

规 格书

SPECIFICATION SHEET

Customer name:				
BERYL SERIES:	RD	TYI		
DESCRIPTION:	6.8uF/400V	Φ8*14		
Apply date :	2022-04-12			
BERYL			CUSTOMER	
P/N:RD400M6R8LO8*14TH-2A	.2Et	P/N:		
PREPARED	APPROVAL	PREPARED	CHECKED	APPROVAL
董桂茹	张业维			

After approved, please sign back 1 Approval Sheet before order. If not, we will treat it as tacitly acknowledged and accepted our relative standard and technical index.

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Revise record

NO.	Date	Revise reason	Revise content	Prepared
01	2022.04.12	First issue	First issue	董桂茹



1、 Application

This specification applies to Aluminum electrolytic capacitor (foil type) used in electronic equipment. Designed capacitor's quality meets IEC 60384.

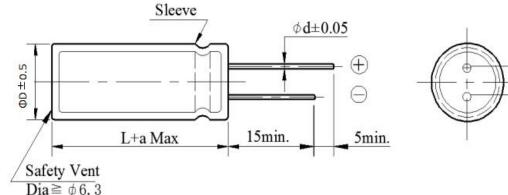
2. Table of specification and characteristics

Cap(uF) 120Hz/20°C	WV(V)	Size	(mm)	Temperature (°C)		-		_		-		-		-		-		-		Capacitance Tolerance	Life(hours) @105(°C)
120112/20 C	D L (C)		Toterance	(105(0)																	
6.8	400	8	14	-40~+1	05	±20%	8000														
%)(MAX) Hz/20°C	LC(µA)(MAX) 2min/20°C					· / /	Surge voltage(V)														
≤24				-		124	440														
	120Hz/20°C 6.8 %)(MAX) Hz/20°C	120Hz/20°C WV(V) 6.8 400 %)(MAX) LC(μA)(N Hz/20°C 2min/2	WV(V) 120Hz/20°C WV(V) 6.8 400 6.8 400 %)(MAX) LC(μA)(MAX) Hz/20°C 2min/20°C	120Hz/20°C wv(v) D L 6.8 400 8 14 %)(MAX) LC(μA)(MAX) ESR(Ω Hz/20°C 2min/20°C 100KI	WV(V) Image: Comparison of the second s	WV(V) Image: complement of the second s	WV(V) Important (°C) Tolerance $120Hz/20^{\circ}C$ \overline{D} L $C^{\circ}C$ Tolerance 6.8 400 8 14 $-40 \sim +105$ $\pm 20\%$ $\%$)(MAX) $LC(\mu A)(MAX)$ $ESR(\Omega)(MAX)$ RC (mA rms) $Hz/20^{\circ}C$ $2min/20^{\circ}C$ $100KHz/25^{\circ}C$ $(MAX)105^{\circ}C/120Hz$														

Other: /

3、 Product Dimensions

Туре



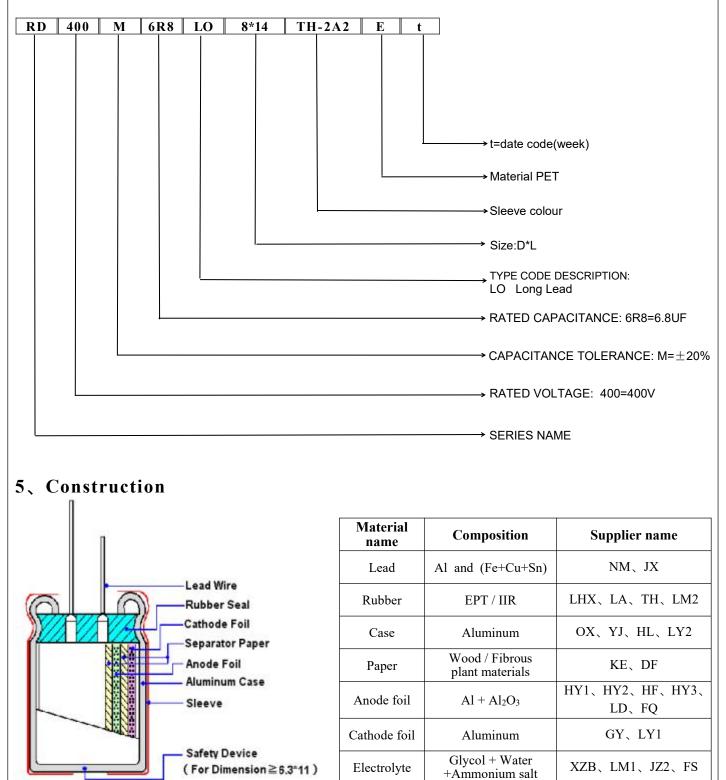
ΦD	5	6.3	8	10	13	16	18	22
Р	2	2.5	3.5	5	5	7.5	7.5	10
Фd	0.5	0.5	0.5/0.6	0.6	0.6	0.8	0.8	0.8
а			(L< 20)	± 1.5	(L≥2	$0) \pm 2.0$		

