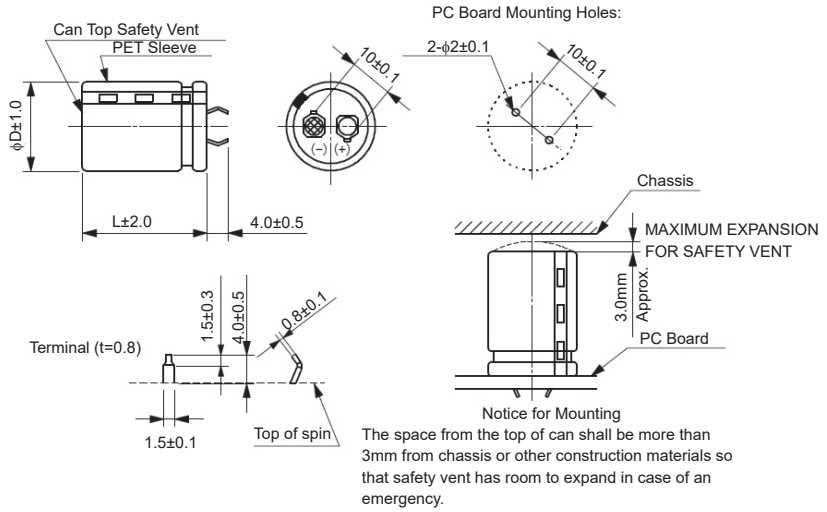
SPECIFICATIONS

Operating Temperature Range		-25 ~ +125°C						
Rated Voltage Range		400 ~ 450Vdc						
Rated Capacitance Range		68 ~ 820µF						
Capacitance Tolerance		±20% (M)						
Max. Leakage Current (µA) After 5 minutes (20°C)		$5 \times \sqrt{C(\mu F)V}$						
Max. Tan δ at 120Hz/20°C	W.V. (Vdc)	400		420		450		
	Tan δ max.	0.25		0.25		0.25		
Surge Voltage	W.V. (Vdc)	400		420		450		
	S.V. (Vdc)	450		470		500		
Ripple Current Frequency Correction Factors	Frequency (Hz)	50 (60)	120 (100)	300	500	1K	≥10K	
	Multiplier	0.80	1.00	1.15	1.20	1.25	1.40	
Low Temperature Stability Impedance Ratio @ 120Hz	W.V. (Vdc)	400		420		450		
	Z-25°C/+20°C	10						
Load Life Test 2,000 hours at +125°C	Capacitance Change	Within ±20% of initial measured value						
	Tan δ	Less than 200% of specified maximum value						
	Leakage Current	Less than specified maximum value						
Shelf Life Test 1,000 hours at +125°C (no load)	Capacitance Change	Within ±20% of initial measured value						
	Tan δ	Less than 200% of specified maximum value						
	Leakage Current	Less than specified maximum value						
Resistance to Soldering Heat	The terminal shall be immersed into solder bath at 260±3°C for 10±1 seconds up to 2.0-2.5mm from the body of capacitor. After the test, the capacitor shall meet the following requirements.							
	Capacitance Change	Within ±10% of initial measured value						
	Tan δ	Less than specified maximum value						
	Leakage Current	Less than specified maximum value						

PART NUMBER SYSTEM

NRLRT 681 M 400V 35X55 S F

- F — RoHS compliant
- S — Lead Length (S=4mm)
- 35X55 — Case Size (mm)
- 400V — Voltage Rating
- M — Tolerance Code
- 681 — Capacitance Code
- NRLRT — Series



Notice for Mounting
The space from the top of can shall be more than 3mm from chassis or other construction materials so that safety vent has room to expand in case of an emergency.

