

### SAMXON BRAND ALUMINUM ELECTROLYTIC CAPACITORS

# **PRODUCT SPECIFICATION**

規格書

**CUSTOMER :** 

(客戶):

Г

DATE :

(日期):2018-05-19

CATEGORY (品名)	: ALUMINUM ELECTROLYTIC CAPACITORS
DESCRIPTION (型号)	: VTD 25V330 μF ( φ 8x10.2)
VERSION (版本)	: 01
Customer P/N	:
SUPPLIER	:

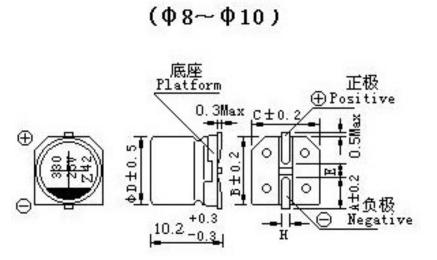
SUPPL	IER	CUST	FOMER
PREPARED (拟定)	CHECKED (审核)	APPROVAL (批准)	SIGNATURE (签名)
杜焕	付婷婷		

#### ELECTROLYTIC CAPACITOR SPECIFICATION VTD SERIES

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MAN YUE ELECTRONICS	ELECTROLYTIC CAPACITOR	SAMXON
COMPANY LIMITED	SPECIFICATION VTD SERIES	

#### Table 1 Product Dimensions and Characteristics



Unit: mm

Size	8x10.2
A±0.2	2.9
B±0.2	8.3
C±0.2	8.3
D±0.2	8.0
Е	3.1
L±0.2	10.2
Н	0.8~1.1

No.	SAMXON Part No.	WV (Vdc)	Cap. (µF)	Cap. tolerance	Temp. range(℃)	tanδ (120Hz, 20℃)	Leakage Current (µA,2min)	Max Ripple Current at 105°C 120Hz (mA rms)	Load lifetime (Hrs)	Dimension (mm) D×L
1	VTD337M1EFT2TR**	25	330	-20%~+20%	-55~105	0.14	83	220	2000	8x10.2
										<u> </u>

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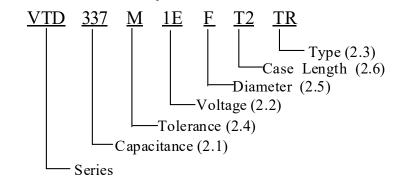
#### ELECTROLYTIC CAPACITOR SPECIFICATION VTD SERIES



#### 1. Application

This specification applies to polar Aluminum electrolytic capacitor (foil type) used in electronic equipment. Designed capacitor's quality meets IEC60384.

#### 2. Part Number System



#### 2.1 <u>Capacitance code</u> Code 337 Capacitance (µF) 330

- 2.2 Rated voltage code Code 1E Voltage (W.V.) 25
- 2.3 <u>Type</u>

Code	TR
Reference	Embossed Taping.

- 2.4 <u>Capacitance tolerance</u> "M" stands for  $-20\% \sim +20\%$
- 2.5 <u>Diameter</u>

Code	F
Diameter	8

 $\begin{array}{c} 2.6 \qquad \underline{\text{Case length}} \\ \text{T2=10.2mm} \end{array}$ 

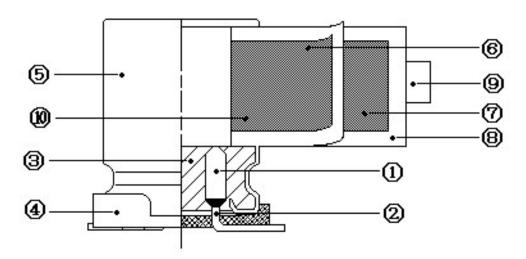
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### SAMXON