Sheet NO.: 20220412

P±0.5



4、Part Number



Sleeve

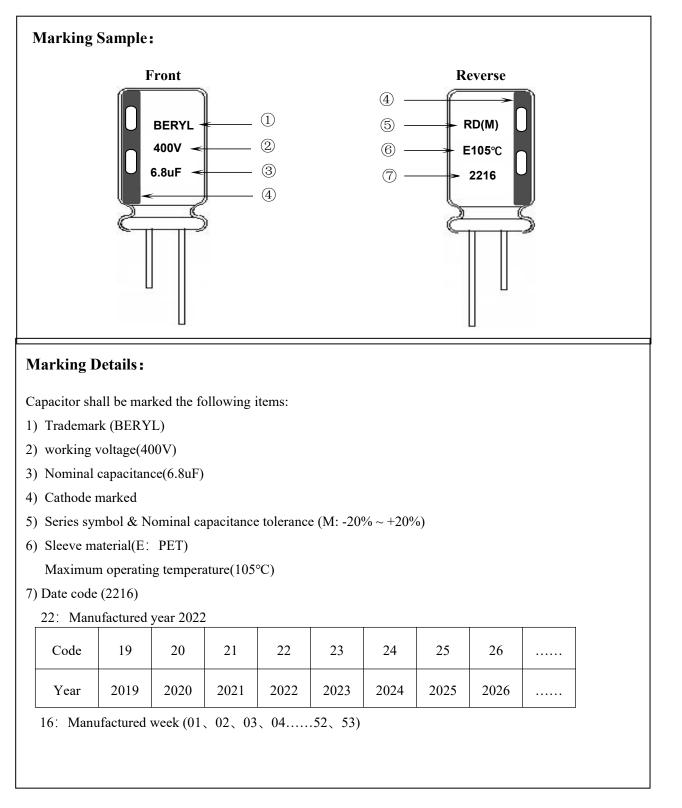
Sheet NO.: 20220412

PET

YL、CY



6、Product Marking





7、 Characteristics

Standard atmospheric conditions

Unless other specified, the standard range of atmospheric conditions for making measurements and tests is as follows:

Ambient temperature :15°C to 35°CRelative humidity:45% to 85%

Air pressure : 86kPa to 106kPa

If there is any doubt about the results, measurement shall be made within the following conditions: Ambient temperature : $20^{\circ}C \pm 2^{\circ}C$ Relative humidity : 60% to 70%Air pressure : 86kPa to 106kPa

Operating temperature range

The ambient temperature range at which the capacitor can be operated continuously at rated voltage is $(160 \sim 400 \text{WV}) - 40^{\circ}\text{C}$ to $+105^{\circ}\text{C}$ $(450 \sim 500 \text{WV}) - 25^{\circ}\text{C}$ to $+105^{\circ}\text{C}$

Table

	ITEM	PERFORMANCE
1	Nominal capacitance (Tolerance)	<condition> Measuring Frequency: 120Hz±12Hz Measuring Voltage: Not more than 0.5Vrms +1.5~2.0V.DC Measuring Temperature: 20±2°C <criteria> Shall be within the specified capacitance tolerance.</criteria></condition>
2	Leakage current	$\begin{array}{c} <\!\! \textbf{Condition}\!\!> \\ \text{Connecting the capacitor with a protective resistor } (1k\Omega\pm10\Omega) \text{ in series for} \\ 2 \text{ minutes, and then, measure leakage current.} \\ <\!\! \textbf{Criteria}\!\!> \\ \text{I: Leakage current } (\mu\text{A}) \\ \text{I} (\mu\text{A}) \leq 0.02\text{CV}+10(\mu\text{A}), \\ \text{measurement circuit refer to right drawing.} \\ \text{C: Capacitance } (\mu\text{F}) \\ \text{V: Rated DC working voltage } (\text{V}) \end{array}$
3	Dissipation factor	<condition> Nominal capacitance, for measuring frequency, voltage and temperature. Must be within the parameters (See page 3)</condition>



