

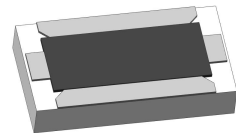
**Part No. Descriptions**

|                |                       |                          |                                    |                                                                                                                                                            |                      |                       |   |       |   |       |                    |                                                            |
|----------------|-----------------------|--------------------------|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-----------------------|---|-------|---|-------|--------------------|------------------------------------------------------------|
| ****<br>Series | **<br>Frequency       | **<br>Attenuation        | **<br>Temperature                  | *<br>Frequency                                                                                                                                             | ***<br>Metallization | *<br>Termination      |   |       |   |       |                    |                                                            |
| ↓              | ↓                     | ↓                        | ↓                                  | ↓                                                                                                                                                          | ↓                    | ↓                     |   |       |   |       |                    |                                                            |
| KTCA           | (36)                  | (02 to 06)<br>2dB to 6dB | Coefficient Code<br><br>(N3 to N7) | Range Code<br><table><tr><td>Number Code</td><td>Frequency Range (GHz)</td></tr><tr><td>5</td><td>18-27</td></tr><tr><td>6</td><td>27-36</td></tr></table> | Number Code          | Frequency Range (GHz) | 5 | 18-27 | 6 | 27-36 | Options<br><br>SMT | Plating Options<br><br>(no code)=lead free or (S)=Lead(Pb) |
| Number Code    | Frequency Range (GHz) |                          |                                    |                                                                                                                                                            |                      |                       |   |       |   |       |                    |                                                            |
| 5              | 18-27                 |                          |                                    |                                                                                                                                                            |                      |                       |   |       |   |       |                    |                                                            |
| 6              | 27-36                 |                          |                                    |                                                                                                                                                            |                      |                       |   |       |   |       |                    |                                                            |

| Part No.       | Frequency Range Code | Attenuation (dB) | Temperature Coefficient Code | Temperature Coefficient of Attenuation (dB/dB/°C) | Typ. VSWR (:1) @25°C | Max. Input Power (mW) | Attenuation Accuracy (dB) |
|----------------|----------------------|------------------|------------------------------|---------------------------------------------------|----------------------|-----------------------|---------------------------|
| KTCA3602N*SMTS | 18~36                | 2                | N3~N7                        | -0.003~ -0.007                                    | 1.50                 | 100                   | ±1.0                      |
| KTCA3603N*SMTS | 18~36                | 3                | N3~N7                        | -0.003~ -0.007                                    | 1.50                 | 100                   | ±1.0                      |
| KTCA3604N*SMTS | 18~36                | 4                | N3~N7                        | -0.003~ -0.007                                    | 1.50                 | 100                   | ±1.0                      |
| KTCA3605N*SMTS | 18~36                | 5                | N3~N7                        | -0.003~ -0.007                                    | 1.50                 | 100                   | ±1.0                      |
| KTCA3606N*SMTS | 18~36                | 6                | N3~N7                        | -0.003~ -0.007                                    | 1.50                 | 100                   | ±1.0                      |

**General Specifications**

- Frequency Range 18 to 27GHz
- Attenuation 4dB
- Attenuation Accuracy at 25°C ±1.0dB Typical
- VSWR at 25°C 1.50:1 Typical
- Nominal Impedance 50 Ohms
- Power Rating 100 mW CW
- Power Derating 100% @ 100°C  
Derates to 0% @ 150°C
- Operating Temperature -55°C to +150°C
- Temperature Coefficient over Operating Temperature Range: See Table Above.  
Temperature Coefficient Tolerance: ±0.001dB/dB/°C.
- Substrate: Alumina (Al<sub>2</sub>O<sub>3</sub>)
- Resistive material: Thick film
- Terminal material: Thick Film, Nickel Barrier, Sn/Pb Solder Plated
- Protective Coating: Thick film (ethyl acetate)
- Package Outline: See Sheet 3.
- Workmanship: per MIL-PRF-55342.
- RoHS Compliant.
- Electrostatic Discharge Control: per MIL-STD-1686.



**Unit Marking**    dB Value (XX), Direction of Shift (N) and TCA Shift (X).  
Legibility and Permanency: per MIL-STD-130.

