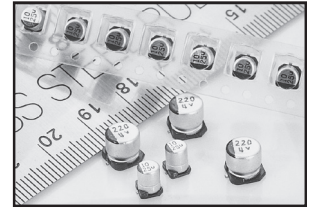


FEATURES

- **EXTENDED TEMPERATURE +125°C & LONG LIFE (4,000 HOURS)**
- **CYLINDRICAL V-CHIP CONSTRUCTION FOR SURFACE MOUNTING**
- **DESIGNED FOR AUTOMATIC MOUNTING AND REFLOW SOLDERING**
- **MEETS THE REQUIREMENTS OF AEC-Q200***

*Contact NIC for supporting test data

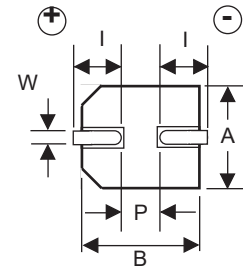
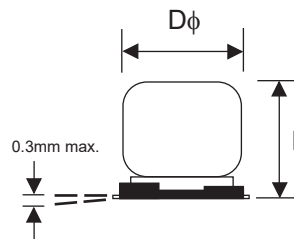


CHARACTERISTICS

Rated Voltage Range	25 ~ 35VDC		
Rated Capacitance Range	100 ~ 330μF		
Operating Temp. Range	-40 ~ +125°C		
Capacitance Tolerance	±20% (M)		
Max. Leakage Current After 2 Minutes @ 20°C	0.01CV		
Tan δ @ 120Hz/20°C	W.V. (Vdc)	25	35
	S.V. (Vdc)	32	44
	Tan δ @ 120Hz/20°C	0.16	0.14
Low Temperature Stability Impedance Ratio @ 120Hz	W.V. (Vdc)	25	35
	Z -25°C/Z +20°C	2	2
	Z -40°C/Z +20°C	3	3
Load Life Test at W.V. @ 125°C All Case Sizes: 4,000 Hours	Capacitance Change	Within ±30% of initial measured value	
	Tan δ	Less than 300% of specified max. value	
	Leakage Current	Less than specified max. value	

STANDARD PRODUCT AND CASE SIZE Dφ xL (mm)

Cap.(μF)	Code	Working Voltage (Vdc)	
		25	35
100	101	-	8X10.8
150	151	8X10.8	-
220	221	-	10X10.8
330	331	10X10.8	-



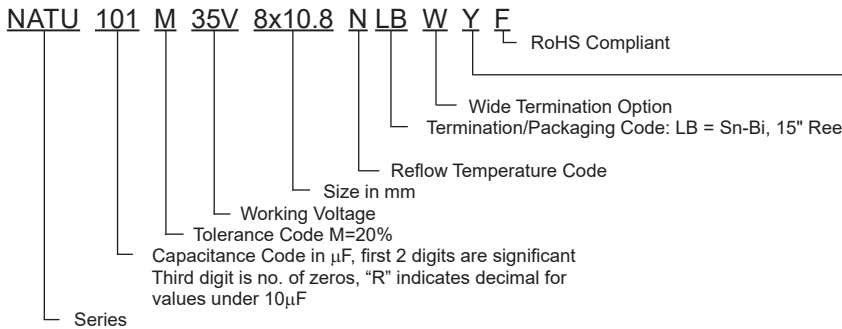
DIMENSIONS (mm)

Case Size	Dφ ±0.5	L max.	A, B ±0.2	I ±0.3	(P)	W
8 x 10.8	8.0	10.8	8.3	2.9	3.2	0.7 ~ 1.1
10 x 10.8	10.0	10.8	10.3	3.2	4.6	0.7 ~ 1.4

Reflow Code
L = +250°C
N = +260°C

Termination / Packaging Code
LB = Sn-Bi / 15" reel

PART NUMBER SYSTEM



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

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 VALUES, CASE SIZES & SPECIFICATIONS