	ITEM		PERFORMANCE							
4	Impedance	Measuring point: 2n < Criteria >	Measuring frequency:100kHz; Measuring temperature:20±2°C Measuring point: 2mm max. from the surface of a sealing rubber on the lead wire.							
5	Load life test	<condition> According to IEC60. Maximum operating current for Rated life exceed the rated wo recovering time at a <criteria> The characteristic sh Leakage current Capacitance Chang Dissipation Factor Appearance</criteria></condition>	temperature \pm +48/0hours. rking voltage) tmospheric con all meet the for Not more within	2°C with DC (The sum of I Then the proc additions. The pro- llowing require than the sp $\pm 20\%$ of initia re than 200%	bias voltage pl DC and ripple p luct should be result should n rements. pecified value. al value. of the specified	us the rated beak voltage tested after 1 neet the follo d value.	ripple shall not 6 hours			
6	Shelf life test	<condition> The capacitors are then stored with no voltage applied at a temperature of Maxim temperature±2°C for1000+48/0 hours. Following this period, the capacitors sha from the test chamber and be allowed to stabilized at room temperature for16 h leakage current <criteria> The characteristic shall meet the following requirements. Leakage current Not more than 200% of the specified value. Dissipation Factor Not more than 200% of the specified value.</criteria></condition>								
7	Maximum permissible (ripple current, temperature coefficient)									



	ITEM				PE	RFO	ORMAN	CE			
8 Terminal strength		seconds. I Fixed the o 2~3 second Diam 0.: (Criteria>	capacito Bending capacito ds, and t eter of lo 5mm and 0.6~0.8 1	r, applied for strength of r, applied for hen bent it ead wire d less mm	d force to the terminal in lead out direction for $30+$ of terminals. d force to bent the terminal (1~4 mm from the rub <u>t it for 90° to its original position within 2~3 secon</u> Tencile force N					the rubbe seconds N (kgf)	er) for 90° within
			able cha	nges shall b	e found,	no b	oreakage o	r loosene	ess at the	terminal	
		<condition> STEP</condition>	Testi	ng tempera	ure (°C)			Tim	e]
			10501	20±2	<u>()</u>	T T	Fime to rea			ibrium	-
		2		-40 -25±	3	-	Fime to rea		-		-
	Temperature characteristics	3	20±2		Time to reach the			-		-	
		4 105±				Г	Time to reach thermal equilibriu			ibrium	-
		5			Г	Fime to rea	ach thern	nal equil	ibrium	-	
9		<criteria> a. At +105 Dissipat The leal b. In step 5 Dissipat The leal c. At - 40° Voltage Z-40°C/Z-</criteria>	°C, capa tion factor cage cur 5, capaci tion factor cage cur C, Impe (V)	and impedation acitance measurement measurement shall be very rent shall be very rent shall be very rent shall ne dance (Z) range (Z) r	asured at within the red shall f ured at + within the ot more t atio shall	+20 lim not n 20°C lim nan t	°C shall b hit of Item nore than C shall be hit of Item the specifi	e within 7.3 10 times within ±1 7.3 ed value	±25% of of its sp 10% of it	ecified va s origina	alue. l value.
10	Surge test	$\label{eq:condition} $$ \end{picture}$ $$ Applied a surge voltage to the capacitor connected with a (100 ±50)/CR (k\Omega) resistor in series for 30±5 seconds in every 5±0.5 minutes at 15~35°C.Procedure shall be repeated 1000 times. Then the capacitors shall be left under normal humidity for 1-2 hours before measurement CR : Nominal Capacitance (µF) $$ Criteria> $$ $$ $$ $$ $$ $$ $$ $$ $$ $$ $$ $$ $$$									
She	et NO.: 20220			-				Page	: 8,	/ 12	



	ITEM	PERFORMANCE							
		Ten Acc	dition> nperature cycle: cording to IEC60384-4 No ording as below:	.4.7 methods, capacitor	shall be placed in	an oven, the condition			
			Tem	nperature	Time				
			(1) +20°C		3 Minutes				
	Change of		(2) Rated low temperatu	are (- 40°C) (-25°C)	30±2 Minutes				
11	temperature test		(3) Rated high temperate	ure (+105°C)	30±2 Minutes				
			(1) to (3) =1 cycle, total	5 cycle					
		Crite	e ria> e characteristic shall meet t	he following requireme	nt.				
			Leakage current	Not more than the sp					
			Dissipation Factor	Not more than the sp					
			Appearance	There shall be no lea	kage of electrolyte	Э.			
12	Damp heat	be e 40± <crite< th=""><th>cording to IEC60384-4 No. exposed for 500±8 hours in 2°C, the characteristic cha eria> Leakage current</th><th>an atmosphere of 90~9</th><th>95%R H .at wing requirement.</th><th></th></crite<>	cording to IEC60384-4 No. exposed for 500±8 hours in 2°C, the characteristic cha eria> Leakage current	an atmosphere of 90~9	95%R H .at wing requirement.				
	test			Not more than the spe	lifted value.				
	eese		Course items of the second	W/41.in + 100/ - £ in 41-1	1				
			Capacitance Change	Within $\pm 10\%$ of initial					
			Dissipation Factor	Not more than 120% of	f the specified val	ue.			
				-	f the specified val	ue.			
13	Solderability test	<cone Sole Dip Dip</cone 	Dissipation Factor Appearance dition> e capacitor shall be tested u dering temperature : 245 ping depth : 2m ping speed : 25- ping time : 3±0	Not more than 120% of There shall be no leak under the following con- $5\pm5^{\circ}C$ m ±2.5 mm/s	f the specified valuate of electrolyte.	ue.			
13	Solderability	<cone Sole Dip Dip Dip</cone 	Dissipation Factor Appearance dition> e capacitor shall be tested u dering temperature : 245 ping depth : 2m ping speed : 25- ping time : 3±0	Not more than 120% of There shall be no leak under the following con- $5\pm5^{\circ}C$ m ±2.5 mm/s	f the specified valuate of electrolyte.	ue.			



