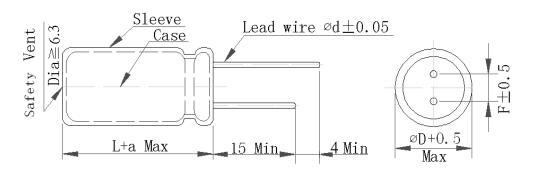


Aluminum Electrolytic Capacitor



	ELITE	Customer	Capacitance	Tolerance On rated	Working	Surge	Category	Tanδ @25℃	Leakage Current	Rated Ripple Current	Endurance		Dime	nsions	(mm)		Appearance
No.	Part No.	Part No.	^	Capacitance (%)	Voltage (Vdc)	Voltage (Vdc)	Temp. Range	(120 Hz) (Max)	(uA) (2min.)	(mA rms) @125℃ 100KHz	@ 125℃ (Hours)	ΦD	L	a	Фd	F	Drawing No
1	PY1V471MNN1220R		470	± 20	35	44	-40 ~ +125	0.12	164.5	1480	2000	12.5	20	1.5	0.6	5.0	

*Test leakage current before testing dissipation factor and capacitance during the electric characteristic test.

Test reakage current before testing dissipation factor and capacitance during the electric characteristic test	•		
REMARKS:	APPROVED BY	CHECKED BY	PREPARED BY
	李文华	対方領	梁慧坪

Precautions in using Aluminum Electrolytic Capacitors

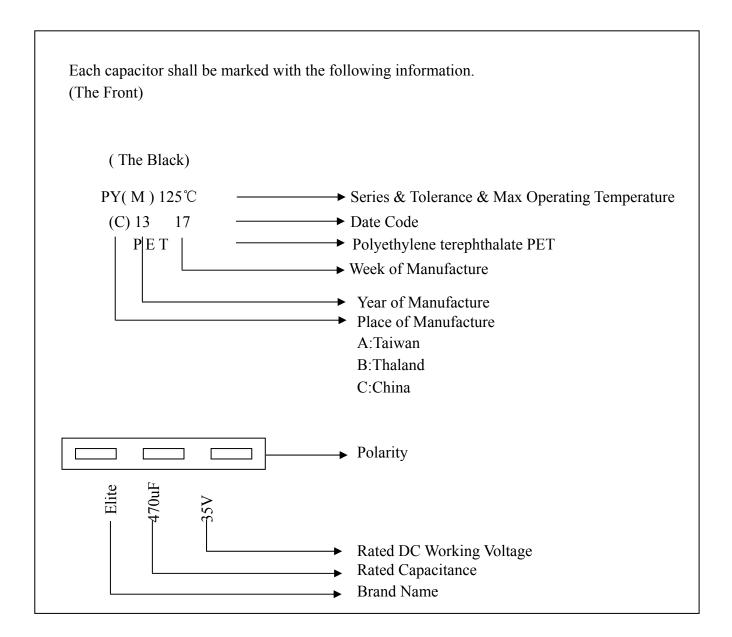
- 1. Standard DC electrolytic capacitors have polarity, which are indicated on the capacitors. They should not be used with polarity in reverse, if the polarity in circuit diagram is unknown, use non-polarised capacitors.
- 2. The capacitors should not be used at any temperature exceeding the range of the specified operating temperature.
- 3. If the capacitors are stored or left for a long time, aging should be conducted at the rated working voltage before application.
- 4. The capacitors are not suitable for circuits where sudden charge and discharge are frequently repeated.
- 5. Use the capacitors within the permissible ripple current range.
- 6. Do not impress voltage exceeding the capacitor's working voltage rating.
- 7. Be careful not to apply excessive force to the lead wires or terminals, which is subjected to the requirements of JIS-C-5101-4.
- 8. Soldering irons should be kept away from the sleeves of capacitors to avoid causing it to break.
- 9. Dip of flow soldering of the capacitors should be limited to 10 seconds at 260 degrees Celsius.
- 10. Take care when cleaning the circuit boards after soldering as some solvents that contain halogenated hydrocarbon solvents may have adverse effects on the capacitors.
- 11. When soldering lead wires or terminals of adjacent components, take care as if contacted, the capacitor sleeve may tear. Mount carefully so as not to bring adjacent components lead wires or terminals in contact with the sleeve, particularly when mounting on through-hole circuit boards.
- 12. The specification of products is followed by the characteristic (W) of JIS-C-5101-4. For methods of processing and testing, refer to JIS-C-5101-1.

