

MDL SDARS/K-3~8V0 SMA PLUG RG174 2m 6

SI00K-D5-02-A

1. Application:

This application shall apply for antenna unit which shall be used with an engine for digital audio.
(for impedance 50Ω)

2. Appearance:

Antenna Unit (with radome, connector, and cable – refer to an attached drawing)

Dimensions	37.4*34.0*12.95mm	; Radome	#K
Weight	35 g typ	; Connector	SMA PLUG
Cable	RG-174 2m	; Magnet	YES
Anti-slip pad	No	; Label	YES

3. Operating Condition:

Temperature	-40 to +90°C
Humidity	10 to 95% RH

4. Storage Condition:

Temperature	-40 to +90°C
Humidity	10 to 95% RH

Preliminary

UNLESS OTHER SPECIFIED TOLERANCES ON :
 X = ± X.X = ± X.XX =
 ANGLES = ± HOLE DIA = ±



INPAQ TECHNOLOGY CO., LTD.

SCALE :	UNIT : mm
DRAWN BY : 郭錦樺	CHECKED BY: 楊奇峰
DESIGNED BY : 莊意堂	APPROVED BY : 曾源標

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**TITLE : MDL SDARS/K-3~8V0 SMA PLUG RG174
2m 6 SI00K-D5-02-A**

**DOCUMENT
NO.**

ENS000034780

**SPEC REV.
P0**

5. Electrical Specification:

5-1 Patch

Symbol	Parameter	Test Condition		Limits			Unit
				Min	Fc	Max	
f_i	Input Frequency	Note: (1)		2320	2326.25	2332.5	MHz
G_{AE}	Antenna Passive Gain (G_{AE} is measured over the entire 12.5 MHz BW) On Diameter 300 mm Ground	Elevation angle 90°	Average	2.14	2.81	2.91	dBic
			Max	2.27	3.01	3.16	
			Min	1.84	2.45	2.49	
			Ripl	0.43	0.56	0.67	
		Elevation angle 80°	Average	2.09	2.71	2.67	
			Max	2.51	3.00	3.07	
			Min	1.44	2.13	2.23	
			Ripl	1.07	0.87	0.84	
		Elevation angle 70°	Average	2.71	3.19	3.13	
			Max	3.29	3.67	3.42	
			Min	1.87	2.60	2.63	
			Ripl	1.42	1.07	0.79	
		Elevation angle 60°	Average	3.25	3.75	3.66	
			Max	4.11	4.41	4.16	
			Min	2.52	3.01	2.96	
			Ripl	1.59	1.40	1.20	
		Elevation angle 50°	Average	2.88	3.39	3.33	
			Max	3.93	4.41	4.26	
			Min	1.76	2.49	1.99	
			Ripl	2.17	1.92	2.27	
		Elevation angle 40°	Average	1.70	2.18	2.14	
			Max	2.80	3.18	3.31	
			Min	0.34	1.04	0.56	
			Ripl	2.46	2.14	2.75	
Elevation angle 30°	Average	0.21	0.77	0.77			
	Max	1.71	2.01	2.13			
	Min	-1.16	-0.60	-1.12			
	Ripl	2.87	2.61	3.25			
Elevation angle 25°	Average	-0.59	0.00	0.04			
	Max	0.87	1.23	1.44			
	Min	-2.01	-1.54	-2.16			
	Ripl	2.88	2.77	3.60			
Elevation angle 20°	Average	-1.79	-1.20	-1.18			
	Max	0.00	0.27	0.51			
	Min	-3.69	-2.62	-3.22			
	Ripl	3.69	2.89	3.73			

5-2 LNA

Characteristics		Specification
Center Frequency		2332.5MHz
Gain		35dB typ
Noise Figure		1.5 dB typ
Output V.S.W.R		2.0 max
Operating Voltage	3.0~8.0V	DC =3.0~8.0V
Current	3.0~8.0V	15mA typ

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SCALE :

UNIT : mm

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5-3 LNA Overall Specification

