

**ANTENNA SPECIFICATION****5. ELECTRICAL SPECIFICATION****5.1 FREQUENCY BANDS**

Band Name	Frequency Band
CDMA/AMPS	824 - 894 MHz

5.2 IMPEDANCE

Nominal impedance (including matching circuit) : 50Ω

5.3 MATCHING REQUIREMENTS

In order to assure the best performance of the antenna, the matching will be evaluated in free space and in talk position for both extended and retracted position.

The antenna will comply with the Electrical Specification requirements, as set out below, while mounted on the handset containing the PCB. The handset with PCB are to be supplied by the customer and should be representative of the latest design version of all parts. Any modifications in the handset or PCB can affect the performance of the antenna and should be discussed with Galtronics to determine the affect of such changes on antenna performance and delivery requirements.

5.4 VSWR**5.4.1 Requirements in free space**

Mode	Tx	Rx
Extended	2.0 :1	2.0 :1
Retracted	2.0 :1	2.0 :1

Transmit Band (Herein designated as Tx) -the frequencies of operation for the Band transmit function shall be 824 to 849 MHz.

Receive Band (Herein designated as Rx) -the frequencies of operation for the Band receive function shall be 869 to 894 MHz.

5.4.2 Test Method (Engineering)

The antenna is tested while mounted to the handset. The handset is set up with a 50Ω coaxial cable connected to the 50Ω point. Calibration is done at this 50Ω point. The other end of the 50Ω coaxial cable is connected to a network analyzer. The handset is positioned on a non-conductive table for free space measurements. VSWR is also evaluated in talk position on a phantom head for reference only.

5.4.3 Test Method (Production)

In mass production it is not practical to use the handset supplied by the customer. A production test fixture will be designed by Galtronics for use on processes requiring electrical testing. The results on the test fixture will be correlated to the results obtained on the customer handset. Testing in final inspection is done on a statistical basis.



CALTRONICS

REPORT FORM

PART No.: 02-4258-46-950

PROJECT No.: RFQ 095000

TITLE: QUALIFICATION ELECTRICAL TEST RESULTS

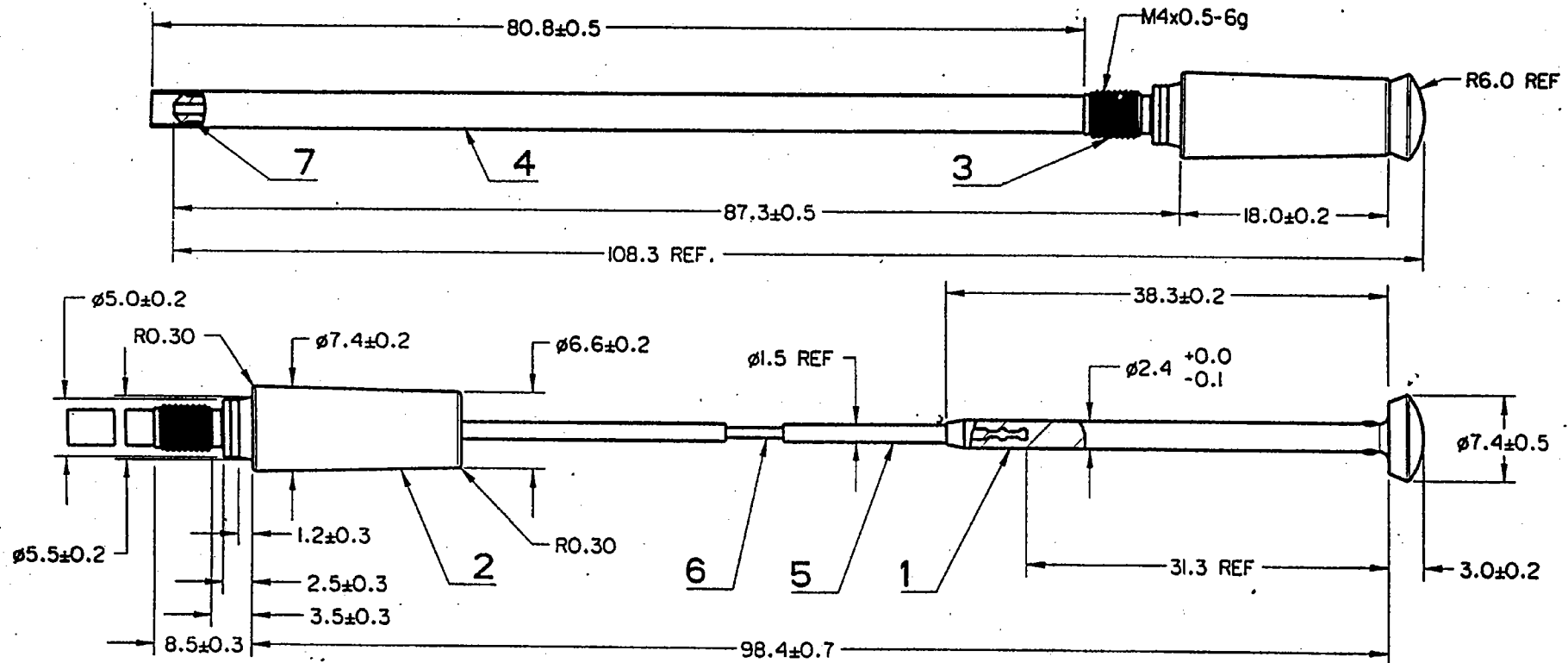
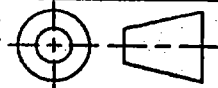
AMPS/CDMA Band

