# **Engineering Bulletin**

Introductory No.909I/May. 2025

#### ΡΧΥ NPCAP<sup>™</sup>-Series

•Super low ESR, impedance and high heat resistance have been obtained by using conductive polymer as electrolyte.

- •Guaranteed LC after reflow
- •For automobile modules and other high temperature applications
- •Endurance : 125°C 3,000 hours
- •Rated voltage range : 6.3 to 16Vdc, Capacitance range : 56 to 270µF
- •Solvent resistant type(see PRECAUTIONS AND GUIDELINES)
- RoHS2 Compliant
- •Halogen Free

CHEMI-CON

•AEC-Q200 compliant : Please contact Chemi-Con for more details, test data, information.

#### SPECIFICATIONS

Items	Characteristics								
Category Temperature Range	-55 to +125°C								
Rated Voltage Range	6.3 to 16Vdc								
Capacitance Tolerance	±20% (M) (at 20°C , 120Hz)								
Leakage Current	Shall not exceed values sh	nown in STA	NDARD RA	TINGS.		(at 20°C after 2 minutes)			
Dissipation Factor (tan $\delta$ )	0.12 max.					(at 20°C , 120Hz)			
Low Temperature	$Z(-25^{\circ}C) / Z(+20^{\circ}C) \le 1.7$	15							
Characteristics	$Z(-55^{\circ}C) / Z(+20^{\circ}C) \le 1.2$	25							
(Max. Impedance Ratio)	The following energification		tiofied when	the capacity	re are reste	(at 100KHZ)			
		No cignific			is are resio	led to 20 C after the fated voltage is applied for 5,000 flours at 125 C.			
			ant damage						
		≥ ±20% (		value					
	D.F. (tan o )	≥ 150% 0	of the Initial	specified va	lue				
	ESR	≦ 150% 0	of the initial	specified va	lue				
Dies Humidite	Leakage current	≦ The init	tial specified	l value					
Bias Humidity	The following specifications	JIOWING specifications shall be satisfied when the capacitors are restored to 20°C after subjecting them to the DC rated voltage at							
	Appeorance	No cignific	ont domog						
		No significant damage							
		$\leq \pm 20\%$ of the initial value			lue				
	D.F. (tan o )	$\leq$ 150% of the initial specified value			lue				
	ESR	$\leq 150\%$ of the initial specified value							
Ourse Maltana	Leakage current	≦ The init	tial specified	i value					
Surge voltage	The capacitors shall be suc		JUU cycles e	ach consisti	ng or charge	with the surge voltage specified at 125 C for 30 seconds			
	Reted voltage (V/d-)	r(R=1kΩ)an	d discharge		s 30 second	IS.			
		0.3	10	10					
	Surge voltage (vdc)	1.Z	12	18					
	<b>A</b>	NI :							
	Appearance	No significant damage $\leq \pm 20\%$ of the initial value							
	D.F. (tan o )	$\leq$ 150% of the initial specified value							
	ESR	$\leq$ 150% of the initial specified value							
O a balancia da di barat	Leakage current	≦ The init	ial specified	l value					
Soldering Heat	The following specification	ring specifications shall be satisfied when the solder temperature is reduced back to 20°C after soldering has been performed un							
	recommended soldering co	onditions.							
	Appearance	No significant damage							
		Within the specified tolerance range							
	D.F. (tan o )		a specified						
	ESR	≥ The init	iai specified	i value					
	Leakage current	$\leq$ The initial specified value							

## DIMENSIONS [mm]





Size Code	φD	L	Α	В	С	W	Р
E61	5	5.8	5.3	5.3	5.9	0.5 to 0.8	1.4
F61	6.3	5.8	6.6	6.6	7.2	0.5 to 0.8	1.9

## MARKING



Product specifications in this bulletin are subject to change without notice.Request our product specifications before purchase and/or use. Please use our products based on the information contained in this bulletin and product specifications. Please contact us for mass production schedule.



# STANDARD RATINGS

WV Cap (Vdc) (µF)	Сар	Size	Leakage current *2 (µA max./ after 2min.)	ESR (mΩ max./20°C , 100k to 300kHz)	Rated ripp (mArms/	ole current 100kHz)	Part No
	(µF)	code			-55°C≦ Tx ≦ 105°C *1	105°C <tx *1<="" 125°c="" td="" ≦=""><td colspan="2"></td></tx>	
	150	E61	189	23	2,800	1,400	APXY6R3ARA151ME61G
6.3	220	F61	277	18	3,000	1,500	APXY6R3ARA221MF61G
	270	F61	340	16	3,160	1,550	APXY6R3ARA271MF61G
10	120	E61	240	25	2,800	1,400	APXY100ARA121ME61G
	220	F61	440	20	3,000	1,500	APXY100ARA221MF61G
16	56	E61	179	32	2,500	1,250	APXY160ARA560ME61G
	100	F61	320	24	2,800	1,400	APXY160ARA101MF61G

\*1 TX : Ambient Temperature(°C )

\*2 After soldering has been performed under the recommended soldering conditions.

# RATED RIPPLE CURRENT MULTIPLIERS

•Frequency Multipliers

Frequency (Hz)	120	1k	10k	50k	100k to 300k
SMD type	0.05	0.30	0.55	0.70	1.00

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