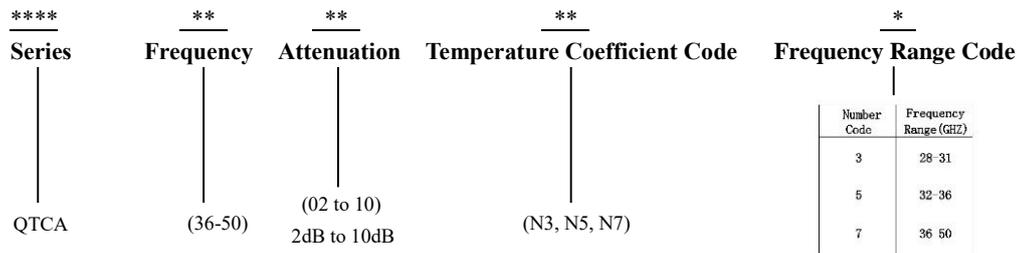
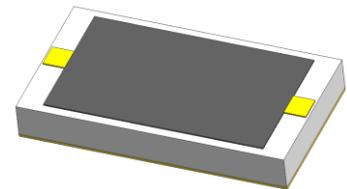


Part No. Descriptions


Part No.	Attenuation (dB)	Temperature Coefficient Code	Temperature Coefficient of Attenuation (dB/dB/°C)	Typ. VSWR (:1) @25°C	Attenuation Accuracy (dB)
QTCA5002N*	2	N3,N5,N7	-0.003,-0.005,-0.007	1.20	±0.5
QTCA5003N*	3	N3,N5,N7	-0.003,-0.005,-0.007	1.20	±0.5
QTCA5004N*	4	N3,N5,N7	-0.003,-0.005,-0.007	1.20	±0.5
QTCA5005N*	5	N3,N5,N7	-0.003,-0.005,-0.007	1.20	±0.5
QTCA5006N*	6	N3,N5,N7	-0.003,-0.005,-0.007	1.20	±0.5

General Specifications

- | | |
|--|--|
| 1. Frequency Range | 36 to 50GHz |
| 2. Attenuation | 3dB |
| 3. Attenuation Accuracy | at 25°C ±1.0dB Typical |
| 4. VSWR | at 25°C 1.50:1 Typical |
| 5. Nominal Impedance | 50 Ohms |
| 6. Power Rating | 200 mW CW |
| 7. Power Derating | 100% @ 100°C
Derates to 0% @ 150°C |
| 8. Operating Temperature | -55°C to +150°C |
| 9. Temperature Coefficient over Operating Temperature Range: See Table Above. | Temperature Coefficient Tolerance: ±0.001dB/dB/°C. |
| 10. Substrate: Alumina (Al ₂ O ₃) | |
| 11. Resistive material: Thick film | |
| 12. Terminal material: Thick film, Input, Output and front Ground all made by gold, Back Ground made by Pd/Ag. | |
| 13. Protective Coating: Thick film (ethyl acetate) | |
| 14. Package Outline: See Sheet 3. | |
| 15. Workmanship: per MIL-PRF-55342. | |
| 16. RoHS Compliant. | |
| 17. Electrostatic Discharge Control: per MIL-STD-1686. | |



Unit Marking ATTENUATION, TCA SLOPE AND TCA
 LEGIBILITY AND PERMANENCY PER MIL-STD-130

Quality Assurance

1. SAMPLE INSPECT PER ANSI/ASQC Z 1.4 GENERAL INSPECTION, LEVEL II, AQL = 1.0
 - 1.1 VISUAL AND MECHANICAL EXAMINATION FOR CONFORMANCE TO OUTLINE DWG REQUIREMENTS.
2. MEASURE RESISTOR DATA AND APPLY FIRST-PASS ATTENUATION AND VSWR CRITERIA:
 - 2.1. ATTENUATION:
 - 2.1.1. G (dB) =TBD * RTOTAL + TBD, WHERE R TOTAL IS THE DC RESISTANCE MEASURED BETWEEN INPUT AND OUTPUT TERMINALS
 - 2.1.2. ACCEPTANCE LIMITS: PER TABLE 1, WHERE "G (dB)" REFERS TO "NOMINAL ATTENUATION (dB)

