

APPROVAL

DESCRIPTION :

NCE PARTS NO. : TC-C3

PARTS NO. :

DRAWING :

RECEIVED

VENDOR:UNITY SYSTEMS.CO.,LTD.

ADD: Unit 19Floor, Block west QIUSHI building ,zhuzhilinlu,
Shennanzhonglu, Shenzhen,Guangdong,P.R.China

TEL:86-755-88316650

FAX:86-755-88316651

[Http://www.newcont.com](http://www.newcont.com)

E-mail:pvc@newcont.com

NCE

TRIMMER CAPACITORS

MODEL: TC-C3

UNITY SYSTEMS. CO., LTD.

**ADD: Unit 19 Floor, Block west QIUSHI building, zhuzhilinlu,
Shennanzhonglu, Shenzhen, Guangdong, P.R. China**

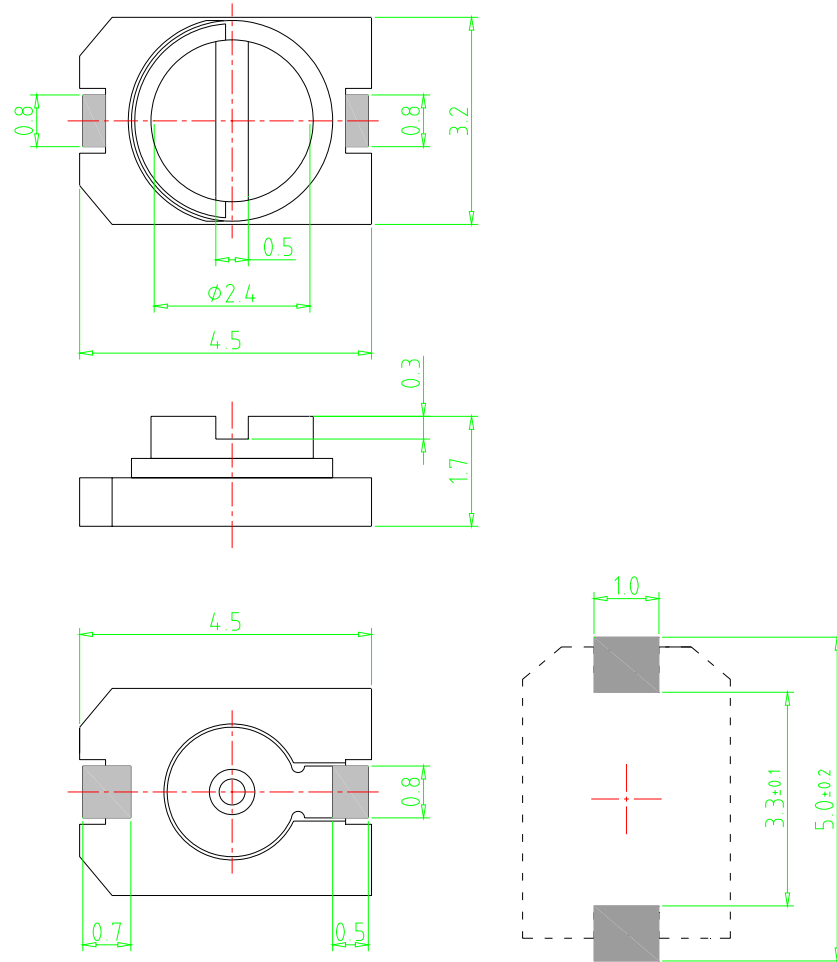
TEL: 86-755-88316650

FAX: 86-755-88316651

[Http://www.newcont.com](http://www.newcont.com)

