

KC.WA.00054

Antenna Specification

1. Application:

This application shall apply for antenna unit which shall be used such as automotive, conventional communications, smart home, etc..

2. Electrical Specification:

Those specifications were specially defined for customer's model, and all characteristics were measured under the model's handset testing jig .

2-1. Frequency Band:

Frequency Band	MHz
BT /WiFi	2400-2500/5150-5850MHz

2-2. Impedance

50 ohm nominal

2-3. VSWR

2-3-1. Measurement frequency points and VSWR value

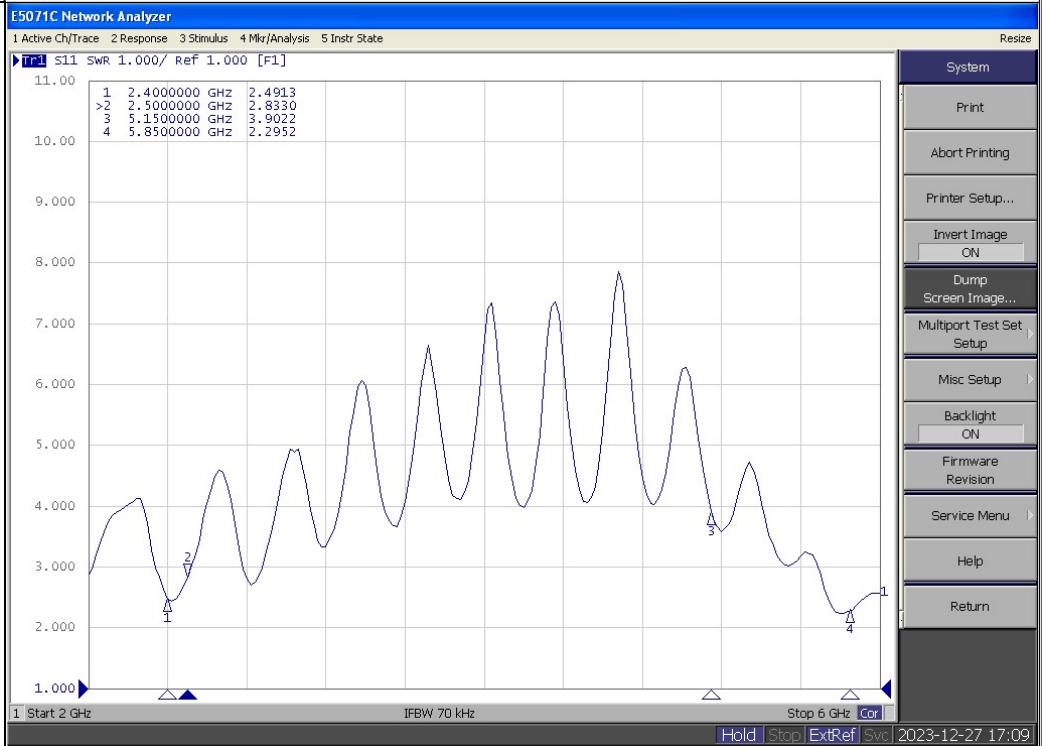
Frequency Band(MHz)	2400	2500	5150	5850
Typical Value: (VSWR)	2.4	2.8	3.9	2.2


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2-3-4 Measuring Method

1. A 50 Ω coaxial cable is connected to the antenna. Then this cable is connected to a network analyzer to measure the VSWR.
2. Keeping this jig away from metal at least 20 cm

