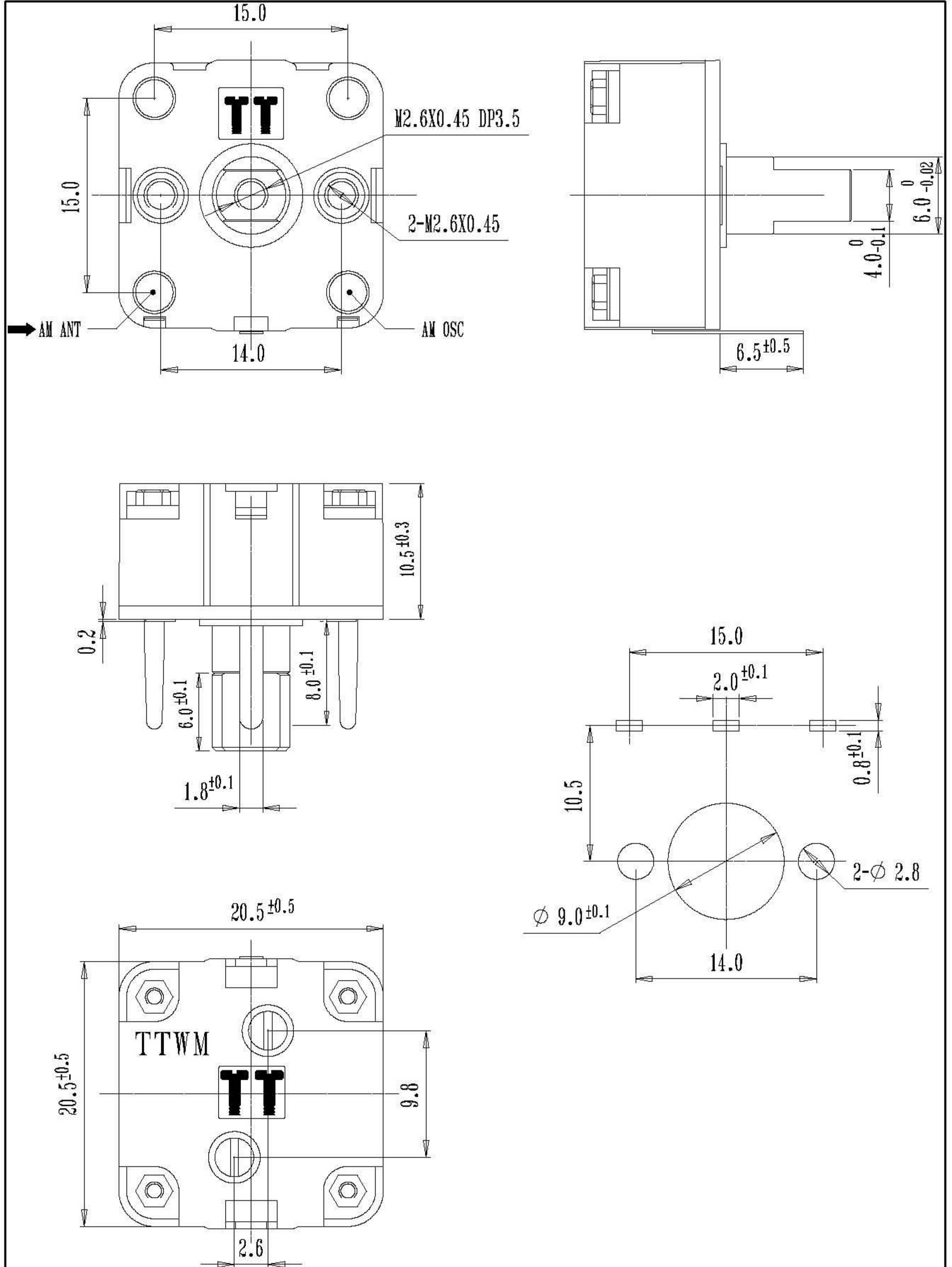


Variable Capacitors

Order code	Manufacturer code	Description
12-0255	AT-201N (5)	MINIATURE TUNING CAPACITOR-AM (RC)

Variable Capacitors	Page 1 of 5
The enclosed information is believed to be correct, Information may change without notice due to product improvement. Users should ensure that the product is suitable for their use. E. & O. E.	Revision A 20/02/2007



TITLE/DESCRIPTION: POLY VARIABLE CAPACITOR

PART NO. : LA-201N-L10

SPECIFICATIONS

Model: AT-201N (5)

1. Application

This specification is applicable for 2 gangs capacitor with 2 gangs of different capacity on AM section.

