

Antenna Datasheet

GMR Rubber Antenna

Model:

BWGMRJWX50-10ZJ

Description:

GMR Rubber Antenna with SMA Male Jack

Features:

800-2200 MHz Frequency Range

SMA Male Jack (Inner Thread, Inner Pin) Connector

Structure: Straight

360° Omnidirectional Radiation

Dimensions: 50mm x 10mm

Compliant with RoHS & REACH Regulations

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BWGMRJWX50-10ZJ

Part Number Explanation

BW	Company	Bat Wireless
GMR	Frequency	800-2200MHz
J	Name	Rubber Antenna
W	Type	External
X	Constant	X
50-10	Dimensions	50-10mm
Z	Feature	Straight
J	Connector	SMA Male Jack

Selection Table

Connector	IPEX-1	IPEX-2	IPEX-3	IPEX-4	IPEX-5	SMA	Customizable
Cable Length	100	150	200	250	300	500	Customizable
Cable Type	RG0.81	RG1.13	RG1.37	RG174	RG178	RG316	Customizable

1. Description

Bat Wireless **BWGMRJWX50-10ZJ** is a high-performance omnidirectional antenna with excellent penetration capability, ultra-long communication distance, strong environmental adaptability, small size and light weight. It adopts a high-quality plastic shell, with a non-foldable Straight head, and has excellent signal receiving and transmitting capabilities, providing stable and reliable support for device connection. Its compact and lightweight rubber rod design makes it easy to install, transport and carry.

Classic Application Scenarios:

Railway small base stations: Base stations along the railway tracks, covering specific sections.

Train on-board communication: Installed on on-board communication equipment to realize mobile communication.

Handheld terminal devices: Used during inspection, maintenance and other operations.

Bat Wireless provides customized services to optimize your equipment. We have a mature R&D team that can respond quickly to meet your needs. If you have any requirements, please contact our sales and FAE.



2. Specification

Parameters	Typ.	Unites	Notes
Electrical Characteristics			
Antenna Type	Rubber Antenna		
Frequency Range	800-2200MHz	MHz	
Input Impedence	50	Ω	
V.S.W.R	<1.7		
Gain	3	dBi	
Polarization Type	Vertical		
Power Capacity	50	W	
Lightning Protection	-		
DC Voltage	-	V	
Radiator	-		
Mechanical Characteristics			
Dimensions	50 x 10	mm	
Connector Type	SMA-J Male (Customizable)		
Cable Type	-		
Cable Length	-	mm	
Mount way	Screw-on		
Color	Black		
Meterial	ABS		
Weight	5.02	g	
Environmental Characteristics			
Waterproof Rating	-		
ROHS Compliant	Compliant		
Operating Temperature	-45~ +85	$^{\circ}\text{C}$	
Storage Temperature	-45~ +85	$^{\circ}\text{C}$	

3. Product Picture



4. Mechanical Drawing

PARTS DRAWING		ROHS Compliant		
REV	PRODUCT NO.	DATE	NAME	DESCRIPTION

Requirements:

- The wire jacket shall be free from cuts or damage.
- 100% continuity testing shall be performed, and all products must pass.
- 100% full inspection is required, and all products must meet specifications.
- Eco-friendly manufacturing processes shall be adopted, and finished products must comply with ROHS requirements.
- Unless otherwise specified, general tolerances shall apply.

NO	Code	Name	Description	Q'ty
3		Spring	32*5MM Brass	1
2		Plastic Rod	43*10MM Black	1
1		SMA	Male	1

Frequency	800-2200MHz	ANGLE PROJECTION	
Gain	3DBI		GENERAL TOLERANC
VSWR	<1.7	100~200 :	± 3.00
Polarization	Vertical	50~100 :	± 2.00
Impedance	50Ω	25~50 :	± 0.20
Operating Temperature:	-45°C~85°C	10~25 :	± 0.15
Storage Temperature:	-45°C~85°C	1~10 :	± 0.10

PRODUCT NAME			
Rubber Antenna-GSM-SMA Male-L=51.5MM			
UNIT	MM	SIZE	1:3
PAGE			A4

