

NATQ Series

Surface Mount Aluminum Electrolytic Capacitors



- CYLINDRICAL V-CHIP CONSTRUCTION FOR SURFACE MOUNTING
 - EXTENDED LOAD LIFE AT HIGH TEMPERATURE (3K ~ 4K HOURS @ +125°C)
 - HIGH RIPPLE CURRENT RATINGS
 - LARGE CAN SIZE 16X17 & 18X22
 - MEETS THE REQUIREMENTS OF AEC-Q200*
- *Contact NIC for supporting test data



CHARACTERISTICS

Rated Voltage Range	25 ~ 35Vdc		
Rated Capacitance Range	1,300 ~ 3,300μF		
Operating Temp. Range	-40°C ~ +125°C		
Capacitance Tolerance	±20% (M)		
Max. Leakage Current After 2 Minutes @ 20°C	25V ~ 35V	0.01CV max.	
Working and Surge Voltage Ratings	W.V. (Vdc)	25	35
	S.V. (Vdc)	32	44
Tan δ @ 120Hz/+20°C		0.18	0.16
		When capacitance exceeds 1,000μF add 0.02 for every 1,000μF	
Impedance Ratio @ 120Hz	Z -25°C/Z +20°C	2	2
	Z -40°C/Z +20°C	4	3
Load Life Test @ +125°C and Rated Voltage	Case Size & Hours	φ16mm 3,000 hours, φ18mm 4,000 hours	
	Capacitance Change	Within ±35% of initial measured value	
	Tan δ and ESR	Less than 300% of specified max. value	
	Leakage Current	Less than specified max. value	

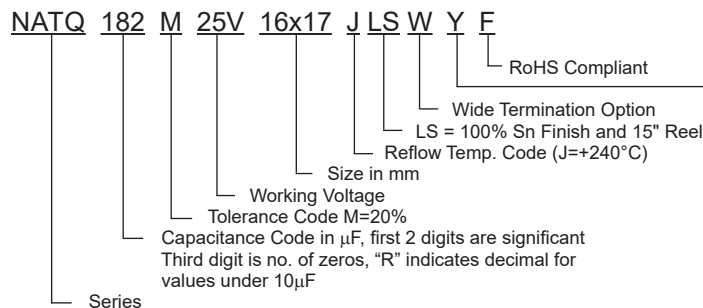
STANDARD PRODUCTS AND CASE SIZES Dφ x L (mm)

PART NUMBER	Cap. (μF)	Working Voltage	Case Size (D X L) mm	Max. ESR (mΩ) AT 100KHz/+20°C	Tan δ	Max. Ripple Current (mA rms) @ 100KHz/+105°C	Load Life Hours @ +105°C
NATQ182M25V16X17JLSYF	1800	25	16X17	47	0.18	2400	3000
NATQ332M25V18X22JLSYF	3300		18X22	32	0.22	3250	4000
NATQ132M35V16X17JLSYF	1300	35	16X17	47	0.16	2400	3000
NATQ242M35V18X22JLSYF	2400		18X22	32	0.18	3250	4000

RIPPLE CURRENT FREQUENCY CORRECTION FACTORS

100Hz ≤ F < 1KHz	1KHz ≤ F < 10KHz	10KHz ≤ F < 100KHz	100KHz ≤ F < 500KHz
0.75	0.90	0.95	1.00

PART NUMBER SYSTEM



Suitable for automotive equipment, sourced to special production and inspection at IATF-16949 certified production site

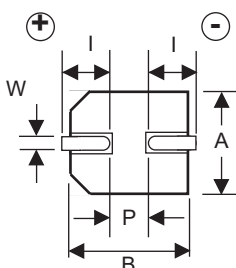
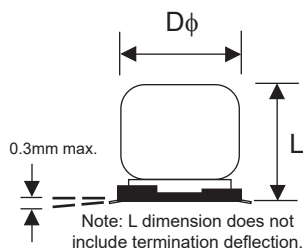
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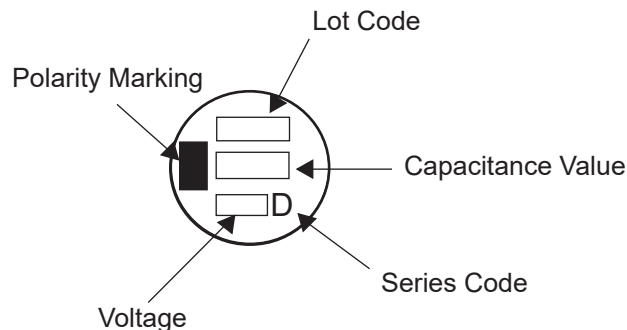