#### **3.**Constructions

3-1 Inside Construction



#### 3-2 Construction parts

No.	Parts	Materials	No.	Parts	Materials
1	Lead line	Aluminum 99.93%	6	Anode foil	Formed aluminum 99.99%
2	Terminal	Tinned copper-ply wire (Lead Free) (*2)	7	Cathode foil	Etched aluminum 98%
3	Sealing pad	I.I.R.	8	Separator	Pulp
4	Base plate	P.P.A	9	Adhesive tape	Poly propylene film
5	Case	Aluminum 98%+ PET coating	10	Electrolyte	GBL & EG

#### 4. Characteristics

#### Standard atmospheric conditions

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

Ambient temperature	:15°C to 35°C
Relative 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 See table 1 temperature range.

As to the detailed information, please refer to table 2.

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#### ELECTROLYTIC CAPACITOR SPECIFICATION VTD SERIES



Tabl	ITEM				PEREO	RMAN	F			
	Rated voltage (WV)				PERFU	KWANG				
4.1		WV (V.DC)	6.3	10	16	25	35	50	63	
	Surge voltage (SV)	SV (V.DC)	7.3	11.5	18.4	29	40	58	73	
4.2	Nominal capacitance (Tolerance)	<condition> Measuring F Measuring V Measuring T <criteria> Shall be with</criteria></condition>	requenc oltage emperat	: N ure : 20	$20$ Hz $\pm$ 12 fot more t $0\pm2$ °C apacitanc	han 0.5V				
4.3	Leakage	<condition> Connecting t minutes, and</condition>	the capa then, me		-		sistor (1	$k \Omega \pm 10$	)Ω) in s	series for
_	current	<criteria> Refer to Tabl</criteria>								
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#### ELECTROLYTIC CAPACITOR SPECIFICATION VTD SERIES

4.6105°C $\pm 2$ with DC bias voltage plus the rated ripple current for Table 1. (The sum of DC and ripple peak voltage shall not exceed the rated working voltage) Then the product should be tested after 16 hours recovering time at atmospheric conditions. The result should meet the following table: 4.6life test <b>Criteria&gt;</b> The characteristic shall meet the following requirements.Leakage currentValue in 4.3 shall be satisfied Capacitance Change Within $\pm 20\%$ of initial value. The characteristic shall meet the following table requirements. <b>Condition&gt;Condition&gt;</b> The capacitors are then stored with no voltage applied at a temperature of $105 \pm 2^{\circ}C$ for $1000+48/0$ hours. Following this period the capacitors shall be removed from the test chamber and be allowed to stabilized at room temperature of $4 - 8$ hours. Next the shall be connected to a series limiting resistor( $1k \pm 100  \Omega$ ) with D.C. rated voltage applied for 30min. After which the capacitors shall be discharged, and then, tested the characteristics.4.7Shelf life test <b>Criteria&gt;</b> The characteristic shall meet the following requirements.4.7AppearanceValue in 4.3 shall be satisfied Capacitance Change Within $\pm 20\%$ of initial value. tan $\delta$ Not more than 200% of the specified value. Appearance The characteristic shall meet the following requirements.	4.5 Interpretative characteristic case in the characteristic case is the case is th			c. At-40°C (-25°C), in table.	-			1	1	1	-
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		4.7				1 11 1	all ha ma	Jankana	of algoty	olyte.	
Please apply voltage through about 1 K12 resistor, 11 necessary.	Please apply voltage through about 1 K22 resistor, 11 necessary.	4.7		Appearance				<u> </u>			•
		4.7		Appearance Remark: If the capacito		red more	han 1 yea	ar, the lea	kage cur	rent may	increase
		4.7		Appearance Remark: If the capacito		red more	han 1 yea	ar, the lea	kage cur	rent may	increase
		4.7		Appearance Remark: If the capacito		red more	han 1 yea	ar, the lea	kage cur	rent may	increase