5. Test Equipment



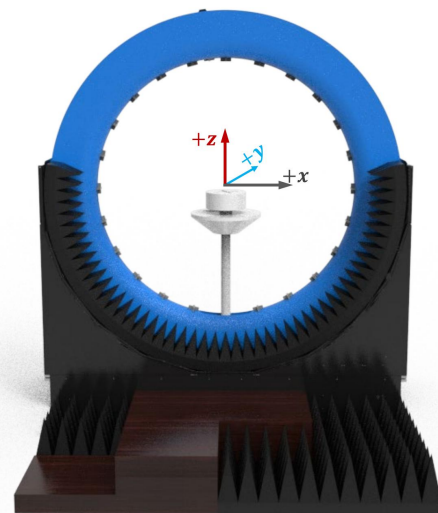
Keysight/E5071C Network Analyzer



R&S/CMW500 Comprehensive Tester



R&S/SMBV100B Signal Generator



DT-3500 Datasheet

Specification:

Specification:	Description
Test Frequency	400MHz-8.5GHz
System Size	L*W*H=4*3.5*3.5m
Number of Probes	23 (Probe) + 1 (link)
Interval Angle	15°
Sampling Diameter	2200mm
Carring Capacity	≤40kg

Testing Capability

Description

Active measurement

Capability : TRP、TIS、EIRP、EIS,. etc
Mode : 2G/3G/4G/5G、Wi-Fi b/g/n/a/ac/ax、BT、NB-IOT、Cat-M (eMTC)、GPS/BEIDOU/GLONASS、ZigBee、LoRa(Non-Signaling),.etc

Passive measurement

Test category : Gain、Efficiency、2D pattern、3D pattern、Pattern roundness、Axial Ratio、ECC,Phase center,. etc
Polarization : Circular polarization, linear polarization, elliptical polarization