2-3-5 Picture



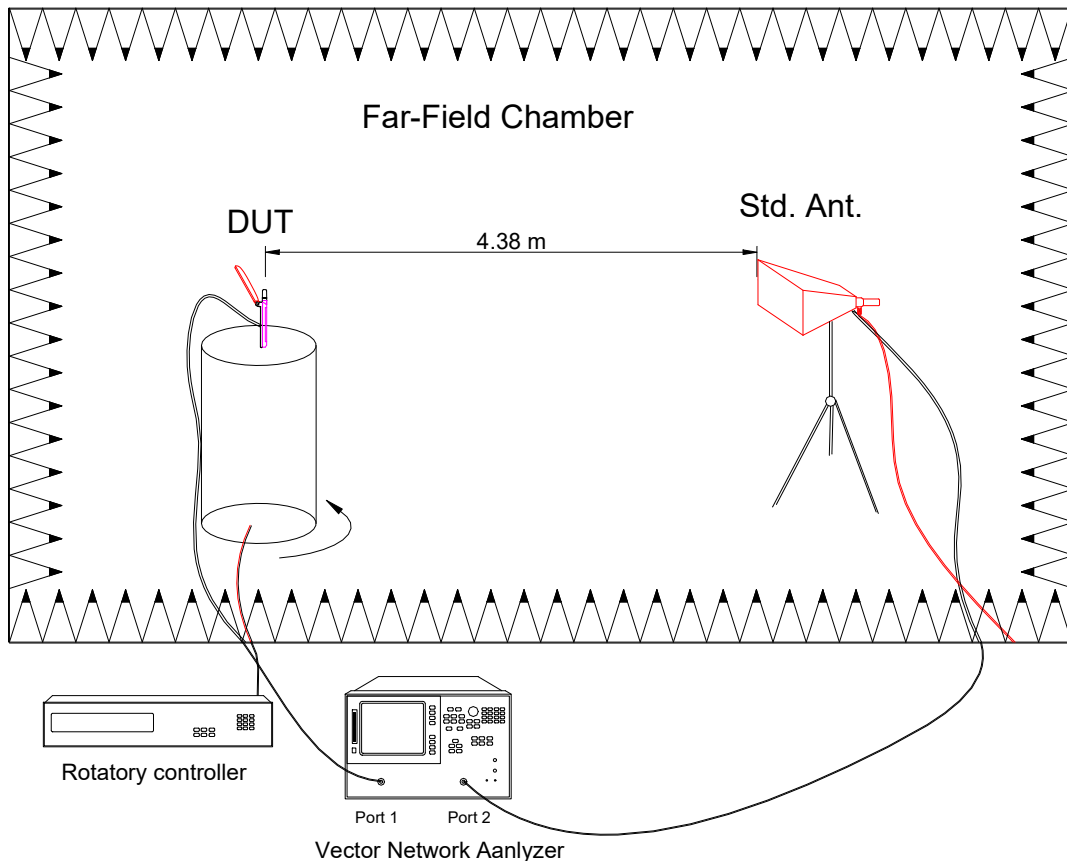
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2-4. Efficiency and Gain

4-5.1 Measure method

1. Using a low loss coaxial cable to link a standard handset jig
2. Fixed this handset jig on chamber's rotator plane
3. Linking jig into network analyzer port and using a probing horn antenna to collect data.
4. Using another standard gain horn antenna to calibrated those data

