

# APPROVAL

DESCRIPTION : TUN-CAP 40-266P 20 × 20A

NCE PARTS NO. : BE443AB91-A04

PARTS NO. :

DRAWING :

**RECEIVED**

**VENDOR:UNITY SYSTEMS.CO.,LTD.**

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# NCE

## POLYVARICON

### MODEL: BE443AB91-A04

**UNITY SYSTEMS. CO., LTD.**

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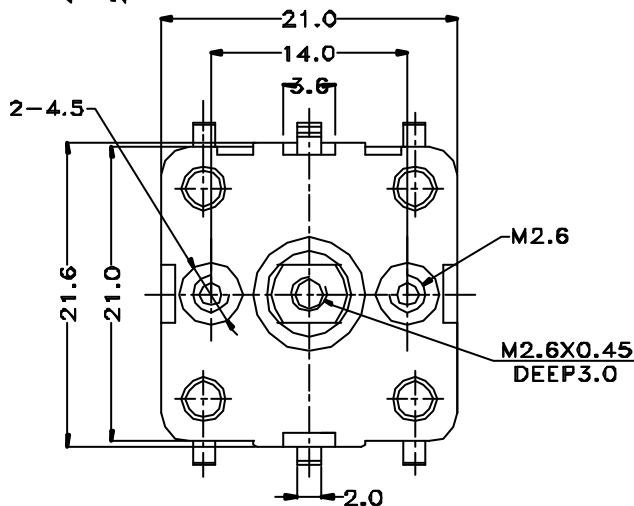
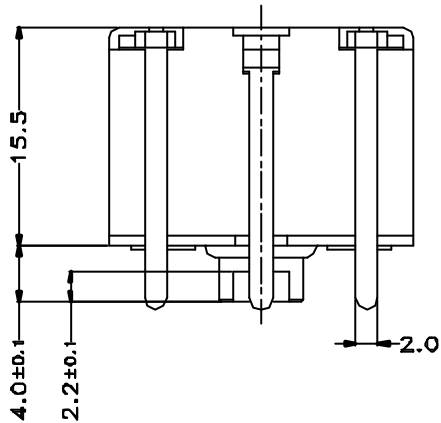
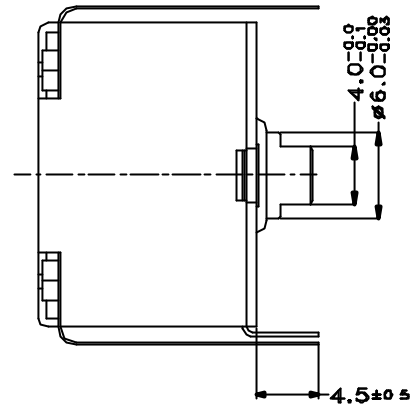
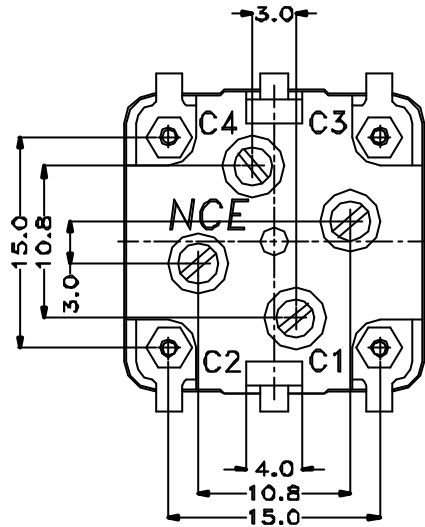
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**Outline drawing**



- C1: FM OSC**
- C2: FM ANT**
- C3: AM OSC**
- C4: AM ANT**

REVISIONS	APPEARANCE		MODEL
	UNIT: mm	SCALE: 2/1	BE443AB91-A04
	DIMENSION TOLERANCE GENERAL ± 0.3		CODE NUMBER
	DESIGNED BY: WISDOM TIAN		189-91-01
	DRAWN BY: WISDOM TIAN		<b>NCE</b>
	CHECKED BY: LASER YANG		
	APPROVED BY: L.K.ZHANG		

**1. Application**

This specification is applicable for 4 gangs capacitor , model **BE443AB91-A04** with 2 gangs of equal capacitance on AM section and with 2 gangs of equal capacitance on FM section, for tuned and oscillation circuit of transistor radio.

