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TRX 特锐祥
专注电容器材料

 TRX 专注电容器廿年	SMD- 1			
	SMD 1 . .			
	/N	TRX-3-079	/D	2021-04-25
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/E.C.LIST

Material name	SMD-Y1.CAP		Description	See list	
TRX P.N.	See list	Edition	A0	Date	2021-04-25
Edition	Date	Main update item		Remarks	
A0	2021-04-25	New Version			
Modify	JAENS	Check	/	Approve	SUNNY

1/ I

/Recognized specifications

Code	CUSTOMER P.N.	TRX P.N.	Product description	Package code
1	/	TGY1681K	SMD-Y1Y5P681K/AC400V	10596
2	/	TGY1102K	SMD-Y1Y5P102K/AC400V	10596
3	/	TGY1222M	SMD-Y1Y5U222M/AC400V	10596
4	/	TGY1332M	SMD-Y1Y5U332M/AC400V	10596
5	/	TGY1472M	SMD-Y1Y5U472M/AC400V	10596
6	/	TGY1103M	SMD-Y1Y5V103M/AC400V	10596
7				
8				
9				
10				
11				
12				

2/ II

TR SMD- 1.CAP
 C R T.C D (U : F
 Y1

Specification and model description of Y1 AC ceramic fixed capacitor:


T.C	680	1000	2200	3300	4700	10000
2B(Y5P)						
2E(Y5U)						
2F(Y5V)						
U _R	250V.ac/400V.ac					
Operating Temperature	-40 to 125					
Climatic category	40/ 125/ 21					

1000V

100Hz

About Y AC ceramic fixed capacitor acknowledgement specifications description:

Y a.c. ceramic capacitors are used in electrical and electronic equipment and connected an a.c. main with nominal voltage not exceeding 1000va.c, and with a nominal frequency not exceeding 100Hz.

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1. /P N

T G 1 102 K

No.	Code	
	T	
	G	
	Y1	
	102	represent significant supplier 100pf
	K	/Cap K(±)

Various code mentioned above for the company standard!

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/E	
	/ registered trademark / brand
B	/ code of Dielectric B(Y5P) / E(Y5U) / F(Y5V)
Y1	Safety class
102	/ Capacitance (680-10000pF : 681-103)
K	/Capacitance tolerance K(10%)/M(20%)
400V~	UL CQC ENEC voltage for UL CQC ENEC
	UL
	CQC
	ENEC
	KC
250V~	KC voltage for KC
MB060806	Date code

3. /D

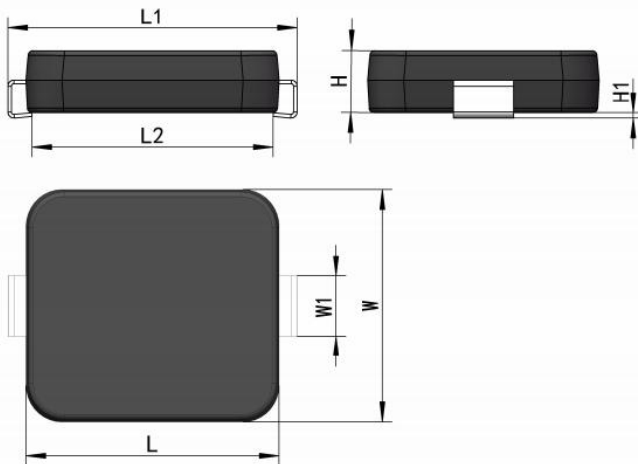
code of year		code of month		code of day					
year	code	year	code	month	code	day	code	day	code
		2020	M	1	01	1	01	16	16
		2021	N	2	02	2	02	17	17
2010	A	2022	P	3	03	3	03	18	18
2011	B	2023	R	4	04	4	04	19	19
2012	C	2024	S	5	05	5	05	20	20
2013	D	2025	T	6	06	6	06	21	21
2014	E	2026	U	7	07	7	07	22	22
2015	F	2027	V	8	08	8	08	23	23
2016	H	2028	W	9	09	9	09	24	24
2017	J	2029	X	10	10	10	10	25	25
2018	K			11	11	11	11	26	26
2019	L			12	12	12	12	27	27
						13	13	28	28
						14	14	29	29
						15	15	30	30
								31	31

