

In Building Solutions Catalogue – Q1 2007

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Bi-Directional Amplifier

Page	Part Number	Description	Uplink/Downlink	Frequency Band	Gain	
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16	MR-PBSMR55-X	SMR/IDEN Personal Bi-Directional Amplifier	Down Link (base to mobile) Up Link (mobile to base)	851-866 MHz 806-821 MHz	55 dB (min.) 55 dB (min.)	
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18	MR-BGSM60-X1W	GSM Bi-Directional Amplifier 1 Watt	Down Link (base to mobile) Up Link (mobile to base)	947-960 MHz 902-915 MHz	60 dB (min.) 60 dB (min.)	
19	MR-BSMR60-X1W	SMR/IDEN Bi-Directional Amplifier 1 Watt	Down Link (base to mobile) Up Link (mobile to base)	851-866 MHz 806-821 MHz	60 dB (min.) 60 dB (min.)	

Multi Band Omni Antenna

MA-CM36-15

MARS Multi Band Omni Antenna covers all the bands for 2G, 2.5G and 3G cellular, as well as ISM, WLAN and Bluetooth. The antenna is aesthetic, small and has unobtrusive profile that blends easily with any environment.

The antenna is easy-installed and is highly recommended as an outstanding logistic solution for Mobile Installations.



Specifications:

<i>Electrical</i>			
Standard	SMR, AMPS, CDMA, TDMA, GSM 900	PCS, DECT, GSM 1900, UMTS	Bluetooth, ISM, WLAN
Frequency range	806 – 960 MHz	1.71 – 2.17 GHz	2.4 – 2.5 GHz
GAIN, typ.	2 dBi	3-4 dBi	5 dBi
VSWR, max.	2 : 1	1.5 : 1	1.8 : 1
Polarization	Linear, Vertical		
Input power, max	50 Watt		
Input Impedance	50 Ohm		
Lightning Protection	DC Grounded		
<i>Mechanical</i>			
Dimensions (HxWxD)	Base Diameter – 205 mm, Height – 89 mm		
Weight	220 gr.		
Connector	N-Type, Female		
Back Plane	Aluminum protected through chemical passivation		
Radome	UV Protected, Plastic		
<i>Environmental</i>			
Operating Temperature Range	- 40°C to + 65°C		
Vibration	According to IEC 60721-3-4		
Flammability	UL94		
Humidity	ETS 300 019-1-4, EN 302 085 (annex A.1.1)		
Service Life	>10 years		

Patent Pending

Specifications subject to change without notice

380 MHz – 6 GHz Multi Band Omni Antenna

MA-CQ26-1X

MARS Multi Band Omni Antenna covers all the bands for 2G, 2.5G and 3G cellular, as well as ISM, WLAN, UNII, Bluetooth, Wi-Fi, WMTS and IMT-MC450.

The antenna is aesthetic and has unobtrusive profile that blends easily with any environment.

The antenna is easy-installed and is highly recommended as an outstanding logistic solution for In-Building Installations.



Specifications:

Electrical								
Standard	IMT-MC450	WMTS		SMR, AMPS, CDMA, TDMA, GSM 900	PCS, DECT, GSM 1900, UMTS	Bluetooth, ISM, WLAN	WLL	UNII, WLL, H-LAN, Wi-Fi
Frequency range	380 – 460 MHz	608-614 MHz	1395-1432 MHz	806 – 960 MHz	1.71 – 2.17 GHz	2.4 – 2.5 GHz	3.4 – 3.7 GHz	4.9 – 6 GHz
GAIN, typ.	1 (2*)		5	4	6	6	6	6
VSWR, max.	3 : 1 (2.5 : 1*)		1.7 : 1	2 : 1	1.8 : 1	1.8 : 1	1.6 : 1	1.6 : 1
Polarization	Linear, Vertical							
Input power, max	50 Watt							
Input Impedance	50 Ohm							
Lightning Protection	DC Grounded							
Mechanical								
Dimensions(HxWxD)	Base Diameter – 205 mm, Height – 89 mm							
Weight	250 gr.							
Connector	N-Type, Female							
Back Plane	Aluminum protected through chemical passivation							
Radome	UV Protected Polycarbonate							
Mount	Ceiling Mounting							
Environmental								
Operating Temperature Range	- 40°C to + 65°C							
Vibration	According to IEC 60721-3-4							
Flammability	UL94							
Humidity	ETS 300 019-1-4, EN 302 085 (annex A.1.1)							
Service Life	>10 years							

Patent Pending

*Specifications for Ground Plate of 40 cm and up, or above a metal surface, with a spacing of 35-45 mm.