4-5.2 Chamber definition

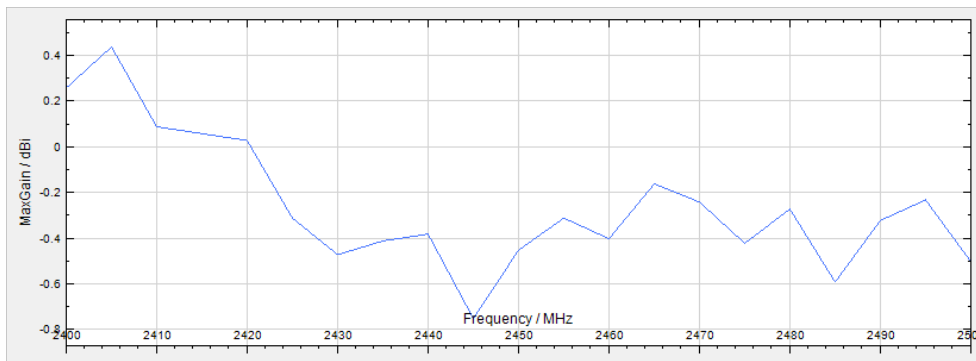
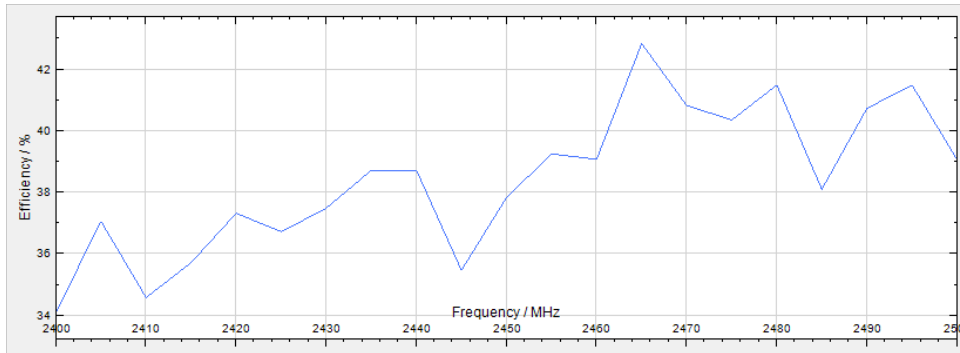
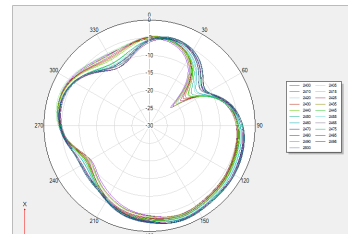
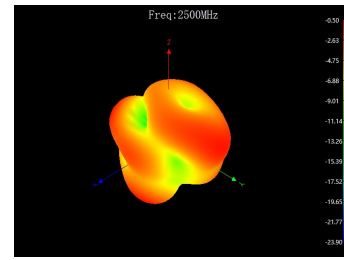
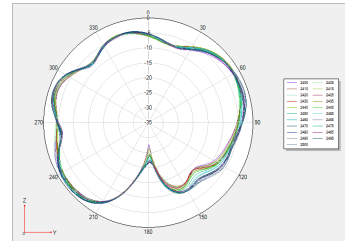
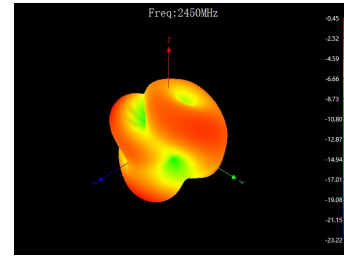
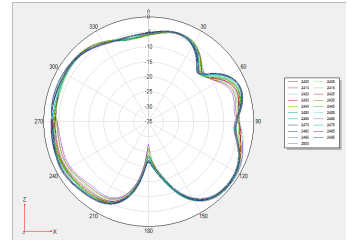
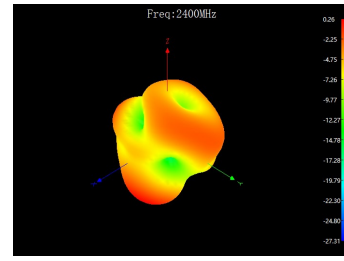


1. An anechoic chamber (7mx4mx3m) which satisfied far-field condition was applied to avoid multi-path effect
2. The quite room region is 40cmx40cmx40cm at the center of rotator
3. The distance between DUT and standard antenna is 4.38 m
4. Probing antenna (9120D horn antenna) and standard gain horn antenna (BBHA9120 LPF 700MHz ~6GHz)