4. /C

Certification	Standard number	Certificate number	Certified voltage
UL/CUL	UL/CSA 60384-14	E315719	AC400V(r.m.s.)
CQC	GB/T6346.14-2015	CQC17001176740	AC400V(r.m.s.)
ENEC	EN60384-14:2013/A1:2016	ENEC-02084	AC400V(r.m.s.)
KC	KC 60384-14	SU03127-21002	AC250V(r.m.s.)

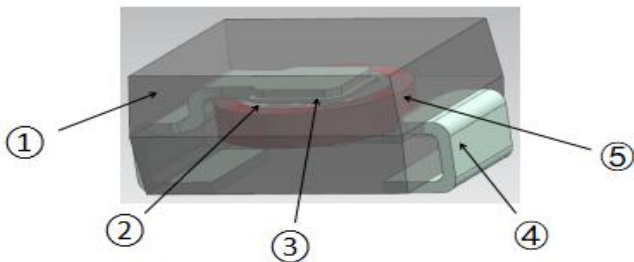
5. /P

5.1 /Product Dimension



Product Dimension(mm)			
L	10.5±0.5	W	9.6±0.5
L1	12±0.5	W1	2.5±0.05
L2	10.5±0.5	H	2.58±0.1
H1	0.15±0.05		

5.2 /Product structure




No.	Part name	Material
	Coating	(UL94V-0) Epoxy molding compound (UL94V-0)
	Electrode	/ Silver/Copper
	Solder	Sn-Pb-Ag Sn-Pb-Ag solder
	Lead Pin	Tinned copper
	Dielectric	Ceramic



/N

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6.2 /Flow Soldering

When soldering capacitor, it should be performed in following conditions.

280°C

Soldering temperature 280 max.

30

Soldering time 30s max.

200°C

Preheating temperature 200°C max.

180

Preheating time 180s max.

6.3 /Soldering Iron PCB/PWB

When soldering this product to a PCB/PWB, do not exceed the solder heat resistance specification of the capacitor. Subjecting this product to excessive heating could melt the internal junction solder and may result in thermal shocks that can crack the ceramic element.

When soldering capacitor with a soldering iron, it should be performed in following conditions.

400°C

Temperature of iron-tip 400 max.

50

Soldering iron wattage 50W max.

5

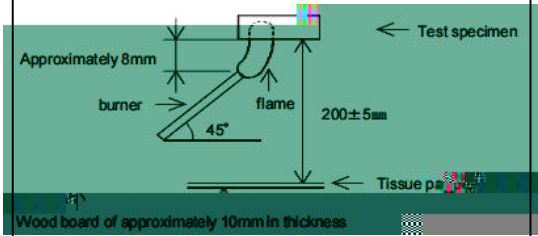
Soldering time 5s max.

7. /P

NO	Item	Specification	test method
1	Appearance	No visible damage Legible marking Lead pin is not oxidation and its surface is without sundries.	unaided eye or magnifier
2	Dimensions	5.1 See 5.1 for details	Using calipers and micrometers