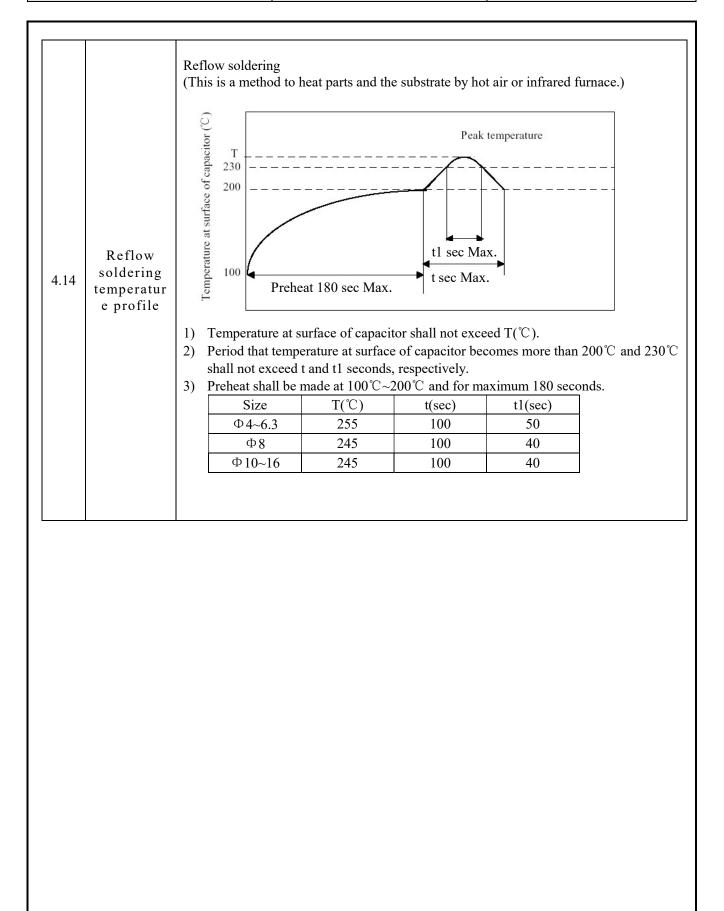
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-	1		I			
		<condition></condition>				
			the capacitor connected with a $(100 \pm 50)/C_R (k\Omega)$ resistor.			
		1	mitted to 1000 cycles, each consisting of charge of $30 \pm 5s$ ,			
		followed discharge of 5 m				
		The test temperature shal				
		C <sub>R</sub> :Nominal Capacitance	ε ( μ F)			
1.0	Surge	<criteria></criteria>				
4.8	test	Leakage current	Not more than the specified value.			
		Capacitance Change				
		tan δ	Not more than the specified value.			
		Appearance	There shall be no leakage of electrolyte.			
		Attention:				
			ltage at abnormal situation only. It is not applicable to such			
		over voltage as often appli	ed.			
		<condition></condition>				
			shall be applied for 2 hours in each 3 mutually			
		perpendicular directions.				
		Vibration frequency	range : $10$ Hz ~ 55Hz			
		Peak to peak amplitu				
		Sweep rate	: $10Hz \sim 55Hz \sim 10Hz$ in about 1 minute			
		Mounting method:				
			r greater than 12.5mm or longer than 25mm must be fixed			
4.9	Vibration	in place with a bracket.				
4.9	test					
		<criteria></criteria>				
		After the test, the followin				
		Inner construction	No intermittent contacts, open or short circuiting.			
			No damage of tab terminals or electrodes.No mechanical damage in terminal. No leakage			
		Appearance	of electrolyte or swelling of the case.			
		Appearance	The markings shall be legible.			
		<condition></condition>	ed under the following conditions:			
		Soldering temperature	: 245±3°C			
		Dipping depth	: 24515 C			
		Dipping speed	: 25±2.5mm/s			
	Solderability	Dipping speed Dipping time	: 3±0.5s			
4.10	test	<criteria></criteria>	. 5±0.58			
	test		A minimum of 95% of the surface being			
		Coating quality	immersed			
L	ı					

