125℃ LONG LIFE SURFACE MOUNT TYPE

ALUMINUM ELECTROLYTIC CAPACITOR, POLARIZED

FEATURES

G RoHS COMPLIANT

- EXTENDED TEMPERATURE +125℃
- NATQ SERIES IS HIGH TEMPERATURE, LONG LIFE PRODUCTS (3000 ～ 4000 HOURS @125℃)
- CYLINDRIAL LEADLESS TYPE FOR SURFACE MOUNTING
- DESIGNED FOR AUTOMATIC MOUNTING AND REFLOW SOLDERING
- SOLVENT PROOF (WITHIN 2 MINUTES)
- MEETS THE REQUIREMENTS OF AEC-Q200

CHARACTERISTICS

Rated Voltage Range		25 ～ 35 Vdc	
Capacitance Range		1300 ～ 3300 μF	
Operating Temperature Range		-40 ～ +125 ℃	
Capacitance Tolerance		±20%(M)	
Max. Leakage Current After 2 minutes @20℃		0.01CV	
Max. Tan δ at 120Hz & 20℃	R.V. (Vdc)	25	35
	S.V. (Vdc)	32	44
	Tan δ @120Hz/20℃	0.18	0.16
	When rated capacitance exceeds 1000 μF, add 0.02 to the value above for each 1000 μF increase.		
Low Temperature Stability Impedance Ratio @ 120Hz	R.V.(Vdc)	25	35
	Z-25℃/Z+20℃	2	2
	Z-40℃/Z+20℃	4	3
Load Life Test 125℃ With Rated Voltage	Test	Φ16:3000hrs, Φ18:4000hrs	
	Capacitance Change	Within ±35% of initial measured value	
	Tan δ	Less than 300% of specified value	
	Leakage Current	Less than specified value	

STANDARD PRODUCT TABLE (ΦD X L mm)

R.V.(Vdc) / Cap.(μF)	25	35
1300		16X17
1800	16X17	
2400		18X22
3300	18X22	

MAXIMUM ESR (Ω at 100kHz & 20℃)

R.V.(Vdc) / Cap.(μF)	25	35
1300		0.047
1800	0.047	
2400		0.032
3300	0.032	

MAXIMUM PERMISSIBLE RIPPLE CURRENT (mA r.m.s. at 100kHz & 125℃)

R.V.(Vdc) / Cap.(μF)	25	35
1300		2400
1800	2400	
2400		3250
3300	3250	

STANDARD PRODUCTS AND SPECIFICATIONS

NIC Part numeber	Size	R.V. (μF)	Cap. (μF)	Tan δ	MAX.ESR (Ω) +20℃,100kHz	Max. Ripple current (mA) 125℃,100kHz	Life (hours)
NATQ182M25V16X17JLSYF	16X17	25V	1800	0.18	0.047	2400	3000
NATQ332M25V18X22JLSYF	18X22		3300	0.22	0.032	3250	4000
NATQ132M35V16X17JLSYF	16X17	35V	1300	0.16	0.047	2400	3000
NATQ242M35V18X22JLSYF	18X22		2400	0.18	0.032	3250	4000

PART NUMBER SYSTEM

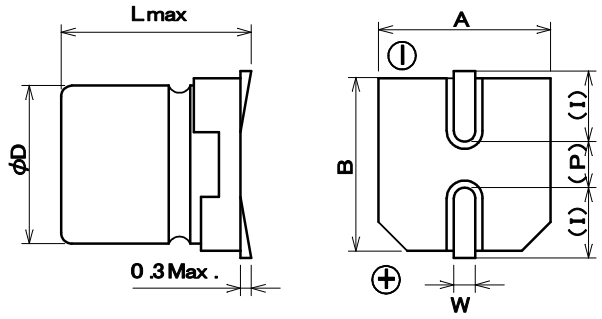
NATQ 182 M 25V 16X17 J LS Y F -> F : RoHS Compliant

- NATQ — Series
- 182 — Capacitance (μF), 3 digits system (R shows decimal point)
- M — Capacitance Tolerance, M:±20%
- 25V — Rated Voltage (Vdc)
- 16X17 — Case Size (mm)
- J — Reflow peak temp. J : 240℃
- LS — Sn 100% Finish & 15" reel
- Y — Y Control: Suitable for automotive equipment, sourced to special production and inspection at IATF-16949 certified production site
- F — F : RoHS Compliant

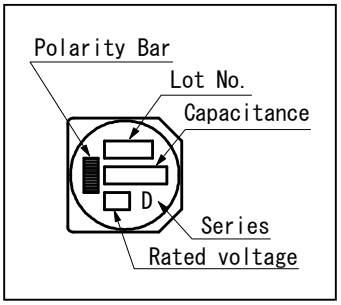
MULTIPLIER FOR RIPPLE CURRENT/Frequency coefficient

Frequency : F(Hz)			
100≦F＜1k	1k≦F＜10k	10k≦F＜100k	100k≦F
0.75	0.90	0.95	1.00

DIMENSIONS (mm)