**Quality Assurance**

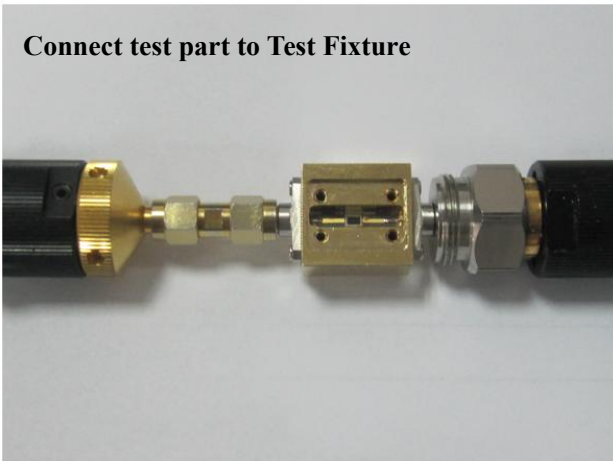
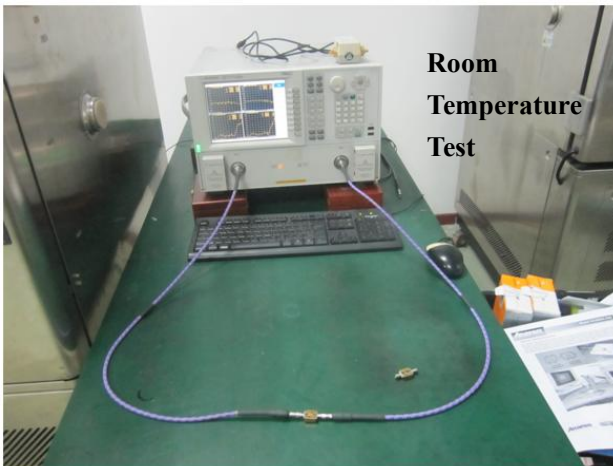
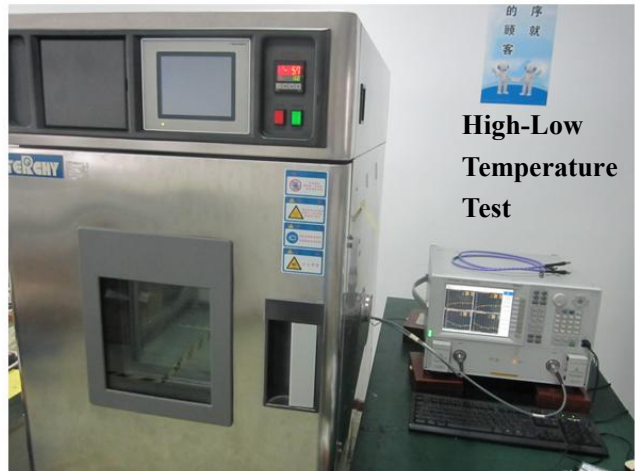
- Sample inspect per ANSI/ASQC Z1.4 general inspection, LEVEL II, AQL = 1.0.
  - 1.1 Visual and mechanical examination for conformance to outline package requirements.
- Select five (5) Units from lot measure attenuation from 18 to 36GHz every 20°C over the temperature range -55°C to +125°C.
  - 2.1 Calculate, using linear regression, the slope of the curve.
  - 2.2 Calculate TCA using the following formula: TCA = Slope / Attenuation @ 25°C.
- Test data required for customer.

**Yantel Corporation**

Add: 3F, Building 3, Southern District 2 of Zhongguan Honghualing Industrial Park, Xili, Nanshan, Shenzhen, China

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 For detailed performance specs & shopping online see Yantel web site : [www.yantel-corp.com](http://www.yantel-corp.com)

**Notes on RF Testing and Circuit Layout****Connect test part to Test Fixture****Equipment Calibration****Room  
Temperature  
Test****High-Low  
Temperature  
Test**

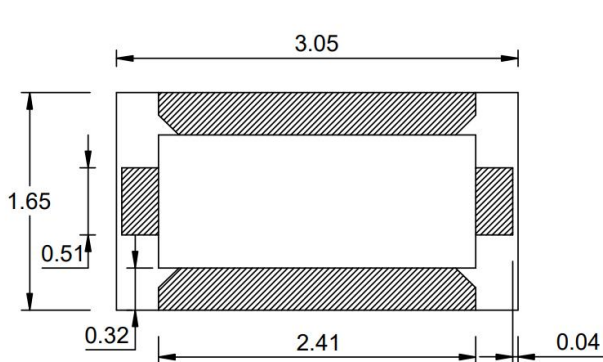
- 1、S2P documents are available for download
- 2、18-36GHz test fixture is rentable (only for Chinese customers) , otherwise please purchase them.