Ordering Options:

MA-CQ26-1X	Antenna
MA-CQ26-1XT	Antenna with DC Return Option

Specifications subject to change without notice

Multi Band Omni Antenna

MA-CR26-2X

MARS Multi Band Omni Antenna covers all the bands for 2G, 2.5G and 3G cellular, as well as ISM, WLAN, UNII, Bluetooth and Wi-Fi.

The antenna is aesthetic, small and has unobtrusive profile that blends easily with any environment.

The antenna is easy-installed and is highly recommended as an outstanding logistic solution for Mobile Installations.



Specifications:

<i>Electrical</i>					
Standard	SMR, AMPS, CDMA, TDMA, GSM 900	PCS, DECT, GSM 1900, UMTS	Bluetooth, ISM, WLAN	WLL	UNII, WLL, H-LAN, Wi-Fi
Frequency range	806 – 960 MHz	1.71 – 2.17 GHz	2.4 – 2.5 GHz	3.4 – 3.7 GHz	4.9 – 6 GHz
GAIN, typ.	2	3-4	5	5	5-6
VSWR, max.	2 : 1	1.6 : 1	1.6 : 1	2 : 1	1.8 : 1
Polarization	Linear, Vertical				
Input power, max	50 Watt				
Input Impedance	50 Ohm				
Lightning Protection	DC Grounded				
<i>Mechanical</i>					
Dimensions (HxWxD)	Base Diameter – 205 mm, Height – 89 mm				
Weight	220 gr.				
Connector	N-Type, Female				
Back Plane	Aluminum protected through chemical passivation				
Radome	UV Protected Plastic				
Mount	Ceiling Mounting				
<i>Environmental</i>					
Operating Temperature Range	- 40°C to + 65°C				
Vibration	According to IEC 60721-3-4				
Flammability	UL94				
Humidity	ETS 300 019-1-4, EN 302 085 (annex A.1.1)				
Service Life	>10 years				

Patent Pending

Ordering Options:

MA-CQ26-1X	Antenna
MA-CQ26-1XT	Antenna with DC Return Option

Specifications subject to change without notice

Multi Band Panel Antenna

MA-CL67-14

Up-To-Date Multi Band Panel Antenna covers all the bands for 2G, 2.5G and 3G cellular, as well as ISM, WLAN and Bluetooth. The antenna is aesthetic, small and unobtrusive profile that blends easily with any environment.

The antenna can be easily used either for Indoor or Outdoor Applications and features different mounting options.

Antenna is designed to include DC Return Option which is available on request.



Specifications:

<i>Electrical</i>			
Standard	SMR, AMPS, CDMA, TDMA, GSM 900	PCS, DECT, GSM 1900, UMTS	Bluetooth, ISM, WLAN
Frequency range	806 – 960 MHz	1.71 – 2.17 GHz	2.4 – 2.5 GHz
GAIN, typ.	8.5 dBi	7.5-10 dBi	5-6.5 dBi
VSWR, max.	2 : 1	1.7 : 1	1.7 : 1
3 dB Beam-Width, H-Plane, typ.	75°	60°	50°
3 dB Beam-Width, E-Plane, typ.	65°	45°	25°
Polarization	Linear, Vertical		
Input power, max	50 Watt		
Input Impedance	50 Ohm		
Lightning Protection	DC Grounded		
<i>Mechanical</i>			
Dimensions (HxWxD)	230 x 214 x 31 mm (9.1"×8.4"×1.2")		
Weight	500 gr.		
Connector	N-Type, Female		
Back Plane	Aluminum protected through chemical passivation		
Radome	UV Protected Polycarbonate		
Mount	See Ordering Options		
<i>Environmental</i>			
Operating Temperature Range	- 40°C to + 65°C		
Vibration	According to IEC 60721-3-4		
Wind Load	200 km/h (survival)		
Flammability	UL94		
Water Proofing	IP-65		
Humidity	ETS 300 019-1-4, EN 302 085 (annex A.1.1)		
Salt Fog	According to IEC 68-2-11		
Ice and Snow	25mm radial (survival)		
Service Life	>10 years		

Ordering Options:

Application \ Mount	Wall Mountable	Pole Mount	Az/El Adjustable Mount MNT-2
Indoor Without DC Return	MA-CL67-14	MA-CL67-14 PM	MA-CL67-14 MNT
Outdoor Without DC Return	MA-CL67-14R	MA-CL67-14R PM	MA-CL67-14R MNT
Indoor With DC Return	MA-CL67-14T	MA-CL67-14T PM	MA-CL67-14T MNT
Outdoor With DC Return	MA-CL67-14RT	MA-CL67-14RT PM	MA-CL67-14RT MNT

Specifications subject to change without notice

Multi Band 140° Antenna
MA-CN14-11

MARS Multi Band 140° Antenna covers all the bands for 2G, 2.5G and 3G cellular. The antenna is aesthetic, small and has unobtrusive profile that blends easily with any environment.