PART NUMBER SYSTEM (RADIAL LEAD TYPE)

♦ Example: PY Series 470 uF 35V Φ 12.5× 20 L

Series (Code		Capacitance	Codo	Lead for	ming Type	Code		Special Re	equest	Code
			Tolerance(70)	 		N	11:			
PY	PY		±20 ±5	M J	-	g Lead ping	P	п	gh Rated rip Endura		R F
			±3 ±10	K		tting	C	ī	ow Leakage		L
			-10/+30		1	cCutting	В		ow Dissipati		D
			-		Kiliko	ccutting	D	L			
			-0/+20	R	1		F	τ.	High Temp		H
			-10/+20		41		L	Lo	ow Impedan		Е
			-5/+20	Н]	0.00	T		PET Sle		P U
				1	Forming	&Cutting	R		Jonvex ruot	bei covei	
							S				
							E				
							E				
				1							
•				•	•					★	
$\mathbf{P} \mathbf{Y}$	3	4 X 7	5 6 7 1	\mathbf{M}	9 NI	10 11 1 1	2	13 14 0	15	16 17 18	19 2
PY		<u> </u>	4 7 1	IVI	1	N 1	الئاك	<u> </u>	R		<u> </u>
	↑		↑			↑	↑				
	I	1				ļ					
	Voltage	Code	Capacitance	Code	Lead Le	ength(mm)	Code		ize (mm) ФD x L)	Code	
	(V)		(uF)			I ,					
	6.3	0J	0.1	R10	2.0		Z 2		5 x 7	0507	
	10	1A	0.47	R47	2.8		В		5 x 11	0511	
	16	1C	1	010	3.1	+0.3/-0.2	Е		6.3 x 11	6311	
	25	1E	4.7	4R7	3.3	10.57 0.2	G		8 x 11.5	08B5	
	30	1F	10	100	3.6		Q		8 x 12	0812	
	35	1V	100	101	3.5		M		8 x 20	0820	
	50	1H	220	221	3.8	±0.3	T	1	0 x 12.5	10C5	
	63	1J	470	471	3.5		3		10 x 16	1016	
	80	1K	1000	102	3.8		C		10 x 20	1020	
	100	2A	3300	332	4.0		D	1	2.5 x 20	1220	
	160	2C	4700	472	4.5		4	1	2.5 x 30	1230	
	180	2Z	10000	103	5.0		5	1	2.5 x 40	1240	
	200	2D	47000	473	6.3		6	1	4.5 x 30	1430	
	220	2P		1	7.0	±0.5	7 I		16 x 20	1620	
	250	2E	·	·	8.0		8		16 x 25	1625	
	350	2V			8.5		J	1	6 x 31.5	16N3	
	400	2G			9.0		9	1	6 x 35.5	16P1	
	420	2S			9.5]	K		16 x 40	1640	
	450	2W			10		Α		18 x 25	1825	
	500	2H			10.5		L	1	8 x 31.5	18N3	
	550	2L			14.8		F	1	8 x 35.5	18P1	
	<u> </u>				1.0	±0.3	S		18 x 40	1840	
					12	_	Н		18 x 45	1845	
						9mm min	N		18 x 50	1850	
						5mm min					
						(Lead Pitch)	Code		I	'	
					2.0		<u>Z</u>				
					2.5		2				
					2.5	+() ×/-() ')	-2				
					3.5 5.0	+0.8/-0.2	3 5 / N				