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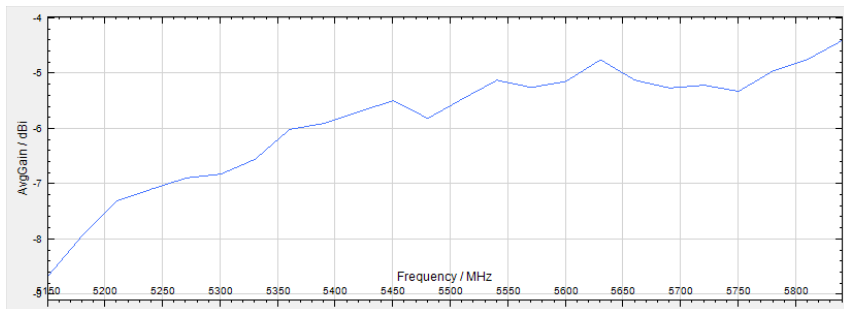
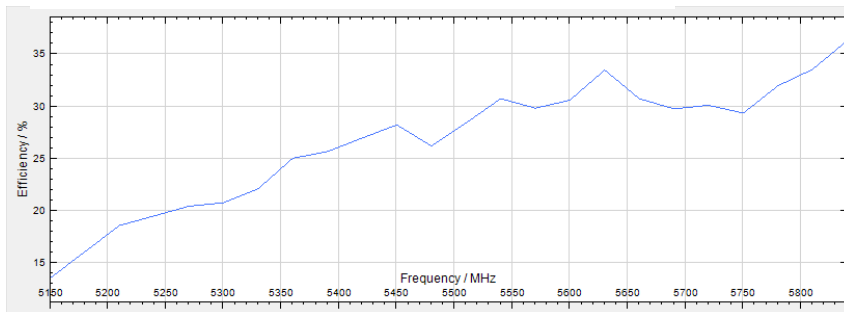
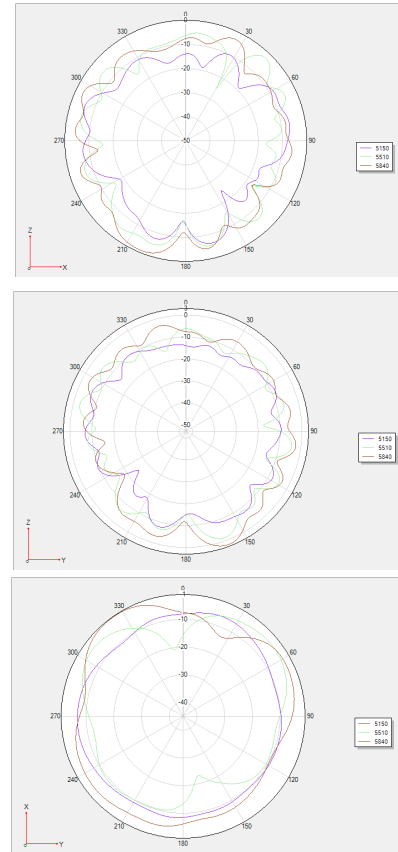
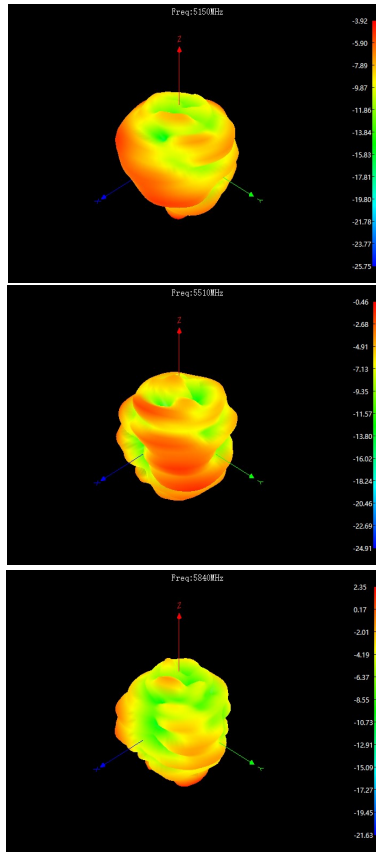
2-4-1 Efficiency and Gain and 3D Date


Frequency/Mhz	MaxGain/dBi	Efficiency / %
2400	0.26	34.12
2405	0.44	37.07
2410	0.09	34.59
2415	0.06	35.73
2420	0.03	37.33
2425	-0.31	36.73
2430	-0.47	37.5
2435	-0.41	38.73
2440	-0.38	38.73
2445	-0.75	35.48
2450	-0.45	37.84
2455	-0.31	39.26
2460	-0.4	39.08
2465	-0.16	42.85
2470	-0.24	40.83
2475	-0.42	40.36
2480	-0.27	41.5
2485	-0.59	38.11
2490	-0.32	40.74
2495	-0.23	41.5
2500	-0.5	39.08



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Frequency/Mhz	MaxGain/dBi	Efficiency / %
5150	-3.92	13.58
5180	-3.13	16.11
5210	-2.24	18.62
5240	-1.89	19.54
5270	-1.57	20.46
5300	-1.45	20.8
5330	-1.16	22.13
5360	-0.45	25.06
5390	-0.2	25.7
5420	0.04	26.98
5450	-0.22	28.25
5480	-0.54	26.24
5510	-0.46	28.44
5540	-0.14	30.76
5570	-0.14	29.85
5600	0.08	30.62
5630	0.83	33.5
5660	0.69	30.76
5690	0.77	29.79
5720	0.98	30.13
5750	1.19	29.38
5780	1.59	31.99
5810	2.09	33.57
5840	2.35	36.31