For any questions or needs, please feel free to contact [inform@yantel-corp.com](mailto:inform@yantel-corp.com).

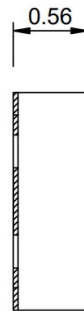
## Package Outlines

All dimensions shown in mm unless stated otherwise  
 Note: Dimension tolerance in  $\pm 0.10$  otherwise mention.

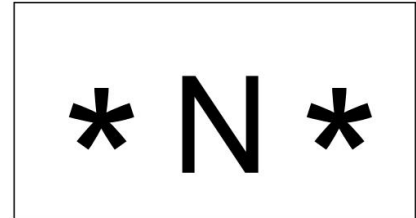
Unit: mm



**TOP**

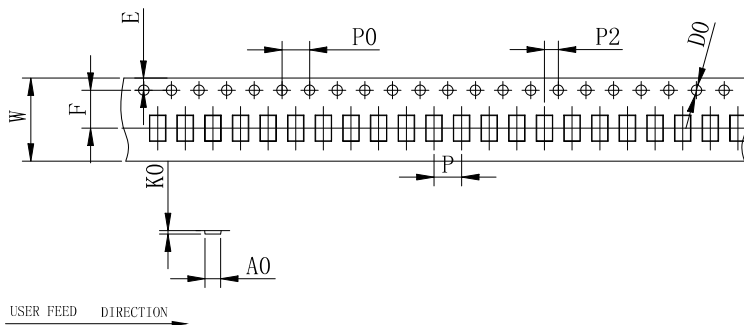


**SIDE**



## Tape & Reel Drawing

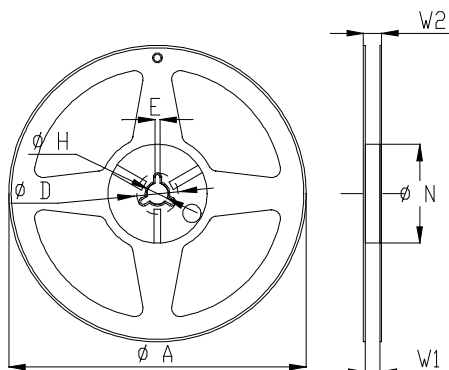
All dimensions shown in mm unless stated otherwise



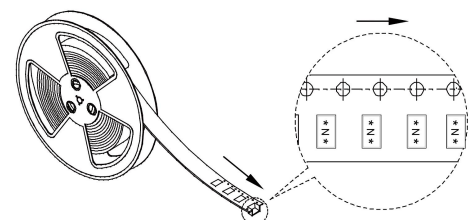
### Remarks:

- 1>Total tolerance of any 10 sprocket holes is  $\leq \pm 0.20$ mm.
- 2>The thickness is measured on the margin of carrier tape.
- 3>Carrier camber should be not more than 1mm per 100mm through a length of 250mm.
- 4>The tolerance which is not marked is  $\pm 0.1$ mm
- 5>A0,B0 are measured from 0.3mm above the bottom of the cavity. KO refers to the inside depth.
- 6>The angle R which is not marked on the cavity is 0.2-0.3.
- 7>Draft angle which is not marked is 3°.
- 8>25 m/reel; 6000 units (maximum) / T&R

| symbol | A0             | B0             | K0             | P0            | P                        | P2            |
|--------|----------------|----------------|----------------|---------------|--------------------------|---------------|
| spec   | $1.85 \pm 0.1$ | $3.2 \pm 0.1$  | $0.6 \pm 0.1$  | $4.0 \pm 0.1$ | $4.0 \pm 0.1$            | $2.0 \pm 0.1$ |
| symbol | W              | T              | E              | F             | D0                       |               |
| spec   | $12.0 \pm 0.3$ | $0.3 \pm 0.05$ | $1.75 \pm 0.1$ | $5.5 \pm 0.1$ | $\Phi 1.5^{+0.1}_{-0.0}$ |               |



| Symbol | Dimensions(mm) |
|--------|----------------|
| A      | $180^{+0/-3}$  |
| N      | $60^{+1/-0}$   |
| W1     | $12.0 \pm 0.3$ |
| W2     | $14 \pm 1.0$   |
| D      | $25 \pm 0.8$   |
| H      | $13 \pm 0.2$   |
| E      | $3 \pm 0.5$    |



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