PRECAUTIONS

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

STANDARD PRODUCT LIST, CASE SIZE AND SPECIFICATIONS

Part Number	Cap. (µF)	W.V. (Vdc)	Case Size DxL (mm)	ESR (Ω @ 20°C/120Hz)	Max. Ripple Current (Arms @ 125°C/120Hz)
NRLRT820M400V22X25SF	82	400	22X25	5.06	0.79
NRLRT101M400V22X30SF	100		22X30	4.15	0.91
NRLRT121M400V22X30SF	120		22X30	3.46	0.98
NRLRT121M400V25X25SF	120		25X25	3.46	0.96
NRLRT151M400V22X35SF	150		22X35	2.77	1.14
NRLRT151M400V25X30SF	150		25X30	2.77	1.12
NRLRT181M400V22X40SF	180		22X40	2.31	1.28
NRLRT181M400V25X35SF	180		25X35	2.31	1.28
NRLRT221M400V22X50SF	220		22X50	1.89	1.50
NRLRT221M400V25X40SF	220		25X40	1.89	1.45
NRLRT221M400V30X30SF	220		30X30	1.89	1.35
NRLRT271M400V22X55SF	270		22X55	1.54	1.69
NRLRT271M400V25X45SF	270		25X45	1.54	1.64
NRLRT271M400V30X35SF	270		30X35	1.54	1.55
NRLRT331M400V25X55SF	330		25X55	1.26	1.9
NRLRT331M400V30X40SF	330		30X40	1.26	1.75
NRLRT391M400V25X60SF	390		25X60	1.07	2.09
NRLRT391M400V30X45SF	390		30X45	1.07	1.94
NRLRT391M400V35X35SF	390		35X35	1.07	1.75
NRLRT471M400V30X50SF	470		30X50	0.89	2.14
NRLRT471M400V35X40SF	470		35X40	0.89	1.96
NRLRT561M400V30X60SF	560		30X60	0.75	2.45
NRLRT561M400V35X45SF	560		35X45	0.75	2.16
NRLRT681M400V35X55SF	680		35X55	0.61	2.52
NRLRT821M400V35X60SF	820		35X60	0.51	2.72
NRLRT820M420V22X25SF	82	420	22X25	5.06	0.79
NRLRT101M420V22X30SF	100		22X30	4.15	0.91
NRLRT121M420V22X30SF	120		22X30	3.46	0.99
NRLRT121M420V25X25SF	120		25X25	3.46	0.96
NRLRT151M420V22X35SF	150		22X35	2.77	1.14
NRLRT151M420V25X30SF	150		25X30	2.77	1.12
NRLRT181M420V22X45SF	180		22X45	2.31	1.34
NRLRT181M420V25X35SF	180		25X35	2.31	1.28
NRLRT221M420V22X50SF	220		22X50	1.89	1.51
NRLRT221M420V25X40SF	220		25X40	1.89	1.45
NRLRT221M420V30X30SF	220		30X30	1.89	1.35
NRLRT271M420V22X60SF	270		22X60	1.54	1.74
NRLRT271M420V25X45SF	270		25X45	1.54	1.64
NRLRT271M420V30X35SF	270		30X35	1.54	1.54
NRLRT331M420V25X55SF	330		25X55	1.26	1.90
NRLRT331M420V30X40SF	330		30X40	1.26	1.74
NRLRT391M420V25X60SF	390		25X60	1.07	2.09
NRLRT391M420V30X45SF	390		30X45	1.07	1.93
NRLRT391M420V35X35SF	390		35X35	1.07	1.74
NRLRT471M420V30X55SF	470		30X55	0.89	2.24
NRLRT471M420V35X40SF	470		35X40	0.89	1.95
NRLRT561M420V30X60SF	560		30X60	0.75	2.44
NRLRT561M420V35X45SF	560		35X45	0.75	2.15
NRLRT681M420V35X55SF	680		35X55	0.61	2.51
NRLRT680M450V22X25SF	68	450	22X25	6.10	0.71
NRLRT820M450V22X30SF	82		22X30	5.06	0.82
NRLRT820M450V25X25SF	82		25X25	5.06	0.81
NRLRT101M450V22X35SF	100		22X35	4.15	0.93
NRLRT101M450V25X30SF	100		25X30	4.15	0.94
NRLRT121M450V22X40SF	120		22X40	3.46	1.06
NRLRT121M450V25X30SF	120		25X30	3.46	1.02
NRLRT151M450V22X45SF	150		22X45	2.77	1.21
NRLRT151M450V25X35SF	150		25X35	2.77	1.18

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STANDARD PRODUCT LIST, CASE SIZE AND SPECIFICATIONS

Part Number	Cap. (µF)	W.V. (Vdc)	Case Size DxL (mm)	ESR (Ω @ 20°C/120Hz)	Max. Ripple Current (Arms @ 125°C/120Hz)
NRLRT181M450V22X50SF	180	450	22X50	2.31	1.36
NRLRT181M450V25X40SF	180		25X40	2.31	1.33
NRLRT181M450V30X30SF	180		30X30	2.31	1.38
NRLRT221M450V22X60SF	220		22X60	1.89	1.56
NRLRT221M450V25X50SF	220		25X50	1.89	1.55
NRLRT221M450V30X35SF	220		30X35	1.89	1.47
NRLRT271M450V25X55SF	270		25X55	1.54	1.74
NRLRT271M450V30X40SF	270		30X40	1.54	1.66
NRLRT271M450V35X35SF	270		35X35	1.54	1.66
NRLRT331M450V30X50SF	330		30X50	1.26	1.94
NRLRT331M450V35X40SF	330		35X40	1.26	1.87
NRLRT391M450V30X55SF	390		30X55	1.07	2.14
NRLRT391M450V35X45SF	390		35X45	1.07	2.08
NRLRT471M450V35X50SF	470		35X50	0.89	2.30
NRLRT561M450V35X55SF	560		35X55	0.75	2.53