RF Link diaram of multi probe spherical near-field testing system

RF Link Overview



RF Link of Passive measurement



RF Link Overview

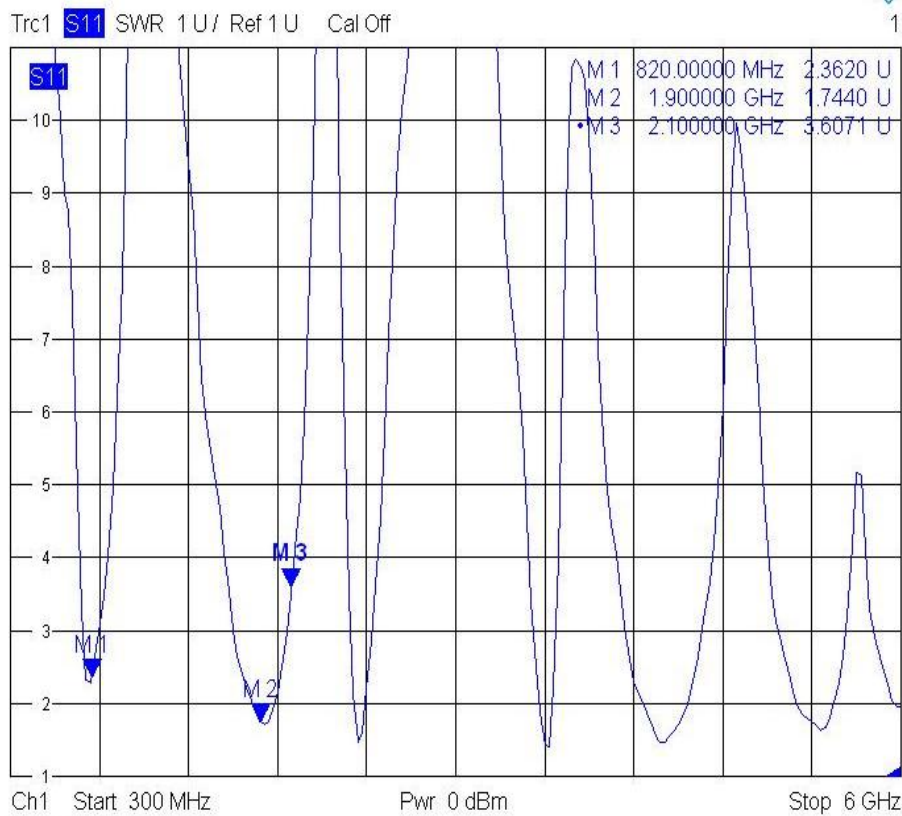


RF Link of Passive measurement