Specifications:

<i>Electrical</i>		
Standard	SMR, AMPS, CDMA, TDMA, GSM 900 806 – 960 MHz	PCS, DECT, GSM 1900, UMTS 1.71 – 2.17 GHz
Frequency range		
GAIN, typ.		5 dBi
VSWR, max.		2 : 1
3 dB Beam-Width, H-Plane, typ.	130°	140 - 150°
3 dB Beam-Width, E-Plane, typ.	65°	45°
Polarization	Linear, Vertical	
Input power, max	50 Watt	
Input Impedance	50 Ohm	
Lightning Protection	DC Grounded	
<i>Mechanical</i>		
Dimensions – Base Plate (HxW)	185 x 105 mm (7.3"×4.1")	
Dimensions – Radome (HxWxD)	175 x 35 x 125 mm (6.9"×1.4"×4.9")	
Weight	260 gr.	
Connector	Pig Tail with N-Type, Female	
Back Plane	Aluminum protected through chemical passivation	
Radome	UV Protected Plastic	
<i>Environmental</i>		
Operating Temperature Range	- 40°C to + 65°C	
Vibration	According to IEC 60721-3-4	
Flammability	UL94	
Humidity	ETS 300 019-1-4, EN 302 085 (annex A.1.1)	
Service Life	>10 years	

Specifications subject to change without notice

Dual Beam GSM Antenna

MA-CC60-20

MARS Dual Beam GSM Antenna is ideal for deployment in tunnels or long building corridors. It features small and unobtrusive profile which blends easily with any environment.

Additional Features:

- Wall/Ceiling mount
- DC grounded for lightning protection to meet local electrical building codes

Applicable Applications:

- Tunnel coverage
- Indoor cell extender



Specifications:

<i>Electrical</i>	
Frequency range	870-960 MHz
GAIN, min.	5 dBi
VSWR, max.	1.5 : 1
Polarization	Linear, Vertical
3 dB Beam-Width, H-Plane, typ.	Two Beams, Each 60°
3 dB Beam-Width, E-Plane, typ.	60°
Front to Back Ratio, min.	-12 dB
Input power, max	50 Watt
Input Impedance	50 Ohm
Lightning Protection	DC Grounded
<i>Mechanical</i>	
Dimensions (HxWxD)	400 x 185 x 55 mm (15.7"×7.3"×2.2")
Weight	400 g
Connector	N-Type Female
Back Plane	Aluminum protected through chemical passivation
Radome	UV Protected, Plastic
Mount	Wall Mountable
<i>Environmental</i>	
Operating Temperature Range	- 40°C to + 65°C
Vibration	According to IEC 60721-3-4
Flammability	UL94
Humidity	ETS 300 019-1-4, EN 302 085 (annex A.1.1)
Service Life	>10 years

Specifications subject to change without notice

Dual Beam CDMA/TDMA/AMPS Antenna
MA-CB50-20

MARS Dual Beam CDMA/TDMA/AMPS Antenna is ideal for deployment in tunnels or long building corridors. Its small and unobtrusive profile blends easily with any environment.

Additional Features:

- Wall/Ceiling mount
- DC grounded for lightning protection to meet local electrical building codes

Applicable Applications:

- Tunnel coverage
- Indoor cell extender



Specifications:

<i>Electrical</i>	
Frequency range	824-894 MHz
GAIN, min.	5 dBi
VSWR, max.	1.5 : 1
Polarization	Linear, Vertical
3 dB Beam-Width, H-Plane, typ.	Two Beams, Each 60°
3 dB Beam-Width, E-Plane, typ.	60°
Front to Back Ratio, min.	-12 dB
Input power, max	50 Watt
Input Impedance	50 Ohm
Lightning Protection	DC Grounded
<i>Mechanical</i>	
Dimensions (HxWxD)	400 x 185 x 55 mm (15.7"×7.3"×2.2")
Weight	400 gr.
Connector	N-Type, Female
Back Plane	Aluminum protected through chemical passivation
Radome	UV Protected Polycarbonate
Mount	Wall Mountable Only
<i>Environmental</i>	
Operating Temperature Range	- 40°C to + 65°C
Vibration	According to IEC 60721-3-4
Flammability	UL94
Humidity	ETS 300 019-1-4, EN 302 085 (annex A.1.1)
Service Life	>10 years

Specifications subject to change without notice

**CDMA High Selective Repeater
MR-HSBDA60-X**

MARS CDMA High Selective Repeater is a high linear repeater at low power consumption. It provides high frequency selectivity at low power consumption.

