

KunShan Innowave Communication Technology CO.,Ltd.

【Material acknowledgement】

CUSTOMER NAME:Shenzhen MTN Electronics Co., LTD

PRODUCT NAME: KE97 (F065E9713910001)

CUSTOMER: 12. N3. 2400NE6DB

Customer material name: MTO-WR1232AC

PRODUCT: Version number :V1.0; MTO-WR1232AC 2.4G antenna 1,55*10*0.6mm resonant frequency 2400~2500Mhz, standing wave ratio less than 2, return loss less than -10, efficiency $\geq 60\%$, gain 4dB, substrate FR4, screen printing, L=100 $\pm$ 5mm Color blue IPEX, meet ROHS2.0, Innowave

Factory signature:

APPROVED BY	AUDITOR BY	CHECKED BY
Huang Chao	Lin Quan Jun	Huang Lei

Customer acknowledges signature:

Acknowledge the result: ☐ OK ☐ NG

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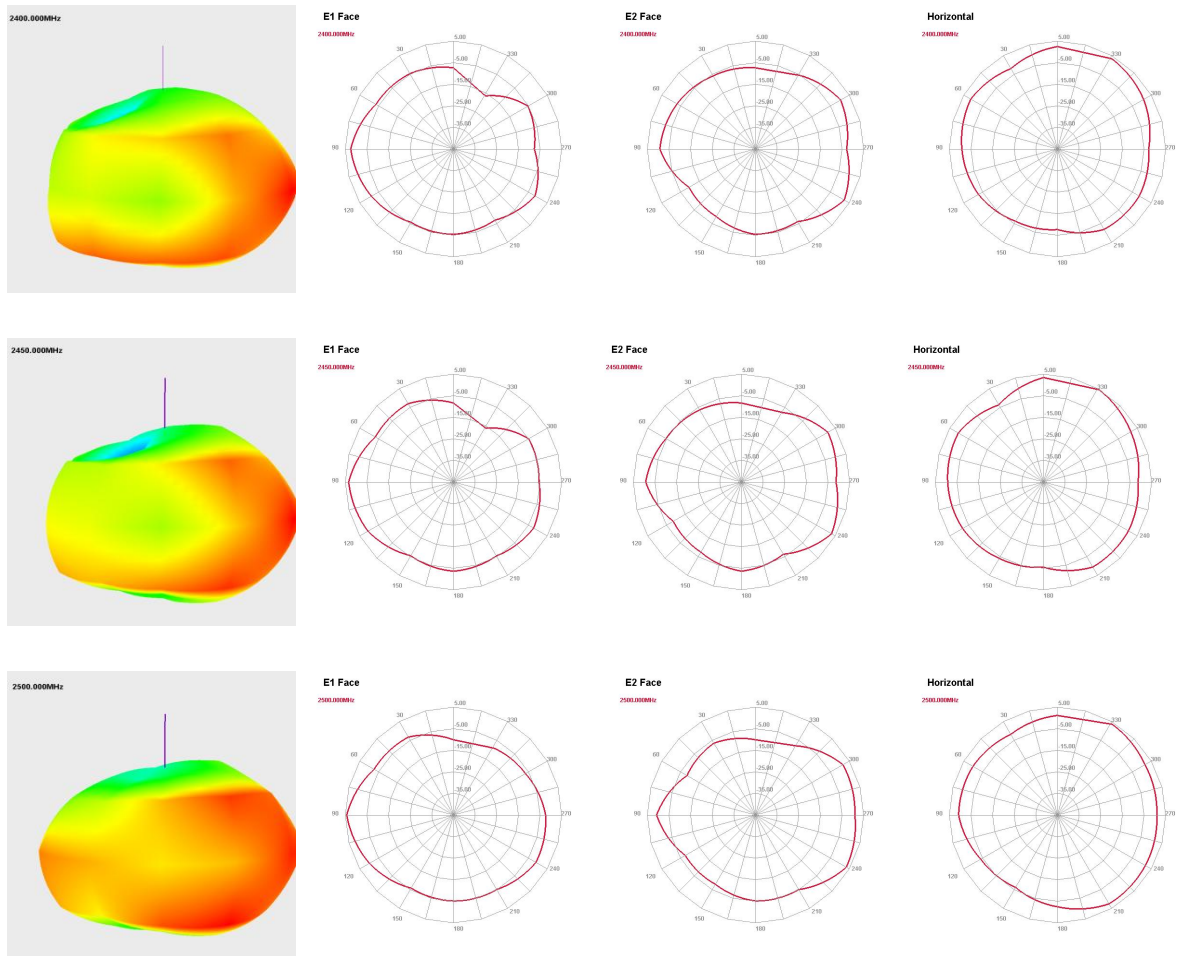
(1) Antenna description