2. Materials

Materials of the main components are shown on table 1.

Table 1

Component	Materials	Component	Materials
Dielectric	Polyethylene Film	Shaft	Brass
Base	PC	Stator Plate	Brass and AL
Case	Polypropylene	Terminal	Brass

3. Electrical Characteristics

3.1 Capacitance

Effective capacitance at each position is shown on table 2, defining the rotation angle 180° is expressed 100%.

Table 2

Rotation (%)	AM(OSC)		AM(ANT)	
	Coefficient	Capacitance (pF)	Coefficient	Capacitance(pF)
100*	100.00	59.2	100.00	141.60
90	93.20	55.2	89.20	126.30
80	86.00	50.9	78.50	111.20
75	82.30	48.7	73.30	103.70
70	78.00	46.2	67.90	96.10
60	69.30	41.0	56.80	80.40
50	59.20	35.0	45.40	64.30
40	48.00	28.4	34.30	48.50
30	35.50	21.00	23.50	33.20
25	28.70	17.00	18.20	25.70
20	21.80	12.90	13.10	18.50
10	8.10	4.80	4.40	6.20
3	0.00	0.00	0.00	0.00

3.2 Minimum Capacitance

Minimum Capacitance shown on Table 3 is defined at the end stop, where shaft is rotated full clockwise. But trimmer capacitance is at minimum.

Table 3

Section	Minimum Capacitance
AM	OSC: $4.0 \pm 1.0\text{pF}$ ANT: $3.0 \pm 1.0\text{pF}$

3.3 Tolerance of Capacitance

Table 4

Condition	Section	Standard
At the angle of* marking of Table 2	OSC	AM(C1) $\pm (1.0\text{pF}+1.5\%)$
	ANT	AM(C2) $\pm (1.0\text{pF}+1.5\%)$ By electrical indexing method

3.4-3.7 Q characteristics, Insulation Resistance, Voltage Proof and Contact Resistance are shown in Table 5.

SPECIFICATIONS

Model: AT-201N (5)

Table 5

Clause	Item	Condition	Standard
3.4	Q Characteristic	AM at 10MHz and 50pF	More than 500
3.5	Insulation Resistance	At 100 D.C. V. on the whole rotation range(resistance of stator to rotor)	More than 100M Ω
3.6	Voltage Proof	One section is applied to 100 D.C. V. for 1 minute on the whole rotation range	Breakdown will not be occurred
3.7	Contact Resistance	The shaft is rotated at 10-20mA A.C.(500-2000Hz) on the whole range	Less than 20m Ω

4. Mechanical Characteristics

Table 6

Clause	Item	Condition	Standard
4.1	Direction of the rotation	Capacitance change when shaft is rotated clockwise	Decreasing
4.2	Shaft rotation	Rotation range is defined 100 for 180°	97 \pm 1%
4.3	Rotation	Torque application when shaft is rotated full at normal condition	80-350gf-cm
4.4	Starting torque	On the whole rotation range	Within 350gf-cm
4.5	Ratio of max & min. torque	Maximum : minimum	Within 3 : 1
4.5	Strength of end stop	A specimen is left in the standard test condition for 1 minutes after 6kgf-cm rotations	Not to be found defects both electrically and mechanically
4.6	Strength of terminals	(1) Lead terminals- to bend the terminal 2 times by 90 degree up and down with 500gf pulling force (2) Stator Pole terminal – to push and pull the stator pole for 10 seconds	Breakdown shall not occur for terminal or other part

5.1 Materials

Table 7

Component	Materials
Trimmer Base	PC
Trimmer Shaft	Brass
Trimmer Rotor Plate	Brass
Trimmer Stator Plate	Brass
Trimmer Dielectric	Hostaphan Mp film

5.2-5.5

Table 8

Clause	Item	Condition	Standard
5.2	Shaft rotation		360°
5.3	Effective Capacity		More than 5pF
5.4	Q Characteristics	At maximum capacity and 10 MHz	More than 120
5.5	Rotation torque	On the whole rotation range	70-280gf-cm

6. The Standard test condition

This means the condition of temperature 5 to 35°C and relative humidity 45 to 85%, pressure 860-1060 mbar but that of 20 \pm 2°C and 65 \pm 5% if there any doubt.