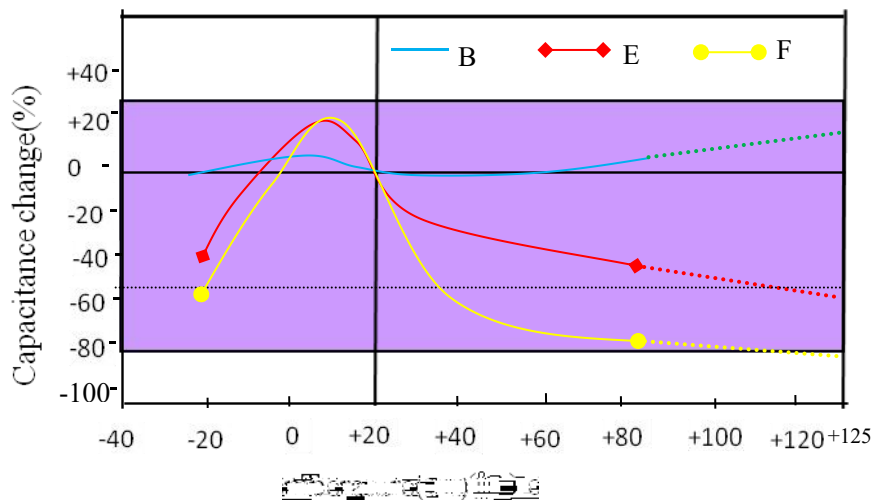
NO	Item		Specification	test method
8	Resistance to soldering heat	visual examination	no visible damage	150 180°C 90±30s Preheat the capacitor at 150 to 180°C for 90±30s. /Reflow temp. : 230°C-260°C /Reflow time : 60 15s. /Reflow number of times: 4 times 15--35°C 45--75%RH 24±2 Let sit at 15-35 °C, 45-75% RH condition for 24±2 h, then measure. The next reflow process should be done after the temperature of the sample has dropped to room temperature.
		voltage proof	NO.3 Pass the item NO.3	
		Capacitance change	Y5P: ±10% Y5U: ±20% Y5V: ±20%	
		D.F.	Y5P: ≤2.5% Y5U: ≤2.5% Y5V: ≤2.5%	
		I.R.	NO.7 accorder NO.7	
9	Solderability		3 90% Good tin coating (tin rate above 90%), within 3 seconds of convergence.	(JIS K 5902) (JIS K 8101) (25%) () Immerse the capacitor in the solution of ethanol (JIS K 8101) and rosin (JIS K 5902) (25% rosin in weight proportion). (Reference) 2±0.5s Immerse in solder solution for 2±0.5s. Temp. of solder: 245±10°C
10	Temperature cycle	visual examination	No visible damage	upper category temperature: +125±3°C lower category temperature: -40±3°C /number of cycles : 5 duration of exposure at the temperature limits 30min 25±3 24±2 Capacitor shall be placed at 25±3°C for 24±2h before initial measurements.
		voltage proof	NO.3 accorder NO.3	
		Capacitance change	Y5P: ±10% Y5U: ±20% Y5V: ±20%	
		D.F.	Y5P: ≤2.5% Y5U: ≤2.5% Y5V: ≤2.5%	
		I.R.	NO.7 accorder NO.7	


NO	Item		Specification	test method
11	Vibration resistance		Capacitor shall not visible Damage Y5P: ±10% Y5U: ±15% Y5V: ±15% DF 2.5%	Frequency rangs: 10→55→10Hz /swing: 1.5mm 6 The total duration shall be 6 hours X Y Z 2 duration of exposure at X,Y,Z 2hours
12	Damp heat (steady state)	visual examination	No visible damage	/test temperature : 40±2°C /humidity : 95±3%RH /duration : 21d : U _R (400V) voltage: Apply U _R (400V) to half of the samples and no voltage to the other half. 25±3 24±2 capacitor shall be placed at 25±3°C for 24±2hours before measurements.
		Capacitance	$= (C_X - C_0) / C_0$ Y5P : ±10% Y5U : ±15% Y5V : ±15%	
		voltage proof	NO.3 accorder NO.3	
		I.R.	≥3000MΩ	
13	Endurance	visual examination	No visible damage	8KV 3 Subjected to 8KV impulses for three times. /Test temperature : 125±3°C /Duration : 1000+24/-0 hours : 680 VAC 1.7U _R 1000V 0.1 Test voltage : 680VAC 1.7U _R except that once every hour the voltage shall be increased to 1000v r.m.s. for 0.1s. 47Ω±5% Each of these voltage shall be applied To each capacitor individually through a resistor of 47Ω±5%. 25±3 24±2 Capacitor shall be placed at 25±3°C for 24±2hours before measurements.
		Capacitance	$= (C_X - C_0) / C_0$ Y5P : ±10% Y5U : ±15% Y5V : ±15%	
		voltage proof	NO.3 accorder NO.3	
		I.R.	≥3000MΩ	