**2. Electrical Characteristics**

**2-1. Capacitance**

Effective capacitance at each position is shown on Table 1 , defining the rotation angle 180 ° is expressed 100%.

Table 1 Capacitance & Coefficient

A M			F M		
Rotation	OSC / ANT		OSC / ANT		Rotation
(%)	Coef.	Capa.(pF)	Coef.	Capa.(pF)	(%)
*100	100.00	266.00	100.00	40.00	*100
90	84.40	224.50	86.18	34.47	90
*80	67.90	180.61	73.37	29.35	80
75	60.00	159.60	67.32	26.93	*75
70	52.30	139.12	61.48	24.59	70
*60	38.00	101.08	50.42	20.17	60
50	26.20	69.69	40.12	16.05	*50
*40	17.00	45.22	30.50	12.20	40
30	10.20	27.13	21.52	8.61	30
*25	7.57	20.14	17.25	6.90	*25
20	5.31	14.12	13.11	5.24	20
*10	1.74	4.63	5.23	2.09	*10
3	0.00	0.00	0.00	0.00	3

**2-2. Minimum Capacitance**

Minimum Capacitance shown on Table 2 is defined at the end stop, where shaft is rotated full clockwise. But trimmer capacitance is minimum.

Table 2

Section	Minimum Capacitance
AM	C3 : 3.6 ± 1.0pF , C4 : 3.3 ± 1.0pF
FM	C1 : 3.0 ± 1.0pF , C2 : 3.6 ± 1.0pF

**2-3. Tolerance of Capacitance**

The tolerance of the effective capacitance is shown Table 3

Table 3

Condition	Section	Standard
At the angle of * marking of Table 1	OSC	AM ± ( 1.5% + 1.5 pF ) , FM ± ( 1.0 % + 1.0 pF )
	ANT	AM ± ( 1.5% + 1.5 pF ) , FM ± ( 1.0 % + 1.0 pF )

Clause	Item	Condition	Standard
2 - 4	Insulation Resistance	At D.C. 100V	More than 100 M
2 - 5	Voltage Proof	Running D.C. 100V for 1 minute	Not to be found unusually
2 - 6	Q Characteristics	AM	Valued at 10MHz 50pF
		FM	Valued at 100MHz 10pF
2 - 7	Contact Resistance	Valued at the tops of shaft and earth terminals when 1kHz ± 200Hz and 100mA are supplied(Rotation speed 30 times/minute)	Less than 20 m

## 3. Mechanical Characteristics

Clause	Item	Condition	Standard
3 - 1	Direction of the rotation	Capacitance change when shaft is rotated clockwise	Decreasing
3 - 2	Shaft Rotation	Rotation range is defined 100% for 180 °	97% (+2 to -1%)
3 - 3	Rotation Torque	Torque application when shaft is rotated full at normal temperature condition	50 - 400 gf.cm
3 - 4	Strength of end stop	A specimen is left in the standard test condition for 1 minute after 5 kgf.cm rotations	Not to be found insulate both electrically and mechanically
3 - 5	Ratio of Max. and Min. torque	Max.: Min.	Within 3: 1

## 4. Trimmer ability

Clause	Item	Condition	Standard
4 - 1	Shaft Rotation	Rotation range	360 °
4 - 2	Rotation Torque	On the whole rotation range. Ratio of Max. and Min. torque	50 – 400 gf-cm Max.: Min. within 3 : 1
4 - 3	Effective Capacitance		More than 5 pF
4 - 4	Q Characteristics	At maximum capacitance and 10 MHz(main capacitance is minimum)	More than 200