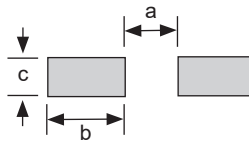
Part Number	Cap. (μF)	Working Voltage	Dissipation Factor @120Hz/20°C	Max. ESR (Ω) AT 100KHz/20°C	Max. Ripple Current (mA rms) AT 100KHz/125°C	Load Life Hours @ +125°C
NATU151M25V8X10.8NLBYF	150	25	0.16	0.30	300	4,000
NATU331M25V10X10.8LLBYF	330		0.16	0.20	500	4,000
NATU101M35V8X10.8NLBYF	100	35	0.14	0.30	300	4,000
NATU221M35V10X10.8LLBYF	220		0.14	0.20	500	4,000

RIPPLE CURRENT FREQUENCY CORRECTION FACTOR

Frequency (Hz)	100 ≤ f <1K	1K ≤ f <10K	10K ≤ f <100K	100K ≤ f
100μF ~ 330μF	0.6	0.85	0.93	1.00

LAND PATTERN DIMENSIONS (mm)

Case Size	a	b	c
8x10.8	2.8	4.1	2.1
10x10.8	4.3	4.4	2.5



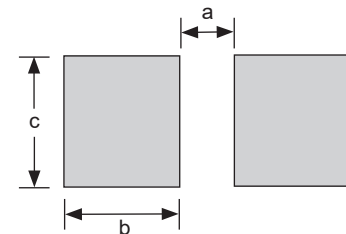
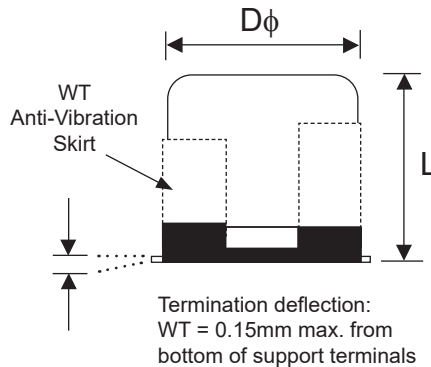
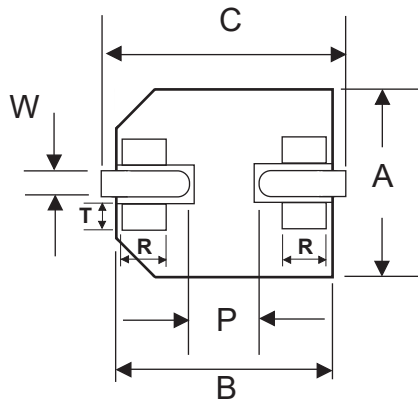
W (WIDE TERMINATIONS) COMPONENT DIM. (mm)

Case Size	Dφ ±0.5	L max.	A, B ±0.2	C ±0.2	P	W	R	T
8x10.8	8.0	11.2	8.3	9.0	(3.2)	0.7 ~ 1.0	(0.7)	(1.3)
10x10.8	10.0	11.2	10.3	11.0	(4.6)	1.0 ~ 1.4	(0.7)	(1.3)

(Reference dimensions)

W (WIDE TERMINATIONS) LAND PATTERN DIM. (mm)

Case Size	a	b	c
8x10.8	2.5	4.5	4.7
10x10.8	3.8	4.8	4.7

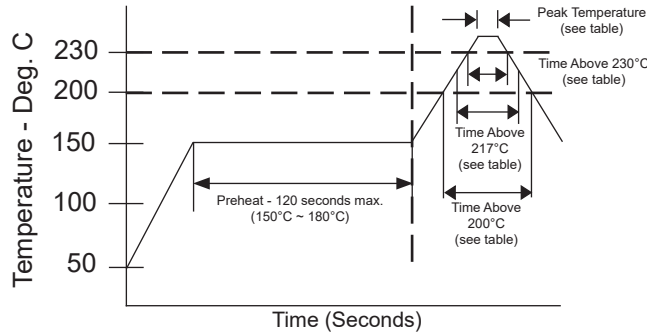


Review & Compare Reflow Soldering Heat Limits
V-chip SMT Aluminum Electrolytic Capacitors
www.niccomp.com/RSL

PEAK REFLOW TEMPERATURES AND DURATION

Diameter	Time above 200°C	Time above 217°C	Time above 230°C	Peak Temperature 5 seconds
8mm ϕ	80 sec. max.	70 sec. max.	40 sec. max.	260°C
10mm ϕ	70 sec. max.	60 sec. max.	40 sec. max.	250°C

Capacitors can withstand two reflow passes under the specified conditions. Capacitors must be allowed to cool to room temperature before the second reflow pass.