Additional Features:

- Auto Setup
- Overload protection
- Oscillation protection
- High spectral purity



Specifications:

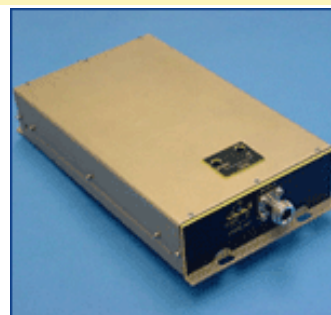
<i>Electrical</i>		
	Down Link 869 – 894 MHz	Up Link 824 – 849 MHz
Frequency range	63 dB	60 dB
Gain at, min. Attenuation	9.1	
Pass Band – Nominal, MHz	(5, 10, 15)	
Pass Band – Optional, MHz	25	
Pass Band Center Frequency Setting Step, KHz	3 dB	
Pass Band Ripple		
Selectivity:		
• At 1 MHz Offset from Pass Band Rejection	50 dB	50 dB
• Intermodulation Distortion from Out of Pass Band Signals (<i>NOTE 1</i>)	-30 dBm	-40 dBm
Composite Output Power	21 dBm	12 dBm
Noise Figure at min. Attenuation	6.5 dB	
Gain Control (Automatic), Step 1 dB (<i>NOTE 2</i>)	30 dB	
Impedance In / Out	50 Ohm	
VSWR In / Out, max.	2 : 1	
Output IP3, min.	40 dBm	34 dBm
Propagation Delay, max.	5 μ sec	
Input Power, No Damage, max.	10 dBm	
Limited Output Power	28 dBm	19 dBm
Biasing (220 VAC/DC Adapter Included)	6.7 VDC @ 3.2 A, max.	
Emission & Spurious	According to Standards	
Oscillation Protection	Yes	
<i>NOTE 1: Down Link: 2 Tones at -30 dBm With 1 MHz Spacing and 1 MHz Pass Band Offset. Up Link: 2 Tones at -40 dBm With 1 MHz Spacing and 1 MHz Pass Band Offset.</i>		
<i>NOTE 2: The Up Link Gain is Always 3 dB Lower Than Down Link Gain</i>		
<i>Mechanical</i>		
Dimensions	260 x 250 x 100 mm	
Weight	2.3 kg	
Connectors	N-Type, Female	
Mount	Wall / Ceiling Mounting	
<i>Environmental</i>		
Operating Temperature Range	- 10°C to + 50°C	
Humidity, min.	95%	
Service Life	>10 years	

Specifications subject to change without notice

Bi – Directional Amplifier

MR-BDA60-X

MARS BDA series of products provides a cost effective answer for enhancing radio communication in buildings, basements, parking garages and other RF shielded environments. BDA products are designed to receive and amplify RF signals strength in both "Down Link" and "Up Link" communication paths.



Specifications:

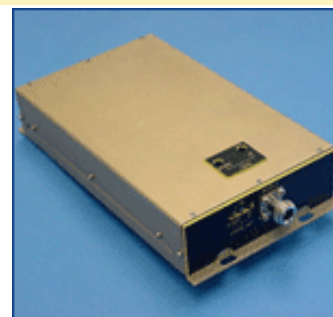
<i>Electrical</i>		
Frequency range	Down Link 869 – 894 MHz	Up Link 824 – 849 MHz
Operational Frequency Band, MHz (Other Available on Request)	869 – 879	824 – 834
Gain at, min. Attenuation, min.	55 dB	60 dB
Output Power @ 1 dB Compression	26 dBm	19 dBm
Output IP3, min.	40 dBm	31 dBm
Pass Band Ripple	± 1.5 dB	
Noise Figure max.	6.5 dB	
Gain Control, Manual, min.	20 dB	
Impedance	50 Ohm	
VSWR, max.	2 : 1	
Input Power, max.	-15 dBm	
Biassing (Via RF Cable and Through Separate DC Connector)	12V / 1000 mA (Adaptor MR-PS26 should be Ordered Separately)	
<i>Mechanical</i>		
Dimensions	253 x 125 x 43 mm	
Weight	850 gr.	
Connectors	N-Type, Female	
Mount	Wall / Ceiling Mounting	
<i>Environmental</i>		
Operating Temperature Range	- 10°C to + 50°C	
Humidity, min.	95%	
Splash, Dust	Protected	
Service Life	>10 years	

Specifications subject to change without notice

GSM Bi – Directional Amplifier

MR-BGSM60-X

MARS BDA series of products provides a cost effective answer for enhancing radio communication in buildings, basements, parking garages and other RF shielded environments.