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		<condition></condition>								
		-	r shall be immersed into solder b							
		1 seconds or $400 \pm 10^{\circ}$ C for $3^{+1}_{-0}$ seconds to 1.5~2.0mm from the body of capacitor.								
		Then the capacitor shall b	e left under the normal temperatur	e and normal humidity						
	Resistance to	for 1~2 hours before mea	surement.							
4.11 solder heat <criteria></criteria>										
test     Leakage current     Not more than the specified value.       Capacitance Change     Within ±10% of initial value.										
		Capacitance Change	Within $\pm 10\%$ of initial v	alue.						
		tan δ	Not more than the specifie	d value.						
		Appearance	Appearance         There shall be no leakage of electrolyte.							
			There shan se he realinge							
		<condition></condition>								
		Humidity Test:	-4 No.4.12 methods, capacitor sha	11						
			hours in an atmosphere of 90~95							
		1	istic change shall meet the followi							
	Damp	<criteria></criteria>	istic change shan meet the followi	ng requirement.						
4.12	heat	Leakage current	Not more than the specified valu	e.						
	test	Capacitance Change	Within $\pm 20\%$ of initial value.							
		Dissipation Factor	Not more than 120% of the speci	fied value.						
		Appearance	There shall be no leakage of elec	trolyte.						
		D 11 11 4	4 0 1 0 70							
		Reasonable pulling strength :0.1~0.7N								
		Pulling speed: 300mm/min								
		push pull scale								
		<u></u>	seal tape							
4.13	Adhesion test		$\theta$ : approx. 10°							
			θ carr	ier tape						
		1 5	ed to the specified reflow solderin							
			w ) it shall meet the condition state	d in the page 10,						
	Reflow	item 4.11.								
		<reflow condition<="" soldering="" td=""><td></td><td></td></reflow>								
			sured with thermal couple. which	shall be placed and fixed						
	soldering	on the top of capacitor body.	surea with thermal couple. which	shall be placed and fixed						
4.14	temperatur									
	e profile	Maximum Permissible Reflow Soldering Temperature Profile								
	_		all done according to following							
			soldering temperature reflow							
		soldering temperature profile								

#### ELECTROLYTIC CAPACITOR SPECIFICATION VTD SERIES



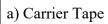
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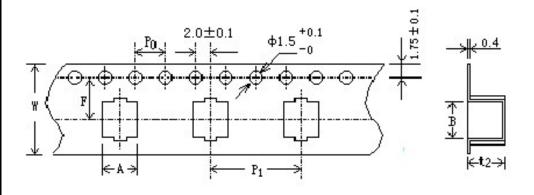
MAN YUE ELECTRONICS
<b>COMPANY LIMITED</b>

### SAMXON

### 5. Taping

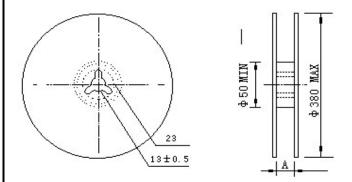
[Unit: mm]





φD×L	W±0.3	A±0.2	B±0.2	F <b>±</b> 0.1	P <sub>1</sub> ±0.1	t <sub>2</sub> ±0.2
φ 8X10.2	24.0	8.7	8.7	11.5	16.0	11.0

b) Reel



φD	6.3	10	8
А	18	26	26

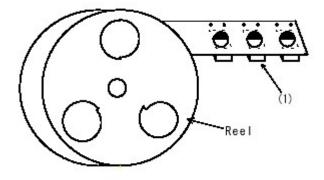
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#### ELECTROLYTIC CAPACITOR SPECIFICATION VTD SERIES

# SAMXON

### 6. Packing Style

- (1). Carrier tape shall be reeled inside. (seal tape shall be outside)
- (2). End of the tape shall be inside to the reel physically as shown in the below figure and leader part of seal tape shall not be attached.



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