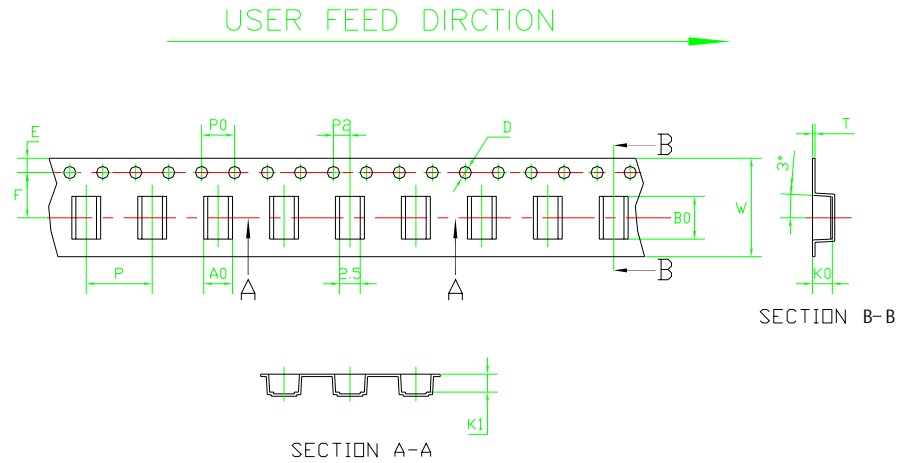
E-mail: pvc@newcont.com

Outline drawing



REVISIONS	APPEARANCE		PART NO
	UNIT: mm	SCALE: 5/1	TC-C3
	DIMENSION TOLERANCE GENERAL ± 0.1		COLOR
	DESIGNED BY:	Yan qinkun	-
	DRAWN BY:	Yan qinkun	NCE
	CHECKED BY:	Yan qinkun	
	APPROVED BY:	X.L.BAO	

ITEM	W	A0	B0	K0	K1	P	F	E	D	P0	P2	T	包 装
DIM	12.0	3.60	4.90	2.20	2.00	8.00	5.50	1.75	1.50	4.00	2.00	0.30	直径/盘 数量
TOLE	+0.30 -0.10	+0.10 -0.10	+0.10 -0.10	+0.10 -0.10	+0.10 -0.10	+0.10 -0.10	+0.10 -0.10	+0.10 -0.10	+0.10 -0.10	+0.10 -0.10	+0.10 -0.10	+0.05 -0.05	φ180mm 1000PCS



技术要求：

1. 任意10个棘轮的累计误差不超过 $+/-0.20$ ；
2. 材料厚度以在载带边缘测量为准；
3. 载带长度方向100mm距离的非平行度不可超过1mm；
4. 超过250mm不计算累计误差；
5. 除非指明，公差范围为： $+/-0.10mm$ ；
6. A0、B0为型腔内侧最底部向上0.30mm处测量为准；
7. K0为内部深度；
8. 材料为PS, 颜色透明。

1. Scope

This specification applies to the type CERAMIC trimmer capacitor using CERAMIC as a dielectric.

2. Construction

2.1 Dimensions and materials

Refer to page 1.

	Items	Contents
1	Dimension	See attached drawing
2	Dielectric	ceramic
3	External	There are not remarkable stain

Table 1

No	Part NO	Capacitance(pf)		Temperature Coefficient(ppm/)	Q factor (1MHZ Cmax)
		MIN	MAX		
1	TCC3-03	1.7 Or less	3 Or more	NPO ± 300PPM	300 Or more
2	TCC3-06	2.5 Or less	6 Or more	NPO ± 300PPM	300 Or more
3	TCC3-10	3.5 Or less	10 Or more	N750 ± 300PPM	300 Or more
4	TCC3-20	5.5 Or less	20 Or more	N1200 ± 500PPM	300 Or more
5	TCC3-30	7.5 Or less	30 Or more	N2200 ± 500PPM	300 Or more

5 *				
4 *				
3 *				
2 *				
1 *				
HISTORY *COUNT	ECN-NO	DATE	REVISION	SIGN

TRIMMER CAPACITORS

NCE

3. Characteristics

Standard atmospherics conditions:

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

Ambient temperature	:	5	to	35	;
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 limits:

Ambient temperature	:	20	±	2	;
Relative humidity	:	60%	to	70%	;
Air pressure	:	86kPa	to	106kPa.	

Operating temperature range:

The operating temperature range is the range of ambient temperature of which the trimmer capacitor can be operated continuously within rated voltage.

-25 to +85

Storage temperature range:

The Storage temperature range is the range of ambient temperature at which the trimmer capacitor can be Stored without damage, conditions are as specified elsewhere in these specification.