NO	Item	Specification	test method
14	Impulse voltage	No permanent breakdown or flashover during the test period.	<p>Peak impulse voltage : 8.0KV</p> <p>Impulses distance : 10s</p> <p>Impulses times : 24</p>
		<p>If any three successive impulses are shown by the oscilloscope monitor to have had a waveform indicating that no self-healing breakdowns or flashovers have taken place in the capacitor, then no further impulses shall be applied and the capacitor shall be counted as conforming.</p>	
		<p>24 3</p> <p>If all 24 impulses have been applied to the capacitor and 3 or more of them are of a waveform indicating that no self-healing breakdowns or flashovers have occurred, then the capacitor shall be counted as conforming.</p>	
		<p>If less than three impulses are of the required waveform, then the capacitor shall be counted as a nonconforming item.</p>	
15	Passive flammability	<p>30</p> <p>The burning time should not be exceeded the time 30s.</p>	<p style="text-align: right;">30</p> <p>The capacitor under test shall be held in the flame in the position which best promotes burning. Each specimen shall only be exposed once to the flame. Time of exposure to flame : 30 s.</p> <p style="text-align: center;">/Length of flame : 12±1mm</p> <p style="text-align: right;">35</p> <p>Gas burner : Length 35mm min.</p> <p style="text-align: center;">/Inside dia : 0.5±0.1mm</p> <p style="text-align: center;">/Outside dia : 0.9mm max.</p> <p style="text-align: right;">95%</p> <p>Gas : Butane gas purity 95% min.</p>
		<p>The tissue paper should not ignite.</p>	

NO	Item	Specification	test method
16	Component solvent Resistanc	No visible damage. NO.3~NO.7 Performance according to No.3 ~ No.7	30 5% 70 5% Solvent to be used: 30 5%alcohol and 70 5%fluxional compound /Solvent temperature: 23±5°C 5 0.5 The capacitor shall be immersed in solvent for 5±0.5seconds. /Recovery time: 8hours
17	Solvent resistance of the marking	The marking shall be legible	30 5% 70 5% Solvent to be used: 30 5%alcohol and 70 5%fluxional compound /Solvent temperature: 23±5°C 5 0.5 10 The capacitor shall be immersed in solvent for 5±0.5seconds and its markshall be wiped with pledget for 10times.

8. /C



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9. /C

RoHS2.0 2011/65/EU

halogen

REACH No190 7/2006



Substances	concentration (unit: ppm)
/Cadmium and cadmium compounds	<100
/Lead and lead compounds	<1000
/Mercury and mercury compounds	<1000
/Hexavalent chromium compounds	<1000
PBBS/Polubrominated biphenyls	<1000
PBDES/Polubrominated diphenylethers	<1000
+ + + /Cd+Pb+ Hg + Cr+6(packaging materials)	<100
/Cl	<900
/Br	<900
+ /Cl+Br	<1500
REACH SVHC Substances of Very High Concern (SVHC) of REACH	TRX REACH The latest reach report of TRX shall prevail

10. /S

The insulating Epoxy molded capacitors does not form a perfect seal; therefore, do not use or store capacitors in a corrosive atmosphere, especially where chloride gas, sulfide gas, acid, alkali, salt or the like are present. And avoid exposure to moisture. So, in order to avoid the absorption of moisture, capacitors are packed in moisture-proof envelope.

6

Store the capacitors in the following conditions at all times, and use within 6 months after delivered.