CARRIER TAPE

Case Size	A	B	C	D	P	T	t
	± 0.2	± 0.2	± 0.3	± 0.1	± 0.1	± 0.2	max.
8x10.8	8.7	8.7	24.0	11.5	16.0	11.1	0.6
10x10.8	10.7	10.7	24.0	11.5	16.0	11.2	0.6

LBF 380mm (15") REEL

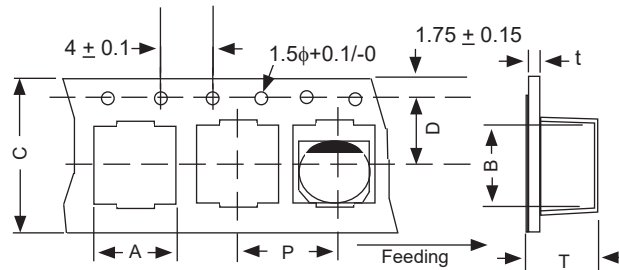
(See page 4 for plastic reel dimensions)

Case Size	W +3/-1	Qty per Reel
8x10.8, 10x10.8	26	15" (380mm) 500

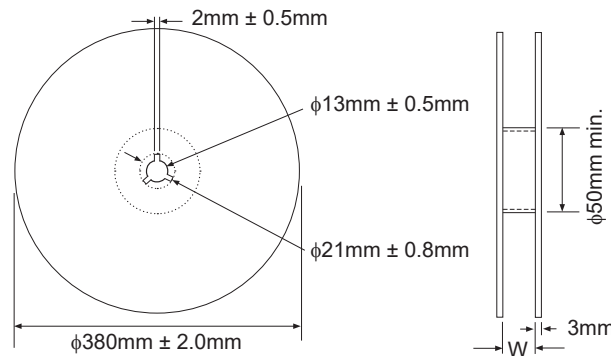
TAPING SPECIFICATIONS (mm)

- Both Leader and Trailer tape: Minimum 10 empty carrier tape pockets.
- Leader tape: Approximately 20cm of cover tape at leader.
- Connection: Maximum 3 connections (slices) per reel.

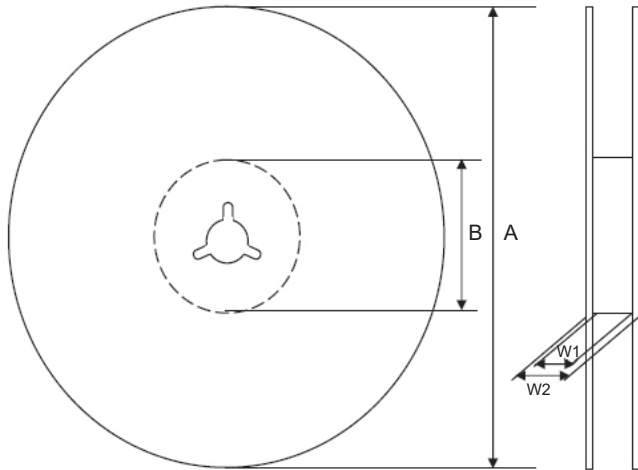
CARRIER



REEL



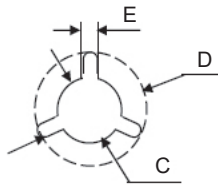
V-Chip 15" (380mm) Reels (LBF suffix)



Dimensions (mm)

Case Size	Tape Width	W1	W2
8x10.8, 10x10.8	24.0	24.5 ~ 26.0	27.5 ~ 32.0

Case Size	Tape Width	A	B	C	D	E
8x10.8, 10x10.8	24.0	$\phi 380 \pm 2$	$\phi 80 \sim 105$	$\phi 13 \pm 0.5$	$\phi 21 \pm 1.0$	2.0 ± 0.5



Case Size	Qty per Reel
	15" (380mm)
8x10.8, 10x10.8	500