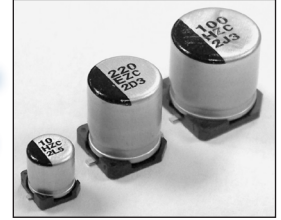




- CYLINDRICAL V-CHIP CONSTRUCTION FOR SURFACE MOUNTING
- HIGH TEMPERATURE RANGE (+145°C)
- LONG LIFE (UP TO 4,000 HOURS)
- LOW ESR, HIGH RIPPLE CURRENT & LOW LEAKAGE
- 8x10.5mm & 10x10.5mm CASE SIZES
- REFLOW SOLDERING RATED TO +260°C (ALL SIZES)
- **MEETS THE REQUIREMENTS OF AEC-Q200***

**High Temperature, Long Life
& Available with Wide
Anti-Vibration Terminations**



*Contact NIC for supporting test data

CHARACTERISTICS

Rated Voltage Range	25 ~ 63Vdc				
Rated Capacitance Range	33 ~ 330μF				
Operating Temp. Range	-55 ~ +145°C				
Capacitance Tolerance	±20% (M)				
Max. Leakage Current After 2 Minutes @ 20°C	Less than 0.01CV				
Working and Surge Voltage Ratings	W.V. (Vdc)	25	35	50	63
	S.V. (Vdc)	32	44	63	79
Tan δ @ 120Hz/20°C		0.14	0.12	0.10	0.08
Low Temperature Stability Impedance Ratio @ 120H	Z(-25°C)/Z(+20°C)	2	2	2	2
	Z(-55°C)/Z(+20°C)	2.5	2.5	2.5	2.5
Load Life Test @ Rated Voltage	Test Duration	+135°C 4,000 Hours, +145°C 2,000 Hours			
	Capacitance Change	Within ±30% of initial measured value			
	Tan δ	Less than 200% of specified max. value			
	ESR	Less than 200% of specified max. value			
	Leakage Current	Less than specified max. value			

STANDARD PRODUCTS AND CASE SIZES Dφ x L (mm)

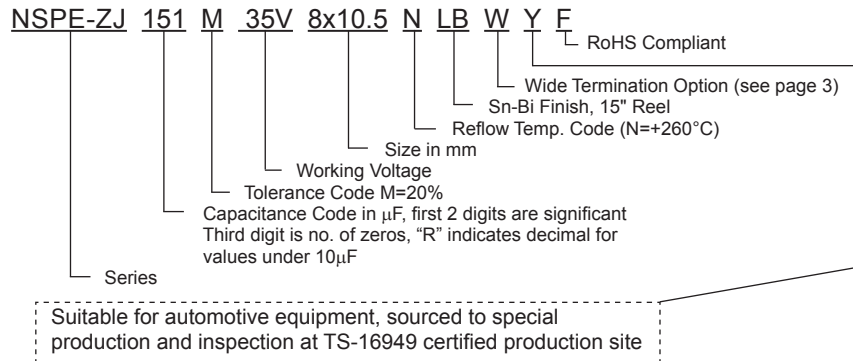
PART NUMBER	Case Size (D X L) mm	Cap. (μF)	Working Voltage	Max. Tan δ 120Hz/20°C	Max. ESR (mΩ) @ 100KHz/20°C	Max. Ripple Current (mA rms) @ 100KHz		Load Life Hours	
						+145°C	+135°C	+145°C	+135°C
NSPE-ZJ221M25V8X10.5NLBYF	8x10.5	220	25	0.14	27	700	1600	2,000	4,000
NSPE-ZJ331M25V10X10.5NLBYF	10x10.5	330		0.14	20	900	2000	2,000	4,000
NSPE-ZJ151M35V8X10.5NLBYF	8x10.5	150	35	0.12	27	700	1600	2,000	4,000
NSPE-ZJ271M35V10X10.5NLBYF	10x10.5	270		0.12	20	900	2000	2,000	4,000
NSPE-ZJ680M50V8X10.5NLBYF	8X10.5	68	50	0.10	30	600	1250	2,000	4,000
NSPE-ZJ101M50V10X10.5NLBYF	10X10.5	100		0.10	28	800	1600	2,000	4,000
NSPE-ZJ330M63V8X10.5NLBYF	8X10.5	33	63	0.08	40	600	1100	2,000	4,000
NSPE-ZJ560M63V10X10.5NLBYF	10X10.5	56		0.08	30	800	1400	2,000	4,000