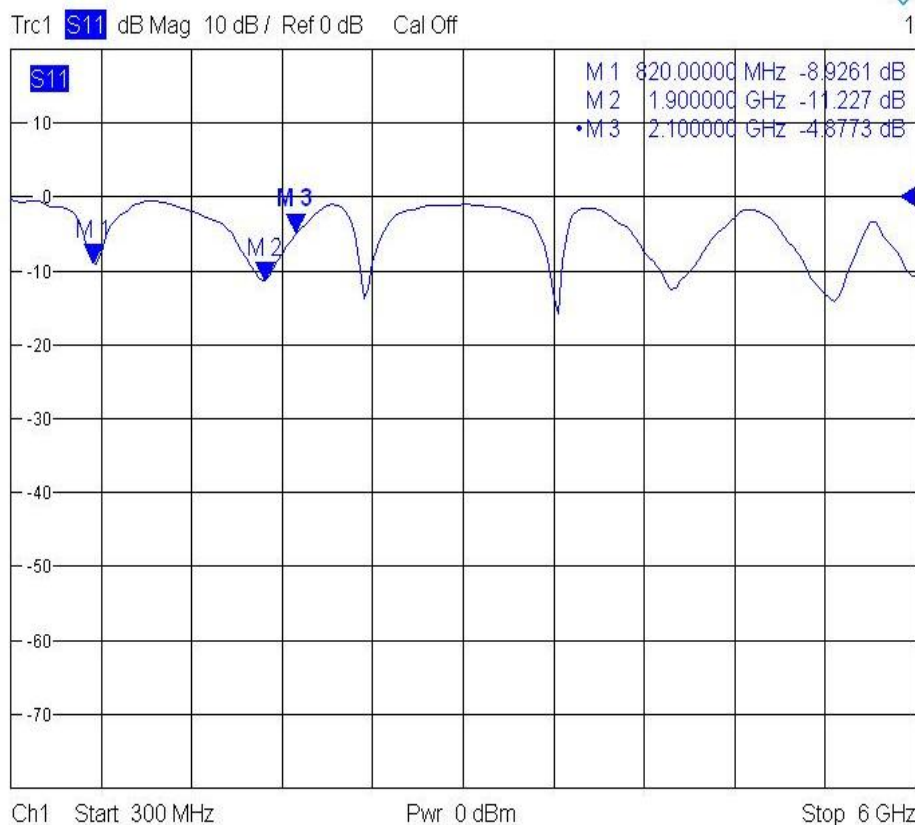


6. Performance Data

6.1 VSWR

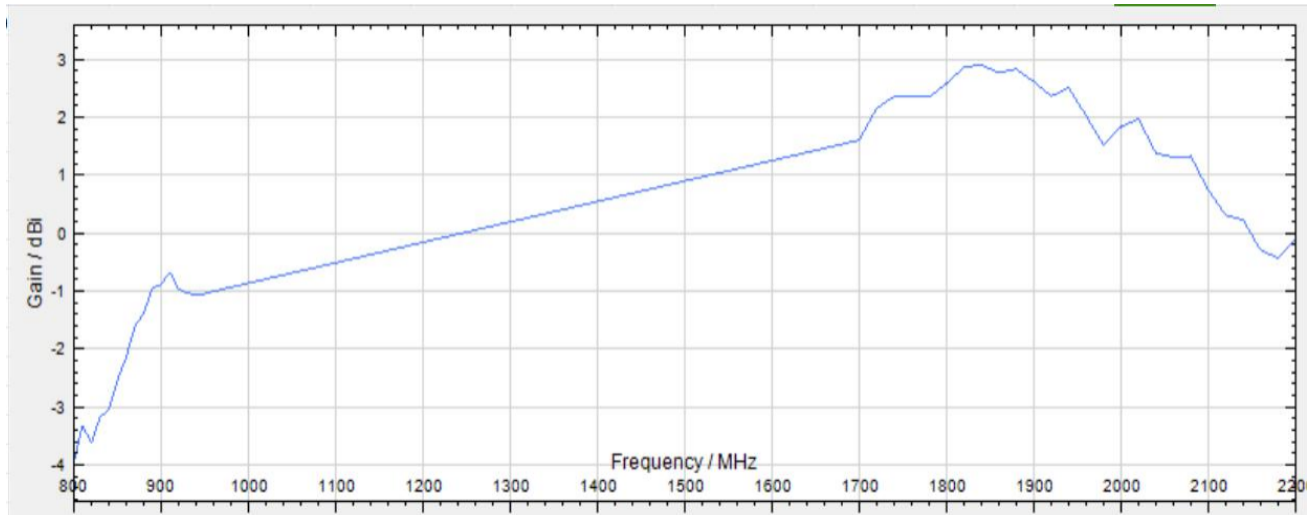


6.2 Return Loss

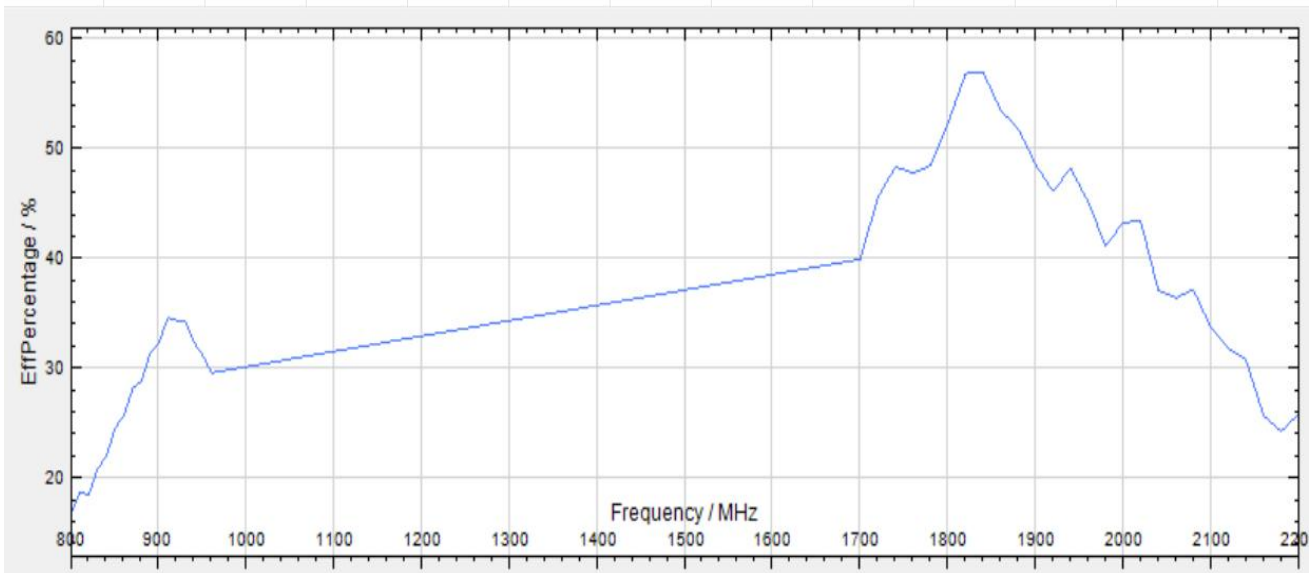


6. Performance Data