Azimuth			GAIN TEST RESULTS (dBi), Free space							
Radio LGE DM120 Ref. 406			Best				AVG			
Measuring	Antenna	Position	824MHz	849MHz	869MHz	894MHz	824MHz	849MHz	869MHz	894MHz
Azimuth	Sample #31	Ext.	1.68	1.40	1.33	1.58	0.73	0.79	0.75	0.91
Azimuth	Sample #31	Ret.	0.06	0.06	0.15	0.72	-1.10	-0.81	-0.59	-0.08
Azimuth talking	Sample #31	Ext.	0.60	0.49	0.13	0.44	-4.12	-4.09	-4.26	-4.05
Azimuth talking	Sample #31	Ret.	-2.38	-1.99	-2.04	-1.45	-7.76	-7.12	-7.12	-6.56
Elevation S-S(E1)	Sample #31	Ext.	1.59	1.83	1.47	1.50	-3.09	-2.66	-3.08	-3.27
Elevation S-S(E1)	Sample #31	Ret.	-0.53	0.15	0.13	0.46	-4.81	-3.94	-4.18	-4.19
Elevation F-B(E2)	Sample #31	Ext.	1.25	1.88	1.55	1.41	-3.41	-2.93	-3.34	-3.68
Elevation F-B(E2)	Sample #31	Ret.	-0.85	0.15	0.18	0.26	-5.13	-4.23	-4.34	-4.35

DWG. NO.:
A3 02-4128-46-950

ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE STATED.
DO NOT SCALE - IF IN DOUBT, ASK!!

THIRD ANGLE
PROJECTION



7	Arcop APID	
6	Ni-Ti-Cr Super Elastic Alloy	
5	Plastic: Polyurethane-Shore 40D	
4	Plastic: PA12	Color: Gray, Pantone 427C
3	Free Cutting Brass ISO CuZn39Pb9 (MS 58A)	Cu/Cu strike/Ni7b ISO 1458-1988
2	Plastic: Polyurethane -Shore 64D	Color: Gray, Pantone 427C
1	Plastic: Zylel Compound 70% EIOI L-30%80IST	Color: Gray, Pantone 427C
NO	MATERIAL	02-4128-46-950

CAD FILE: 02-4128-46-950

SEE COVER SHEET FOR PERTINENT INFORMATION

PAGE 2 OF 2



GALTRONICS

THIS PRINT IS GALTRONICS CONFIDENTIAL

ENGINEER	R.G.	CHECKED	<i>[Signature]</i>
DRAWN	MB	APPVD.	<i>[Signature]</i>
DATE	28-12-00	DATE	8.01.01

MOLDED NO NAME M4
STUD RETRACTABLE
BH CDMA LGIC

DWG. NO.:
A3

02-4128-46-950

REV.

S-1