Marking



PY SERIES

Temperature (°C) Dwell Time (Minutes) 30±3 1. No appearance defect 1. No appearance defect 2. Capacitinance change within ± 5% 3.0±3 4±25°C 3.MAX 70±4 number of cycles 5.00 5.0	Test Item		Test Condition	on	Acceptance Criteria						
Temperature Cycle				(Minutes)							
Temperature Cycle Cycle Rated hight eategory temperature: 2 30±3 1. No appearance defect 2. Capacitance change within ± 5% 30±3 1. No appearance defect 2. Capacitance change within ± 10% 3. D.F. smaller than specification value 4. Leakage current smaller than specification value 4. Leakage curr				30±3	1 No appears	1. No annearance defect					
Resistance to Solder bath temperature: 20±25°C Solder bath composition: Sn - 96.5% Ag - 3.0% Cu - 0.5% Immersion depth: 1.5 to 2.0 mm Immersion depth: 1.5		One Cycle	9		2. Capacitance change within ± 5%						
Total number of cycles: 5	Cycle		Rated hight categor	30±3			ue				
Warm up time: 120 ±2 seconds to reach 120 ±2°C											
Resistance to Solder bath temperature: 260±5 °C Solder bath composition: Sn - 96.5% Ag - 3.0% Cu - 0.5% Immersion depth: 1.5 to 2.0 mm Immersion duration: 10±1 seconds Solder bath temperature: 235±5°C Solder bath composition: Sn - 96.5% Ag - 3.0% Cu - 0.5% Immersion depth: 1.5 to 2.0 mm Immersion duration: Sn - 96.5% Ag - 3.0% Cu - 0.5% Immersion depth: 1.5 to 2.0 mm Immersion duration: 2±0.5 seconds A minimum of 95% of the immersed surface is to be coated with the new solder Temperature: 40 ± 2°C Relative humidity: 90 to 95% Duration: 240 ± 8 hours Temperature: 15 to 35°C Applied voltage: See specification "ON" position: 30 seconds "OFF" position: 30 seconds Duration: 1000 cycles Temperature Characteristics (Max. Impedance Ratio) Working Voltage(V) Impedance Z-25°C/+20°C			Total number of cy	cles: 5							
Solder Ability Solder bath composition: Sn - 96.5% Ag - 3.0% Cu - 0.5% Immersion depth: 1.5 to 2.0 mm Immersion duration: 2±0.5 seconds High Humidity Storage Temperature: 40 ± 2°C Relative humidity: 90 to 95% Duration: 240 ± 8 hours Temperature: 15 to 35°C Applied voltage: See specification "ON" position: 30 seconds "OFF" position: 5 minutes 30 seconds Duration: 1000 cycles Townstand Proposition: 240 ± 8 hours A minimum of 95% of the immersed surface is to be coated with the new solder 1. No appearance defect 2. Capacitance change within ±10% 3. D.F. change within 120% of the specified value 4. Leakage current smaller than specification value 1. No electrical or mechanical damage 2. Capacitance change within ± 15% 3. D.F. smaller than specification value 4. Leakage current smaller than specification value 5. Smaller than specification value 6. Smaller than specification value 7. Smaller than specification value 7. Smaller than specification value 8. Smaller than specification value 9. Sm		±2°C Solder bath Solder bath	n temperature: 260±5 n composition: Sn Ag Cu depth: 1.5 to 2.0 m	5 °C 1 - 96.5% g - 3.0% 1 - 0.5% m	2. Capacitance change within ± 10%3. D.F. smaller than specification value						
High Humidity Storage Capacitance change within ±10%	Solder Ability	Solder bath	n composition: Sn Ag Cu depth: 1.5 to 2.0 mr	1 - 96.5% g - 3.0% 1 - 0.5%							
Surge Applied voltage: See specification "ON" position: 30 seconds "OFF" position: 5 minutes 30 seconds Duration: 1000 cycles Low Temperature Characteristics (Max.Impedance Ratio) Applied voltage: See specification "ON" position: 30 seconds "OFF" position: 5 minutes 30 seconds Duration: 1000 cycles 1. No electrical or mechanical damage 2. Capacitance change within ± 15% 3. D.F. smaller than specification value 4. Leakage current smaller than specification value Working Voltage(V) 10 16~100 160~250 350~450 Impedance Z-25°C /+20°C 3 6		Relative humidity: 90 to 95%				e change within ± e within 120% of	the specified valu				
Temperature Characteristics (Max.Impedance Ratio) Working Voltage(V) 10 16~100 160~250 350~450 Impedance Z-25°C /+20°C 3 6	Surge	Applied vo "ON" posi "OFF" pos	oltage: See specificat tion: 30 seconds ition: 5 minutes 30 s		2. Capacitano 3. D.F. smalle	e change within ± er than specification	= 15% on value	ue			
Characteristics (Max.Impedance Ratio) Working Voltage(V) 10 16~100 160~250 350~450 3 6								1			
Ratio) Impedance Z-25°C /+20°C 3 6	Characteristics	Working	Voltage(V)	10	16~100	160~250	350~450				
Impedance Z-40°C /+20°C 6 4		Impedano	ee Z-25°C /+20°C			3	6				
		Impedano	ce Z-40°C /+20°C	6	4						

		Test Condit	ion		Acceptance Criteria					
	Conduct under work	normal lighting	g conditions	There shall be no explosion, flash, flame, spark fire from the capacitor during or after the test, n shall there be expulsion of any metal from the						
Vent	Capacitor dia	meter Appl Currer								
	Less than 22. More than 22		With	casing.						
Vibration	Amplitude: 1.5 Cycle definition Hz Cycle duration	n: 10 Hz to 55	Hz and back		No electrical or mechanical damage No appearance damage					
Terminal Pull		ninal type & neter (mm) 0.5 0.6 to 0.8 0.8	Load (Kg) 0.5 1.0 1.5		No electrical or mechanical damage No appearance damage					
Endurance	with rated vo	placed in an ltage for 2,000 estored to 25°0 fications) hours at	125°C.	value					
Shelf Life	at 125 °C w	placed in an ovithout applying the applying restored specifications.	ng rated v	vorking	hours 1. Capa valu 2. D.F.	before mea acitance cha e change wit kage curren	asurement. ange within ± 2 thin ± 200% of	30 minutes,24 to 4 25% of the initial The specified values of specification		
Maximum permissible ripple current	Temperature Voltage : DC Rated voltage	: 125±2℃ . Voltage+peak	ripple volt	age ≤						
Ripple current multipliers	Frequency M	Cap(μF)	50(60)		F 20 .00	Frequency(Hz 1K 1.57	z) ≥10K 2.00	≥50K 		
Ripple current multipliers	10 ~ 35	100~470 >470	0.80	-	.00	1.34	1.50			