-25 to +85

3.1 Mechanical characteristics:

	Items	Conditions	Specification
1	Rotational torque	When the spindle is rotated at a rate of 10 rpm	1.5~10.0mNm (15~100gf.cm)
2	Difference between the maximum and minimum value of rotational torque	Difference between the maximum value and the minimum value when the shaft is rotated at a rate of 10 rpm	3 : 1 or less
3	Shaft load	A load of 1 N shall be applied perpendicular to the shaft for 10s.	Clauses 3-1-1 and 3-1-2 should be satisfied
4	Backlash		Without backlash When rotating

3-2 Electrical characteristics

	Items	Conditions	Specification
1	Rated voltage		100 V d.c.
2	Nominal capacitance	Nominal capacitance(Measured at 1MHz)	See table 1
3	Q	Measured at 1 MHz	See table 1

3-3 Endurance characteristics

Test capacity shall be 80% to 90% of the maximum value excluding clauses 3-3-1, 3-3-3 and 3-3-12

	Items	Conditions	Specification
1	Solder ability	Bit temperature : 390 ± 10 Application time of solder iron : 3sec or less	(1)Solder wetting time shall be 3 s or less. (2)A new uniform coating of solder shall cover a minimum of 95% of the surface being immersed.
2	Vibration	At maximum capacitance , only endurance conditioning by a frequency shall be made .the entire frequency range , from 10Hz to 50Hz and return to 10Hz , shall be transverse in 1 min. Amplitude (total excursion) : 1.5 mm This motion shall be applied for a period of 2 h in each of mutually perpendicular axis (a total of 6 h) The variable capacitance shall be subjected to standard atmospheric for other procedures.	Table 2 shall be satisfied.
3	Shock	At maximum capacitance. Peak acceleration : 981 m/s^2 (100 G) Duration of pulse : 6 ms Three successive shall be applied in both directions of mutually perpendicular axis (a total of 18 shock).	Table 2 shall be satisfied.
4	Cold	Placed in tank at -25 ± 2 for 48 ± 4 hours,left at room temperature for 1 hour after which measurement shall be made.	Table 2 shall be satisfied.
5	Dry heat	Placed in tank at 85 ± 2 for 48 ± 4 hours,left at room temperature for 1 hour after which measurement shall be made.	Table 2 shall be satisfied.
6	Damp heat	Placed in tank at 40 ± 2 ,90% to 95%RH for 96 ± 4 hours,left at room temperature for 1 hour after which measurement shall be made.	Table 2 shall be satisfied.
7	Damp heat with load	Twice as much of the rated voltage shall be applied continuously to the capacitor at a temperature of 40 ± 2 with relative humidity of 90% to 95% for 96 ± 4 h. And then it shall be subjected to the controlled recovery conditions for 1h. after which measurement shall be made.	Table 2 shall be satisfied.
8	Electrical endurance	Twice as much of the rated voltage shall be applied continuously to the capacitor at a temperature of 85 ± 2 for 96 ± 4 h. And then it shall be subjected to the controlled recovery conditions for 1h. after which measurement shall be made.	Table 2 shall be satisfied.

Items	Conditions	Specification
9 Change of temperature	The capacitor shall be subject to 5 continuous cycles, such as shown in table below . And then it shall be subjected to the controlled recovery conditions for 1 hour, after which measurement shall be made.	
	Step	Temperature
	1	-25 ± 3
	2	Standard atmosphere conditions
	3	85 ± 2
10 Operating endurance	The capacitor shall be subject to 10 cycles(5 cycles for each left and right) at a speed of 10 rpm to 15rpm	
	Step	Temperature
	1	-25 ± 3
	2	Standard atmosphere conditions
	3	85 ± 2

Table 2 shall be satisfied.

Table 2 shall be satisfied.

Table 2

1	Appearance		There shall be no deformation, excessive looseness, or damage
2	Rotational torque	Refer to clauses 3-1-1and 3-1-2	Clauses 3-1-1 and 3-1-2 should be satisfied
3	Change in capacitance	Refer to clauses 3-2-2	Relative to previously (± 5%)within specified value
4	Q	Refer to clauses 3-2-3	Clauses 3-2-3 should be satisfied
5	Insulation resistance	Refer to clauses 3-2-4	Clauses 3-2-4should be satisfied
6	Dielectric strength	Refer to clauses 3-2-5	Clauses 3-2-5should be satisfied

Change in capacitance = (C2-C1)/C1X100(%)

C1=value measured before test

C2=value measured after test

4. Marking

The following items shall be marked indelibly and legibly on the capacitor or on each unit pack.

4-1 Products name.

4-2 Type name or part number.

4-3 Month and year of or production code (including lot No.)

4-4 Manufacturer's name (abbreviated manufacturer's name permitted) or trademark.

4-5 Country of origin, china.

5.The CFCs of not used.

6.The PBDE ,PBBS of not used.

TRIMMER CAPACITORS

NCE