Product main technical parameters

Main technical specificationf

Main technical parameters		Main technical specifications	
Frequency Range (MHz)	2400-2500	Frequency Range (MHz)	2400-2500
Impedance (Ω)	50	Impedance (Ω)	50
Peak Gain(dBi)	2.0	Peak Gain(dBi)	2.0
VSWR	≦2.0	VSWR	≦2.0
Polarization	vertical polarization	Polarization	vertical polarization
Radiation	Omni-directional	Radiation	Omni-directional
Connector Type	MHF Plug	Connector Type	MHF Plug
Physical Properties		Physical Properties	
Antenna Base	FR-4	Antenna Base	FR-4
Operating Temp	-40℃~+70℃	Operating Temp	-40℃~+70℃
Storage Temp	-40℃~+70℃	Storage Temp	-40℃~+70℃

3.2: Darkroom 2D, 3DRaditation Pattern



3.3: Gain, efficiency meter

Frequency(GHz)	Efficiency (%)	Gain(dBi)
2400	77.07	2.32
2450	75.49	2.64
2500	73.38	2.43

4、 Bill of materials

 KunShan Innowave Communication Technology CO.,Ltd. BOM										
Client:	MTN	Type of aircraft:	MTN-WR1232AC	□	E-BOM	2024/5/10	V1	6	2.4G antenna added double-sided tape, 2.4G antenna PCB surface treatment changed. The	
Project number:	KE97	Edition:	V1	☒	P-BOM	2024/3/15			Initial release	Li Ji Sheng
BOM					Change date	Markers	Places	Change content		signature
Item	Change mark	New part number	Product name	Gauge lattice	Material (Surface treatment)		Colour	QTY	Customer part number	supplier
1		F065E9713910001	KE97- Built-in 2.4G-1 antenna assembly	MTN-WR1232AC 2.4G-1 antenna The blue cable is 100mm long	Halogen PCB+ coaxial line + double-sided tape		Black	1 PCS		Innowave self-control
2		M065E9736910001	KE97- Built-in 2.4G-1 antenna PCB	55*10*0.6mm	Halogen 0.6MM FR4 single panel, single side black oil OSP process		Black	1 PCS		Outsourcing
2		S065E9702950001	KE97- Built-in 2.4G-1 RF cable	Φ1.37*100mm ordinary wire +1 generation domestic terminals	Halogen-free copper wire, one end skinned with tin, one end hit the terminal		Blue	1 PCS		Innowave self-control
	3	T011P161	1.37 Common coaxial line	Φ1.37 common coaxial line	Copper wire, both ends peeled with tin (line loss 0.5-1.0dB impedance 50 ohMs)		Blue	0.100/M		Common materials/outsourced
	3	T0360010	Domestic 1 generation terminal	First generation terminal	Halogen-free 1.37 wire		Yellow	1 PCS		Common materials/outsourced
	3	B15A0003	Lead-free environmental protection high temperature tin bar	Lead-free environmental protection high temperature tin strip weight 1KG	Halogen-free tin content 99.3%		silver	0.01g/pcs		Common materials/outsourced
2	V1	M065E9719990002	KE97- Built-in 2.4G double-sided tape	54.4*9.4*0.15mm	Halogen-free 3M9448A T0.15mm double-sided tape		Natural quality	1 pcs		Outsourcing
2		B15A0002	Lead-free green tin wire 0.8mm diameter	Φ0.8mm	Halogen-free rosin content 2.5-3.0% Weight 1KG		silver	0.046g/pcs		Outsourcing
2	V1	B000BZD00021000	Zip-lock bag 002	300*200mm	The single layer thickness of halogen-free transparent anti-static self-sealing port is		Transparent	1/50PCS		Outsourcing
2		B01A0026	Carton 350*350*250mm	Carton 350*350*250mm	Halogen-free carton 350*350*250mm		Natural quality	1/2000PCS		Outsourcing

5 Equipment list

Device name	Calibration date	Equipment life	Test engineer
Network analyzer	2024-05-23	2025-05-12	Li Daung Jun
ETS	2024-05-23	2025-05-23	Li Daung Jun