## 5. Materials

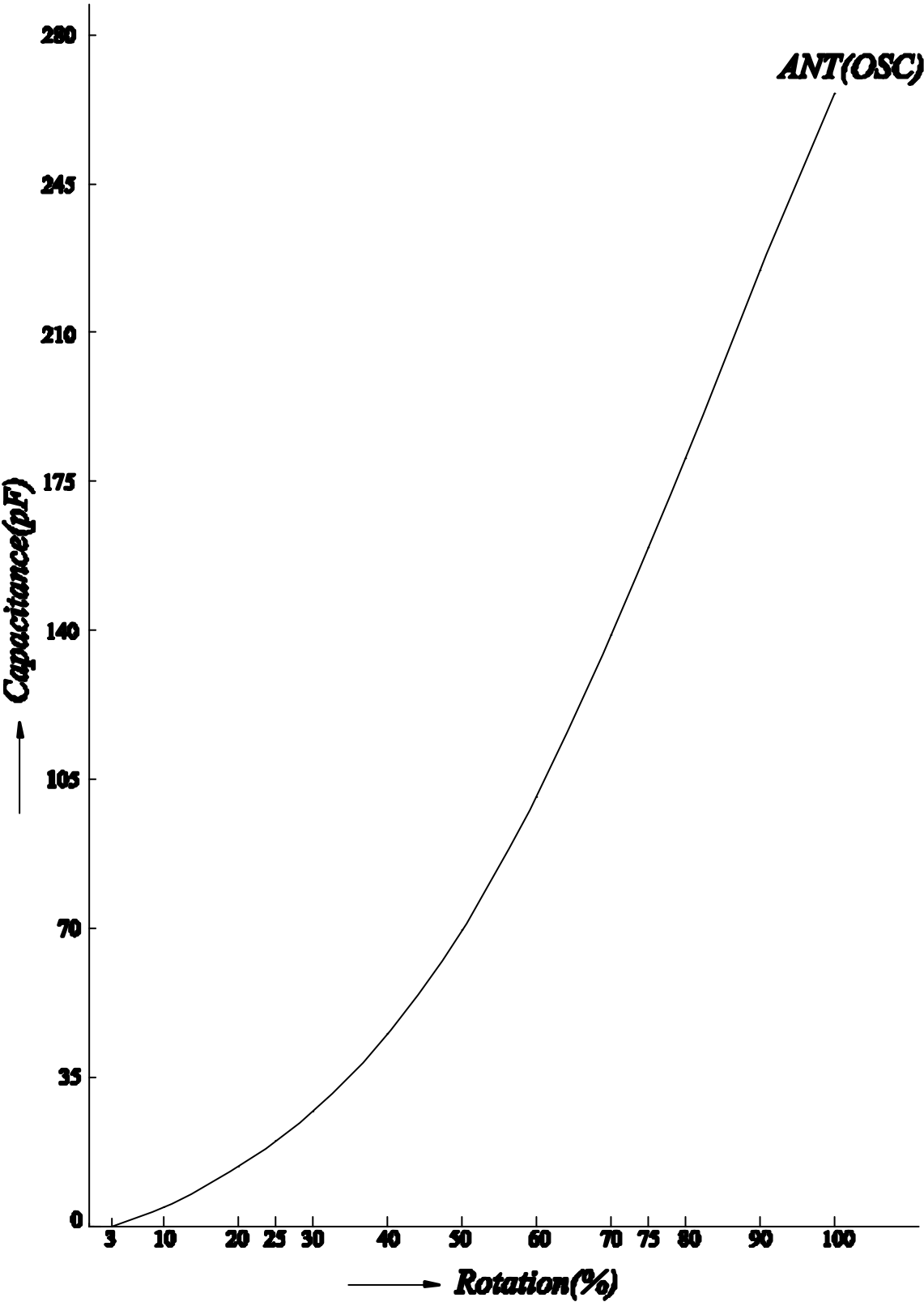
## 5-1. Body Parts

Component	Materials
Base	Degeneration ABS included glass
Case	Degeneration PP or AS
Rotor Shaft	Brass
Rotor Plate	Aluminum or Brass
Stator Plate	Aluminum - Polyethylene film
Terminal	Iron or Brass - Tin plating

## 5-2. Trimmer Parts

Component	Materials
Trimmer Base	Degeneration ABS included glass
Trimmer Shaft	Brass or Copper Alloys
Trimmer Rotor Plate	IRON - Nickel plating
Trimmer Stator Plate	IRON - Polypropylene film

# AM curve-BA



# FM curve-EB