DIMENSIONS (mm)

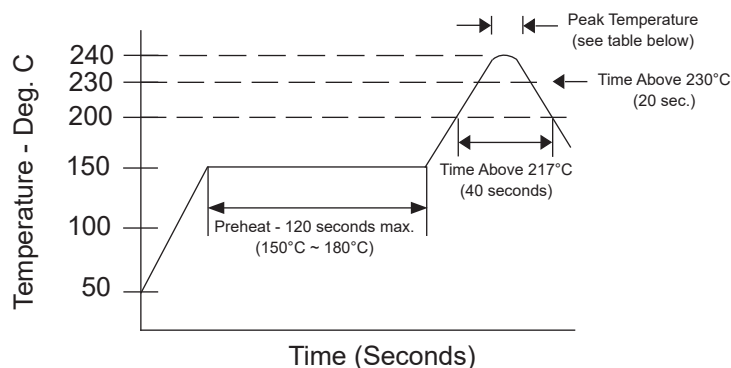
Case Size	Dφ ±0.5	L max.	A, B ±0.2	W	(l) ref.	(P) ref.
16X17	16.0	17.0	16.3	1.2 ~ 1.7	5.1	7.0
18X22	18.0	22.0	19.0	1.2 ~ 1.7	2.5	2.2



Part Marking



RECOMMENDED REFLOW SOLDERING PROFILE*



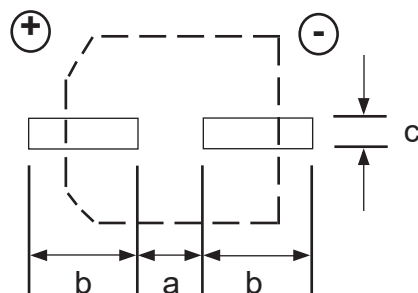
PEAK TEMPERATURE AND DURATION

Diameter	Time above 200°C	Time above 217°C	Time above 230°C	Peak Temperature	Number of reflow passes allowed
φ16 & φ18mm	50 sec. max.	40 sec. max.	20 sec. max.	240°C	2*

*Two reflow passes are permissible with a cool down to room temperature required between the first and second pass.

STANDARD TERMINATION LAND PATTERN DIM. (mm)

Case Dia.	A	B	C
φ16	6.6	6.5	5.0
φ18	6.6	7.7	5.0



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

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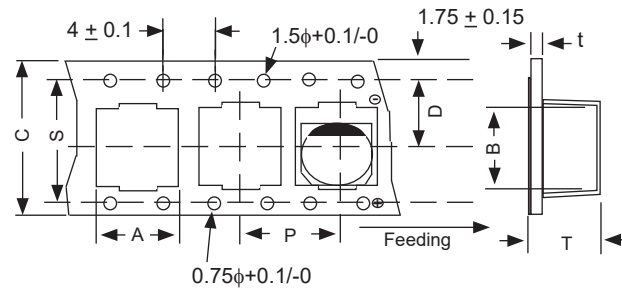


TAPING SPECIFICATIONS (mm)

- Both Leader and Trailer tape: Minimum 40mm (1.57") empty carrier tape pockets.
- Leader tape: Approximately 20cm of cover tape at leader.
- Connection: Maximum 3 connections (slices) per reel.

CARRIER DIMENSIONS (mm)

Case Size	A ±0.2	B ±0.2	C ±0.3	D ±0.1	P ±0.1	T ±0.2	t max.	S ±0.1
16X17	17.5	17.5	44.0	20.2	28.0	17.3	0.6	40.4
18X22	19.5	19.5	44.0	20.2	32.0	22.5	0.6	40.4



V-Chip 15" (380mm) Reels (LB suffix)

Dimensions (mm)

Case Size	Tape Width	A	B	C	D	E
16X17, 18X22	46.0	φ380 ±2.0	φ50 min.	φ13 ±0.5	φ21 min.	2.0 ±0.5

Case Size	Qty per Reel
	15" (380mm)
16X17	200
18X22	125