/Temperature: 10 30°C

/Humidity: 60%max.


168

Solder the enclosed capacitors within 168 hours after opening the moisture-proof package. After opening, store the capacitors in moisture-proof package with a desiccant and HIC card and keep the above condition.

6

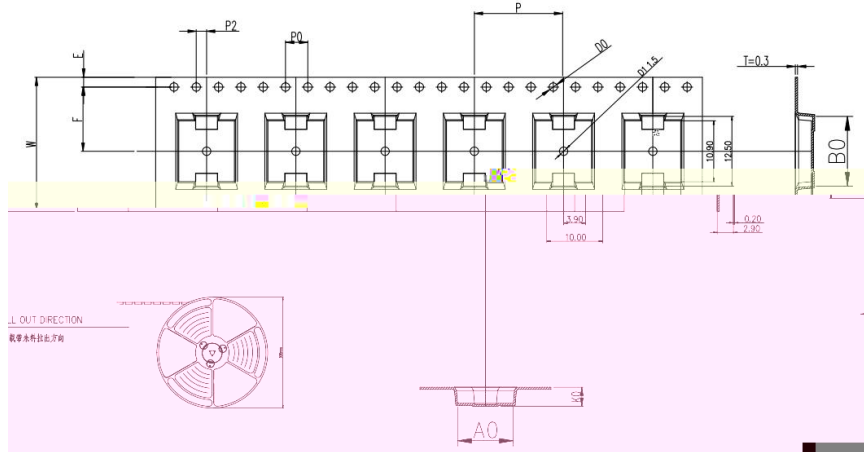
60°C 168

In case the storage period has been exceeded 6 months or the indicator color of a enclosed HIC card has changed when the package has been opened, perform baking (60°Cx168hr) before soldering.

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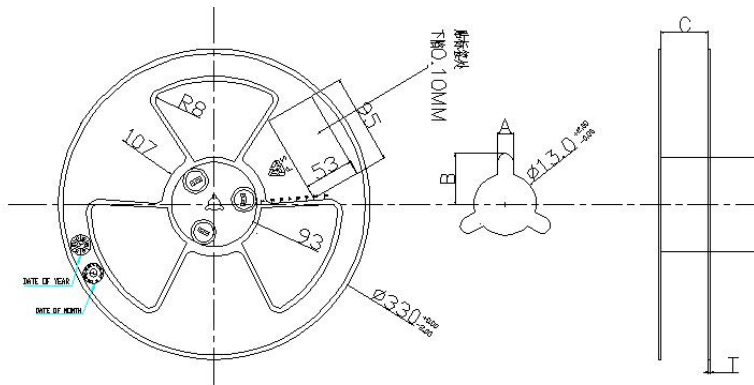
11. /P

11.1 /Dimension of tape



ITEM	W	A0	B0	K1	K0	P	F	E	D0	D1	P0	P2	T
DIM	24.0	$+0.30$ -0.30	$+0.10$ -0.10	$+0.10$ -0.10	3.45	$+0.10$ -0.10	$+0.10$ -0.10	1.75	$+0.10$ -0.00	$+0.10$ -0.00	$+0.10$ -0.10	$+0.10$ -0.10	$+0.05$ -0.05
ALTERNATE													

11.2 /REEL

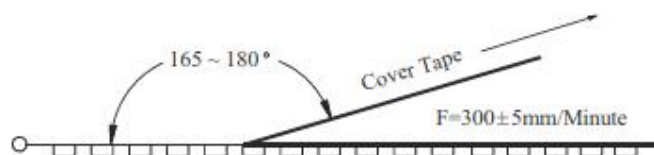



SPEC	A±0.3	B±0.5	C $+0.5$ -0.0	D±0.5	T±0.2
24	2.3	10.75	24.4	Ø97	2.2

REEL	REEL SIZE
1500pcs	13inch

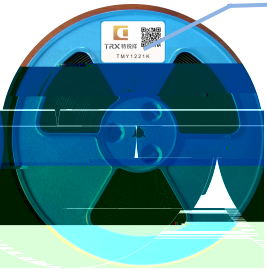
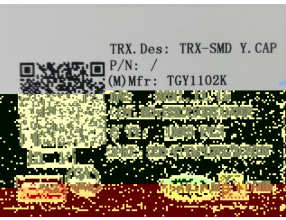