3. SAMPLE INSPECTION:

3.1. DESTRUCTIVE TESTING:

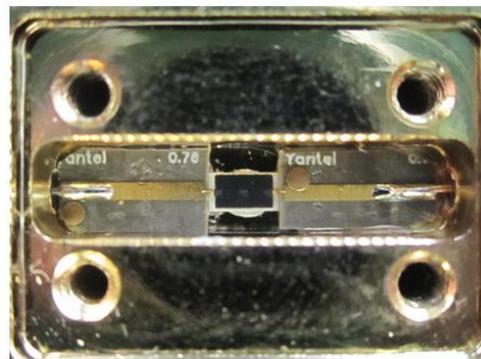
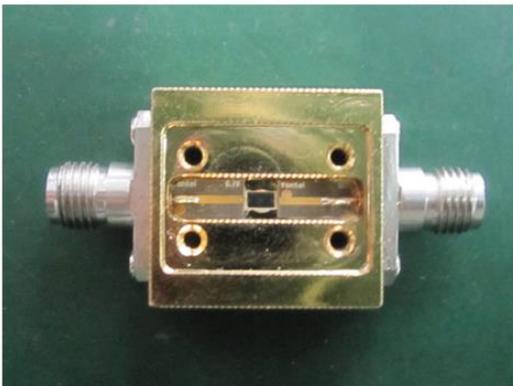
- 3.1.1. SELECT THREE (3) UNITS FROM LOT AND MEASURE TOTAL DCR EVERY 20°C OVER THE TEMPERATURE RANGE FROM -55°C THROUGH +125°C
- 3.1.2. CALCULATE DCA BY FOR EACH MEASUREMENT, USING EQUATION 3.2.1.1
- 3.1.3. CALCULATE, USING LINEAR REGRESSION, THE SLOPE OF THE ATTENUATION VS. TEMPERATURE CURVE
- 3.1.4. CALCULATE TCA USING THE FOLLOWING FORMULA:

$$TCA = \frac{\text{SLOPE}}{\text{ATTENUATION @ 25}^\circ\text{C}}$$

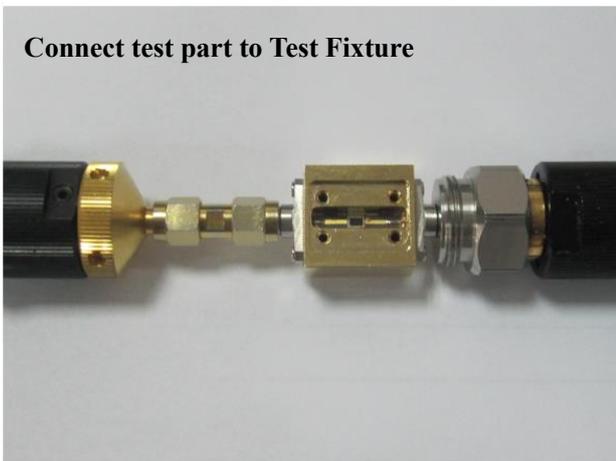
Notes on RF Testing and Circuit Layout

KTCA 16-36GHz series (for Gold Terminal type) Test Fixture

PCB Test Board



Connect test part to Test Fixture



Equipment Calibration



Room Temperature Test



High-Low Temperature Test



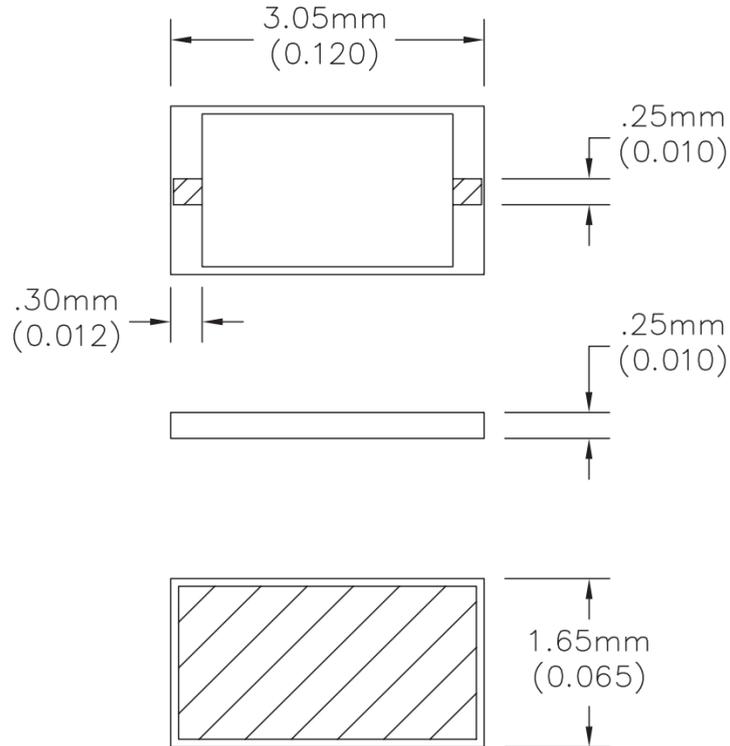
- 1、 S2P documents are available for download
- 2、 16-36GHz test fixture is rentable (only for Chinese customers) , otherwise please purchase them.

For any questions or needs, please feel free to contact inform@yantel-corp.com.

Package Outlines

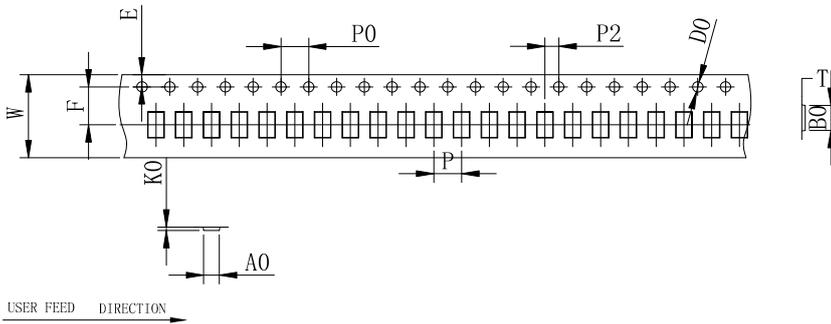
All dimensions shown in mm unless stated otherwise Unit: mm

Note: Dimension tolerance in ± 0.10 otherwise mention.



Tape & Reel Drawing

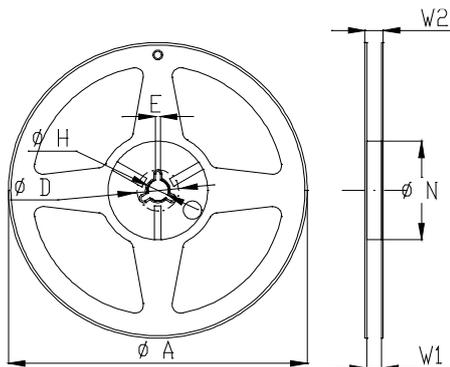
All dimensions shown in mm unless stated otherwise



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 ± 0.1 mm
- 5>A0,B0 are measured from 0.3mm above the bottom of the cavity. K0 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 ± 0.1	3.2 ± 0.1	0.6 ± 0.1	4.0 ± 0.1	4.0 ± 0.1	2.0 ± 0.1
symbol	W	T	E	F	D0	
spec	12.0 ± 0.3	0.3 ± 0.05	1.75 ± 0.1	5.5 ± 0.1	$\Phi 1.5^{+0.1}_{-0.0}$	



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