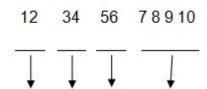
	ITEM	PERFORMANCE							
14	Vibration test	<condition> The following conditions shall be applied for 2 hours in each 3 mutually perpendicular directions. Vibration frequency range : 10Hz ~ 55Hz each to peak amplitude : 1.5mm Sweep rate : 10Hz ~ 55Hz ~ 10Hz in about 1 minute Mounting method: The capacitor with diameter greater than 12.5mm or longer than 25mm must be fixed in place with a bracket. 4mm or less Within 30° 4mm or less Within 30° To be soldered To be soldered After the test, the following items shall be tested: Inner construction No intermittent contacts, open or short circuiting. No damage of tab terminals or electrodes. No mechanical damage in terminal. No leakage of electrolyte or swelling of the case. The markings shall be legible.</condition>							
15	Resistance to solder heat test	<condition> Terminals of the capacitor shall be immersed into solder bath at 260±5°Cfor10±1seconds or400±10°Cfor3⁻⁰ seconds to 1.5~2.0 mm from the body of capacitor. Then the capacitor shall be left under the normal temperature and normal humidity for 1~2 hours before measurement. <criteria> Leakage current Not more than the specified value.</criteria></condition>							
		Capacitance ChangeWithin ±5% of initial value.							
		Dissipation Factor Not more than the specified value.							
		AppearanceThere shall be no leakage of electrolyte.							
16	Vent test	<condition> The following test only apply to those products with vent products at diameter ≥Ø6.3 with vent. D.C. test The capacitor is connected with its polarity reversed to a DC power source. Then a current selected from Table 2 is applied. <table 2=""> Diameter (mm) DC Current (A) 22.4 or less 1</table></condition>							



8、 Packing Information

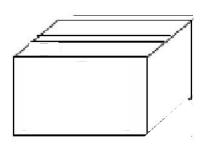
Packing Label Marked (the following items shall be marked on the label)
(Inside box or bag)
(1)Clint order number (2)Client part number (3)Beryl part number (4)Capacitance (5)Voltage (6)Dimension
(7)Packaging quantity (8)Capacitance tolerance (9) QC Marking (0) Lot number (1) Series

LOT Number :

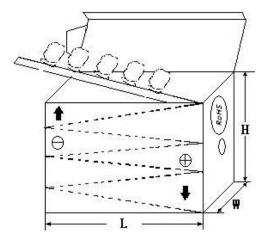


year month date number

1) Bulk Packing:



2) Taped Packing:



3) Outer box



外箱

4) Outer box label:

BERYL	Zhao Qin	g Beryl Elec Ltd.	ctronic	CTechnology Co.,
C.S.R:				
C.S.R P/O:				ROHS HE
C.S.R P/N				
S.P.R P/N:				QC
SPEC:				
QTY:	PCS	TOL:	%	
L/N:		S.P.R:		2



9、 Prohibition to Use Environment- related Substances

We are hereby to certify the followings:

Our company hereby warrants and guarantees that all or part of products, including, but not limited to, the peripherals, accessories or package, delivered to your company (including your subsidiaries and affiliated companies) directly or indirectly by our company are free from any of the substances listed below.

	Cadmium and cadmium compounds						
Accord with	Lead and lead compounds						
heavy metal	Mercury and mercury compounds						
	Hexavalent chromium compounds						
	Polychlorinated biphenyls (PCB)						
Onequie shlarin	Polychlorinated naphthalenes (PCN)						
Organic chlorin	Polychlorinated terphenyls (PCT)						
compounds	Chlorinated paraffins (CP)						
	Other chlorinated organic compounds						
Organic	Polybrominated biphenyls (PBB)						
bromine	Polybrominated diphenylethers (PBDE)						
compounds	Other brominated organic compounds						
Tributyltin compo	ounds						
Triphenyltin com	pounds						
Asbestos							
Specific azo com	pounds						
Formaldehyde							
Polyvinyl chlorid	e (PVC) and PVC blends						
F、Cl、Br、I							
REACH							

The latest version of <Substances Prohibited as per RoHS or <Sony-SS-00259>

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