RIPPLE CURRENT FREQUENCY CORRECTION FACTOR

Frequency	120Hz	500Hz	1KHz	10KHz	≥100KHz
C<47	0.10	0.20	0.30	0.60	1.00
47≤C<150	0.15	0.30	0.40	0.70	1.00
150≤C	0.15	0.30	0.45	0.75	1.00

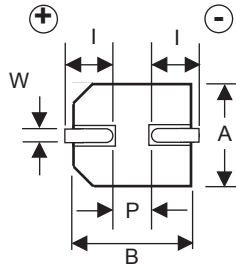
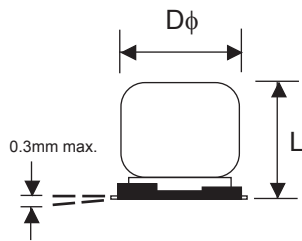
See Part Numbering System on Page 2

PART NUMBER SYSTEM

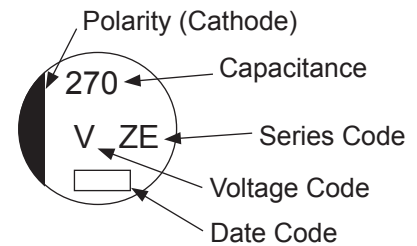


DIMENSIONS (mm)

Case Size	D ϕ ± 0.5	L max.	A, B ± 0.2	W	I ± 0.3	P ± 0.2
8x10.5	8.0	10.5	8.3	0.7 ~ 1.1	3.4	3.1
10x10.5	10	10.5	10.3	0.7 ~ 1.1	3.5	4.6



Part Marking

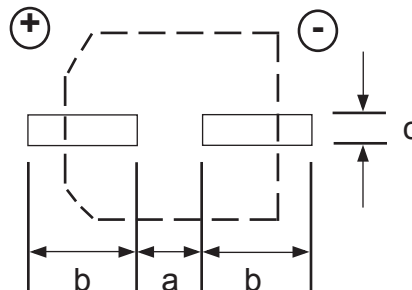


VOLTAGE RATING CODES

Code	Voltage Rating
E	25V
V	35V
H	50V
J	63V

LAND PATTERN DIM. (mm)

Case Dia.	a	b	c
8	3.1	4.0	2.0
10	4.6	4.1	2.0



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

WIDE TERMINATION DIM. (mm)

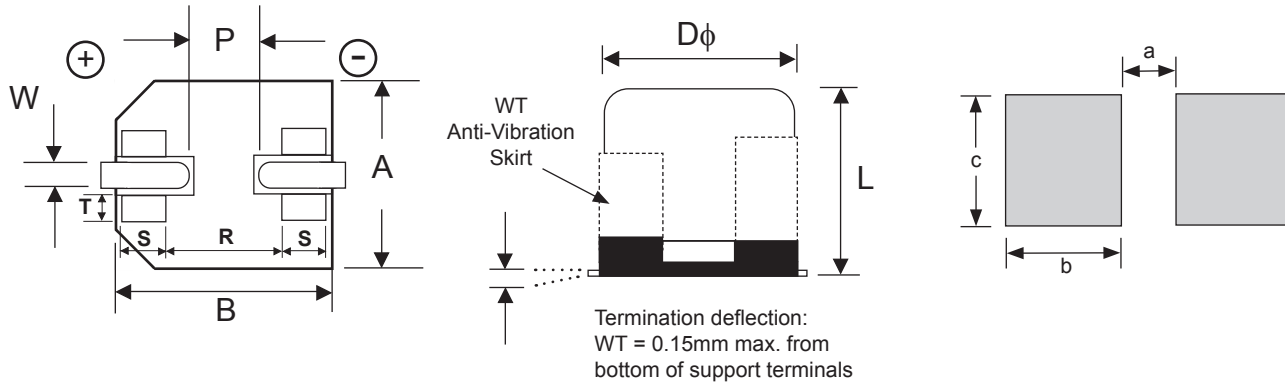
Case Size	Dφ ±0.5	L ±0.3	A, B	P	W	R ±0.2	S ±0.2	T ±0.2
8 x 10.5WT	8.0	10.5	8.3 ± 0.2	(3.1)	1.0 ~ 1.4	5.3	0.7	1.3
10 x 10.5WT	10.0	10.5	10.3 ± 0.2	(4.6)	1.0 ~ 1.4	6.9	0.7	1.3