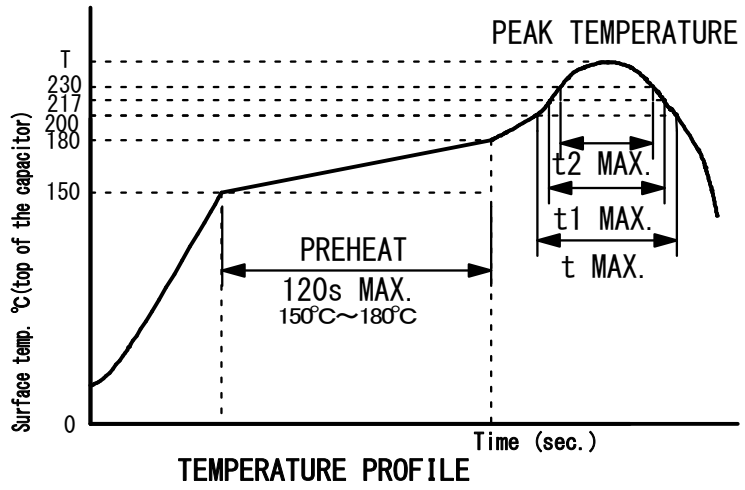


MARKING



Case Size	φD±0.5	L max	A±0.2	B±0.2	(I)	W	(P)
16X17	16	17.0	16.3	16.3	5.1	1.7～2.1	7.0
18X22	18	22.0	19.0	19.0	6.5	1.7～2.1	7.0

PERMISSIBLE REFLOW TEMPERATURE PROFILE



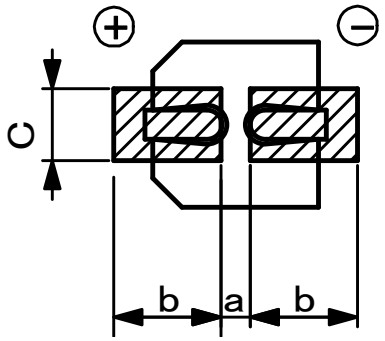
TEMPERATURE PROFILE

Size	Time for more than 200℃ (t)	Time for more than 217℃ (t1)	Time for more than 230℃ (t2)	Peak temperature (T)
Φ16 &Φ18	Within 50sec.	Within 40sec.	Within 20sec.	240℃ (Within 5 sec.)

Capacitor can withstand two reflow processes on the above condition.
Second reflow shall be taken after more than one hour natural cooling time
and taken after the return to normal temperatures of PCB and components.

RECOMMEND LAND PATTERN : (mm)

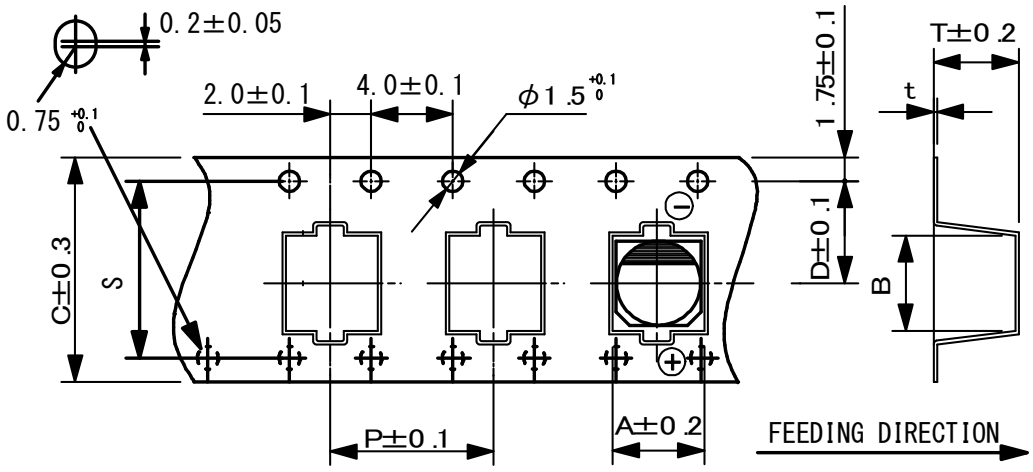
Case Size	a	b	c
16X17	6.6	6.5	5.0
18X22	6.6	7.7	5.0



TAPING SPECIFICATIONS :

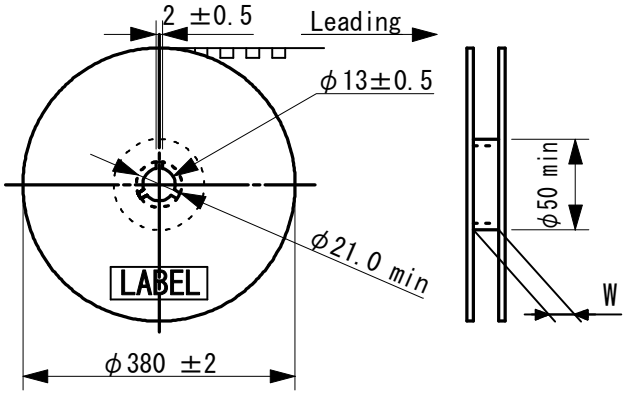
1. Leader and ending tape : Min. 10 cm empty pockets and min. 20 cm of cover tape.
2. Connection : Within 3 connections per reel.

CARRIER TAPE 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

REEL DIMENSIONS (mm) :



Case Size	W	Qty per reel (pcs) TR15 (380mm)
16X17	46	200
18X22	46	125