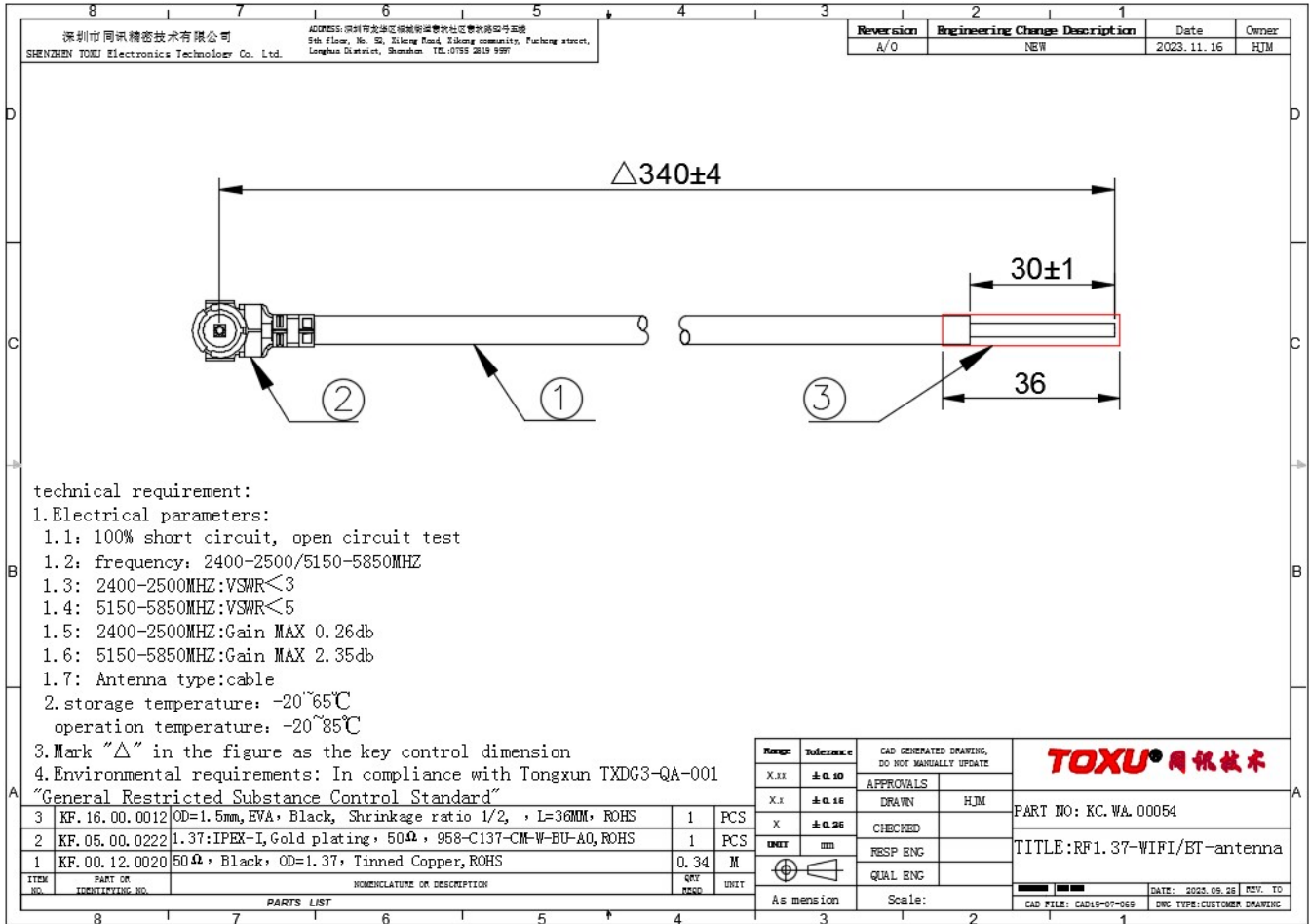


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3. Mechanical Specification:

3-1. Mechanical Configuration (Unit: mm)

The appearance of the antenna is according to drawing



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4.Packaging specification:

8	7	6	5	4	3	2	1																																																					
深圳市同讯精密技术有限公司 SHENZHEN TOXU Electronics Technology Co. Ltd. ADDRESS: 深圳市宝安区福海街道沙井社区沙井路40号五楼 5th Floor, No. 40, Shajing Road, Shajing Community, Fuhai Street, Longhua District, Shenzhen TEL: 0755 2619 9597						<table border="1" style="font-size: 8px;"> <tr> <th>Revision</th> <th>Engineering Change Description</th> <th>Date</th> <th>Owner</th> </tr> <tr> <td>A/0</td> <td>NEW</td> <td>2023.11.16</td> <td>HJM</td> </tr> </table>	Revision	Engineering Change Description	Date	Owner	A/0	NEW	2023.11.16	HJM																																														
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<p>1. product: 1PCS</p>				<p>2. Divide 100PCS products into 1 group</p>		<p>3. Wrap the connectors of 100PCS products with pearl cotton</p>																																																						
				<p>4. Two sets of products packed in PE bags A total of 200PCS</p>																																																								
				<p>5. Put each bag of products into a cardboard box in sequence, (The quantity of the entire box is to be determined), and the box should be sealed</p>																																																								
				<p>6. Attach labels, 1 box of product (quantity of full box to be determined)</p>																																																								
<p>Note: The weight of a single box shall not exceed 12KG</p>																																																												
<table border="1" style="font-size: 8px;"> <tr> <th>ITEM NO.</th> <th>PART OR IDENTIFYING NO.</th> <th>NOMENCLATURE OR DESCRIPTION</th> <th>QTY PER BOX</th> <th>UNIT</th> </tr> <tr> <td>4</td> <td>KF.22.00.0003</td> <td>LxWxH=480x300x185mm, K3-K3, K12KG, khaki, ROHS</td> <td>1</td> <td>PCS</td> </tr> <tr> <td>3</td> <td>KF.20.00.0001</td> <td>PE bag-L*W*H=320*240*0.05mm, PE, transparent, Opening at one end, ROHS</td> <td>0.005</td> <td>PCS</td> </tr> <tr> <td>2</td> <td>KF.22.07.0001</td> <td>Pearl cotton-L*W*H100m*1m/*3mm, ROHS</td> <td>0.1</td> <td>PCS</td> </tr> <tr> <td>1</td> <td>KC.WA.00054</td> <td>RF1.37 cable, 50Ω, Connect to IPEX-I, L=340MM, ROHS</td> <td>1</td> <td>PCS</td> </tr> </table>		ITEM NO.	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	QTY PER BOX	UNIT	4	KF.22.00.0003	LxWxH=480x300x185mm, K3-K3, K12KG, khaki, ROHS	1	PCS	3	KF.20.00.0001	PE bag-L*W*H=320*240*0.05mm, PE, transparent, Opening at one end, ROHS	0.005	PCS	2	KF.22.07.0001	Pearl cotton-L*W*H100m*1m/*3mm, ROHS	0.1	PCS	1	KC.WA.00054	RF1.37 cable, 50Ω, Connect to IPEX-I, L=340MM, ROHS	1	PCS	<table border="1" style="font-size: 8px;"> <tr> <th>Range</th> <th>Tolerance</th> <th colspan="2">CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE</th> </tr> <tr> <td>X.XX</td> <td>±0.40</td> <td>APPROVALS</td> <td></td> </tr> <tr> <td>X.X</td> <td>±0.16</td> <td>DRAWN</td> <td>HJM</td> </tr> <tr> <td>X</td> <td>±0.26</td> <td>CHECKED</td> <td></td> </tr> <tr> <td>UNIT</td> <td>mm</td> <td>RESP</td> <td>ENG</td> </tr> <tr> <td></td> <td></td> <td>QUAL</td> <td>ENG</td> </tr> <tr> <td colspan="2" style="text-align: center;">AS dimension</td> <td colspan="2">Scale:</td> </tr> </table>		Range	Tolerance	CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE		X.XX	±0.40	APPROVALS		X.X	±0.16	DRAWN	HJM	X	±0.26	CHECKED		UNIT	mm	RESP	ENG			QUAL	ENG	AS dimension		Scale:				PART NO: KC.WA.00054 TITLE: Packaging specifications	
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