11.3 /Peeling Strength

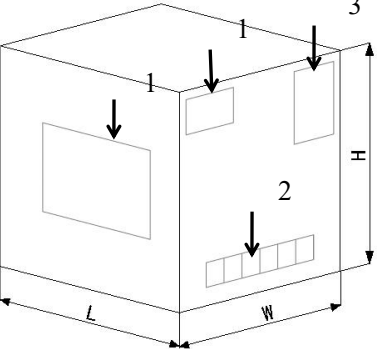



Item	Data	Remark
Cover tape adhesion	10 ~ 100g	Carrier tape and cover tape open angle 165 ~ 180° F=300± 5mm/minute







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11.4 /Product Packaging Scheme


/ -			/Item	
 <p style="text-align: center;">/Reel Size: 13inch 1.5KPCS/Reel</p>  <p style="text-align: center;">/Product information label</p>	/Label	 <p style="text-align: center;">/Inner disc label</p>  <p style="text-align: center;">/Label on Sealed bag</p>  <p style="text-align: center;">/Humidity sensitive label</p>	TRX.Des	
	P/N			
	Mfr			
	D/C			
	Lot.No			
	Q~TY			
	SPEC			

/O -															
	 <p style="text-align: center;">1/Figure 1</p>	 <p style="text-align: center;">2/Figure 2</p>	 <p style="text-align: center;">3/Figure 3</p>												
	<table border="1"> <thead> <tr> <th colspan="3">(mm) Dimension</th> <th>Quantity</th> <th>Out Box Weight</th> </tr> <tr> <th>L</th> <th>W</th> <th>H</th> <td rowspan="2" style="text-align: center;">15KPCS</td> <td rowspan="2" style="text-align: center;">≈18KG</td> </tr> </thead> <tbody> <tr> <td style="text-align: center;">355</td> <td style="text-align: center;">358</td> <td style="text-align: center;">294</td> </tr> </tbody> </table>		(mm) Dimension			Quantity	Out Box Weight	L	W	H	15KPCS	≈18KG	355	358	294
(mm) Dimension			Quantity	Out Box Weight											
L	W	H	15KPCS	≈18KG											
355	358	294													

/P :				
 <p style="text-align: center;">/Out Box</p>	 <p style="text-align: center;">10 / / 10Reel/Box</p>	 <p style="text-align: center;">(/ /) Pallet Size(L/W/H) 1100*1100*90mm</p>	 <p style="text-align: center;">(/ /) Stacking volume(L/W/H) 1100*1100*1600mm</p>	

1. 5 2. PALLET & WRAPPING 3. 50cm 4. /

R :1.The 5 on the packing is stacked layers can't more than 5 layers; 2. Pallets packaging & long-distance transport should be warpping; 3.50 cm above the height of the parcel do not drop; 4. Normal temperature / humidity keeping.

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12. /A

Attention is drawn to the fact that repetition of the voltage proof test by the user may damage the capacitor.

PCB PCB

PCB

Capacitors mounted on a printed circuit board (PCB) requirements of PCB board welding disc required and capacitor pin paste solder joint agreement, the opposite may cause the capacitor and the PCB board to bad welding and capacitor tube deform the feet or body destruction and damage the capacitor.

Avoid any compressive, tensile or flexural stress.

Please consult us first if you wish to embed the capacitor in plastic resins.

PCB

Do not move the capacitor after it has been soldered to the board.

PCB

Do not pick up the PC board by the soldered capacitor.