6.3 Gain



6.4 Efficiency



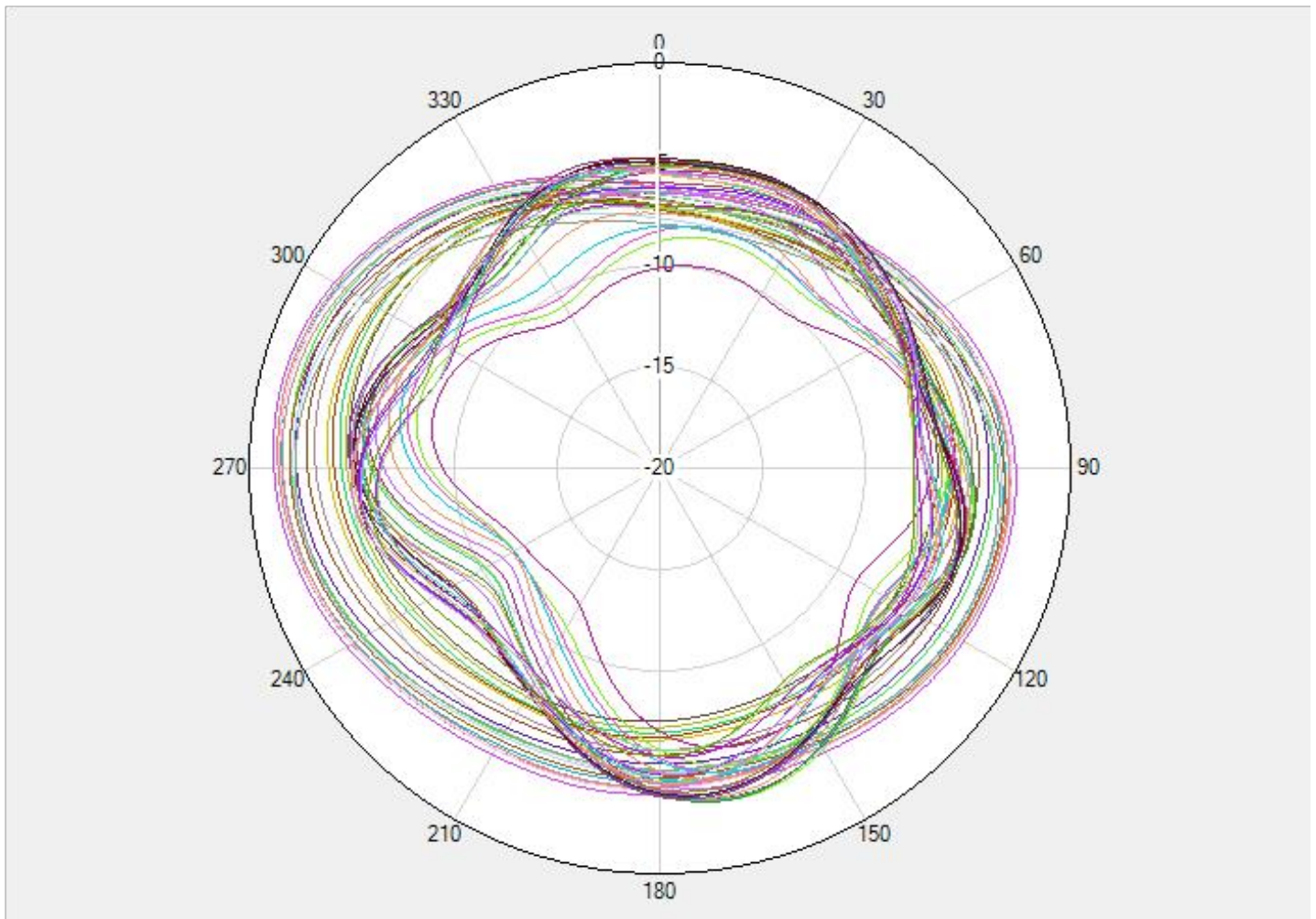
6.5 Gain and Efficiency

Frequency (MHz)	820-960	1900-2100	2100-2200
Gain (dBi)	-0.99	2.63	0.76
Efficiency (%)	29.65	48.64	33.73