Symbol	Parameter	Test Condition	Limits			Unit	
			Min	Fc	Max		
f_i	Input Frequency	Note: (1)	2320	2326.25	2332.5	MHz	
G_{AE}	Antenna Active Gain (G_{AE} is measured over the entire 12.5 MHz BW) On Diameter 300 mm Ground	Elevation angle 90°	Average	33.69	34.23	34.44	dBic
			Max	33.83	34.38	34.61	
			Min	33.48	34.04	34.30	
			Ripl	0.35	0.34	0.31	
		Elevation angle 80°	Average	33.81	34.31	34.41	
			Max	34.07	34.51	34.73	
			Min	33.36	34.00	34.09	
			Ripl	0.71	0.51	0.64	
		Elevation angle 70°	Average	34.52	35.03	35.03	
			Max	35.33	35.62	35.36	
			Min	33.81	34.62	34.70	
			Ripl	1.52	1.00	0.66	
		Elevation angle 60°	Average	34.95	35.44	35.44	
			Max	35.92	36.20	36.04	
			Min	33.92	34.52	34.59	
			Ripl	2.00	1.68	1.45	
		Elevation angle 50°	Average	34.58	35.05	35.04	
			Max	35.82	36.01	35.71	
			Min	33.81	34.27	34.19	
			Ripl	2.01	1.74	1.52	
		Elevation angle 40°	Average	33.27	33.77	33.80	
			Max	34.42	34.52	34.51	
			Min	32.30	32.76	32.79	
			Ripl	2.12	1.76	1.72	
Elevation angle 30°	Average	31.87	32.35	32.42			
	Max	32.84	32.89	33.05			
	Min	30.55	31.43	31.73			
	Ripl	2.29	1.46	1.32			
Elevation angle 25°	Average	29.43	31.32	31.41			
	Max	31.02	32.07	32.25			
	Min	27.43	30.38	30.73			
	Ripl	3.59	1.69	1.52			
Elevation angle 20°	Average	27.00	30.29	30.40			
	Max	29.29	31.32	31.44			
	Min	24.31	29.09	29.22			
	Ripl	4.98	2.23	2.22			

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 $X = \pm$ $X.X = \pm$ $X.XX =$
 ANGLES = \pm HOLE DIA = \pm



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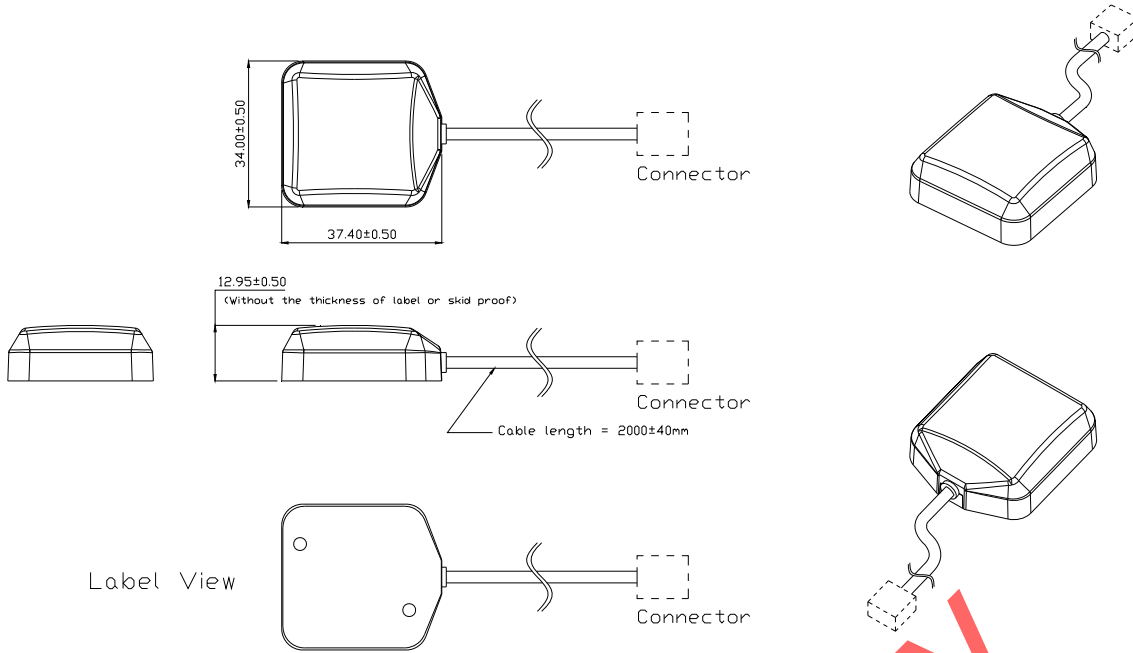
SCALE : UNIT : mm
 DRAWN BY : 郭錦樺 CHECKED BY: 楊奇峰
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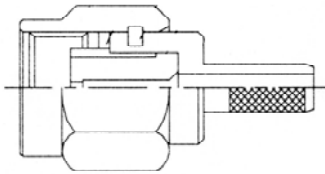
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6. Antenna Dimensions:



connector appearance :SMA PLUG



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