(Reference dimensions)

WIDE TERMINATION LAND PATTERN DIM. (mm)

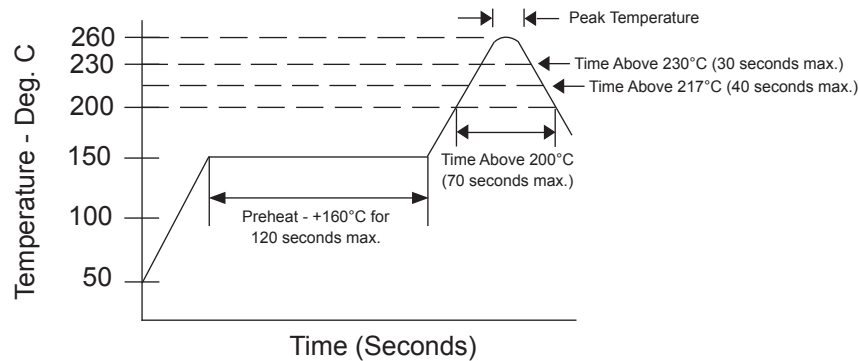
Case Size	a	b	c
8x10.5	2.7	4.0	4.7
10x10.5	3.9	4.4	4.7

WT STYLE TERMINATION



W (Wide Terminations) Anti-Vibration Test	
Test Method	Direction: X, Y, Z axis Frequency & Duration: 5 to 2000Hz reciprocation for 20 minutes, 2 hours each direction Peak to Peak Amplitude: 5mm Peak Acceleration: 30G Sweep Type: Log
Δ Capacitance	Within ± 5% of initial value
Appearance	No significant change observed

RECOMMENDED REFLOW SOLDERING PROFILE*



PEAK TEMPERATURE AND DURATION

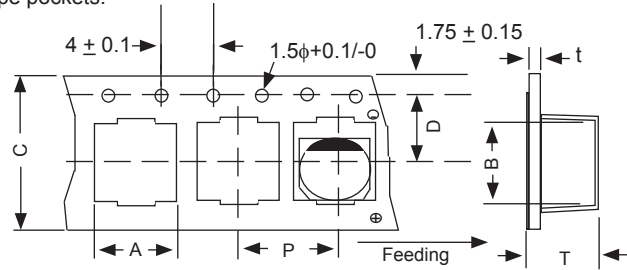
Diameter	Peak Temperature	Time	Time above 230°C	Time above 217°C	# of Reflow Passes
φ8 ~ 10mm	+260°C	≥+250°C 5 sec.	30 sec.	40 sec.	1
	+245°C	≥+240°C 10 sec.			2

*Two reflow passes are permissible with a cool down to room temperature required between the first and second pass. Acceptable soldering methods are IR or IR & heated air.

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.

Case Size	A	B	C	D	P	T	t
8x10.5	±0.5	±0.5	±0.3	±0.1	±0.1	±0.2	max.
10x10.5	10.7	10.7	24.0	11.5	16.0	11.0	0.4



REEL DIMENSIONS (mm)

Case Size	W +3/-1	Qty per Reel
		15" (380mm)
8x10.5	26	500
10x10.5	26	500