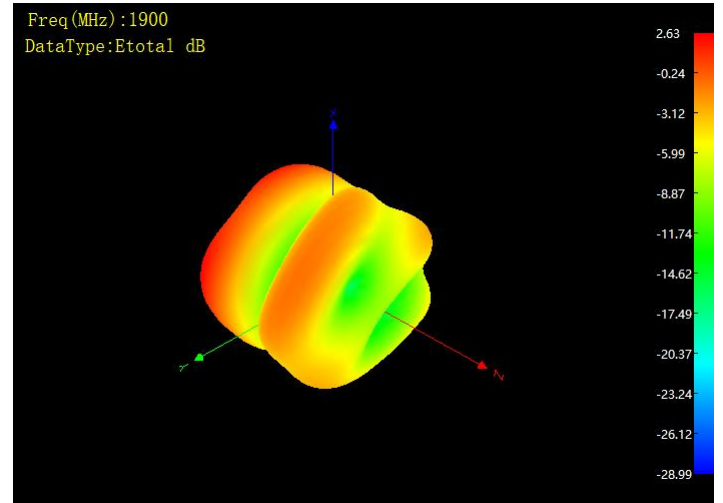
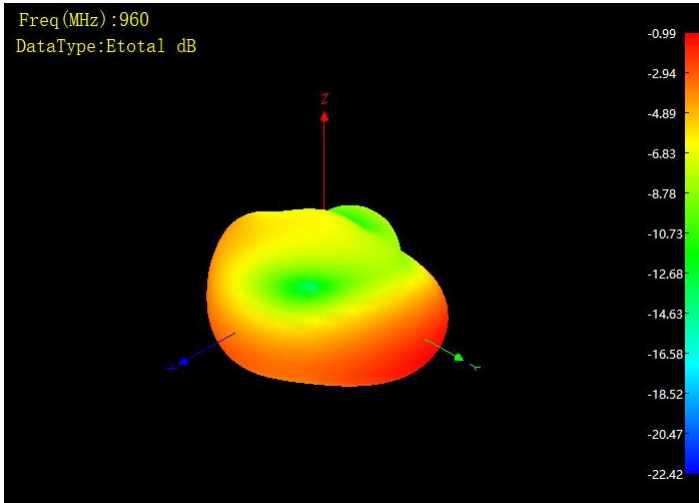
7. Radiation Patterns

7.1 2 D Radiation Patterns

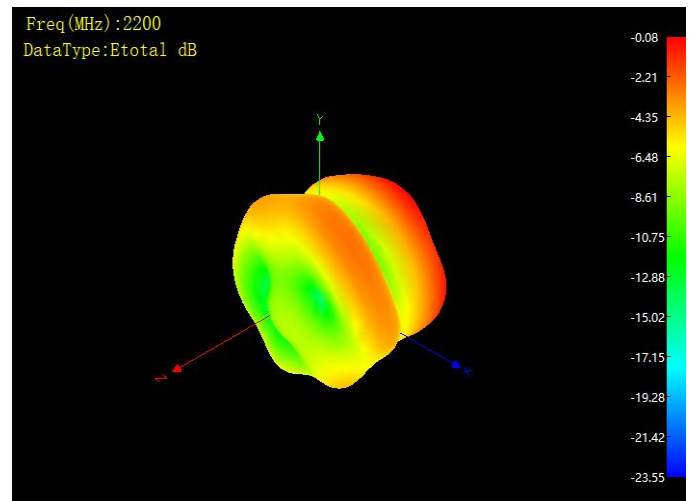
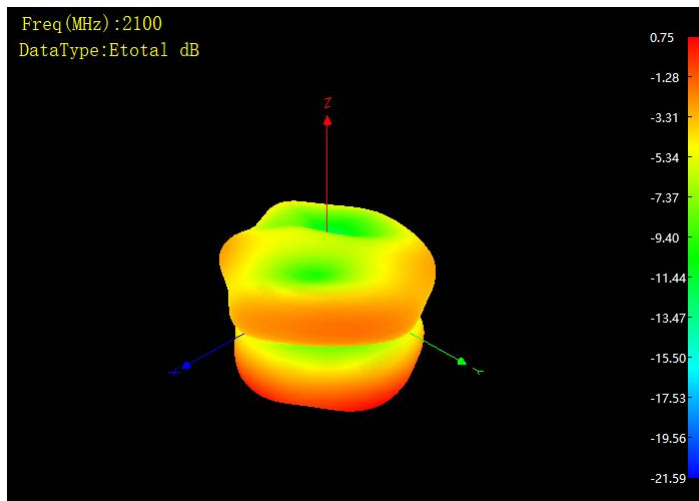




7.2 3D Radiation Patterns—960MHz、1900Mhz



7.2 3D Radiation Patterns—2100、2200MHz





DECLARATION:

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