Specifications:

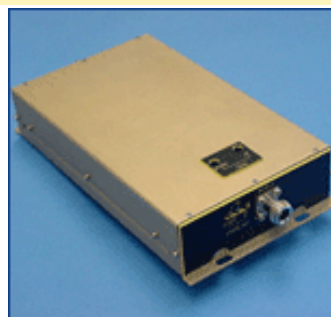
<i>Electrical</i>		
Frequency range	Down Link 935 – 960 MHz	Up Link 890 – 915 MHz
Operational Frequency Band, MHz (Other Available on Request)	947 – 960	902 – 915
Gain at min. Attenuation, min.	55 dB	60 dB
Output Power @ 1 dB Compression	26 dBm	19 dBm
Output IP3, min.	40 dBm	31 dBm
Pass Band Ripple	± 1.5 dB	
Noise Figure max.	6.5 dB	
Gain Control, Manual, min.	20 dB	
Impedance	50 Ohm	
VSWR, max.	2 : 1	
Input Power, No Damage, max.	-15 dBm	
Biassing (Via RF Cable and Through Separate DC Connector)	12V / 1000 mA (Adaptor MR-PS26 should be Ordered Separately)	
<i>Mechanical</i>		
Dimensions	253 x 125 x 43 mm	
Weight	850 gr.	
Connectors	N-Type, Female	
Mount	Wall / Ceiling Mounting	
<i>Environmental</i>		
Operating Temperature Range	- 10°C to + 50°C	
Humidity, min.	95%	
Splash, Dust	Protected	
Service Life	>10 years	

Specifications subject to change without notice

SMR / IDEN Bi – Directional Amplifier

MR-BSMR60-X

MARS BDA series of products provides a cost effective answer for enhancing radio communication in buildings, basements, parking garages and other RF shielded environments. BDA products are designed to receive and amplify RF signals strength in both "Down Link" and "Up Link" communication paths.



Specifications:

<i>Electrical</i>		
	Down Link	Up Link
Frequency range	851 – 866 MHz	806 – 821 MHz
Operational Frequency Band, MHz (Other Available on Request)	851 – 866	806 – 821
Gain at, min. Attenuation, min.	55 dB	60 dB
Output Power @ 1 dB Compression	26 dBm	19 dBm
Output IP3, min.	40 dBm	31 dBm
Pass Band Ripple	± 1.5 dB	
Noise Figure max.	6.5 dB	
Gain Control, Manual, min.	20 dB	
Impedance	50 Ohm	
VSWR, max.	2 : 1	
Input Power, No Damage, max.	-15 dBm	
Biasing (Via RF Cable and Through Separate DC Connector)	12V / 1000 mA (Adaptor MR-PS26 should be Ordered Separately)	
<i>Mechanical</i>		
Dimensions	253 x 125 x 43 mm	
Weight	850 gr.	
Connectors	N-Type, Female	
Mount	Wall / Ceiling Mounting	
<i>Environmental</i>		
Operating Temperature Range	- 10°C to + 50°C	
Humidity, min.	95%	
Splash, Dust	Protected	
Service Life	>10 years	

Specifications subject to change without notice

CDMA / TDMA Bi – Directional Amplifier

MR-PBCT55-X

MARS Personal BDA provides a cost effective solution for enhancing radio communication in offices and other small area spaces. Amplifier features small size and is easy to install.



Specifications:

<i>Electrical</i>		
	Down Link	Up Link
Frequency range	869 – 894 MHz	824 – 849 MHz
Operational Frequency Band, MHz (Other Available on Request)	869 – 879	824 – 834
Gain at, min. Attenuation	55 dB	
Pass Band Ripple	± 2 dB	
Output Power @ 1 dB Compression	13 dBm	
Noise Figure max.	7 dB	
Step Attenuator (2 dB Step)	2 to 31 dB	
Impedance	50 Ohm	
VSWR, max.	2 : 1	
Output IP3, min.	23 dBm	
Input Power, max.	-20 dBm	
Biasing (Through Separate DC Connector)	6V / 400 mA	
(Adaptor MR-PS13 should be Ordered Separately)		
<i>Mechanical</i>		
Dimensions	120 x 70 x 35 mm	
Weight	200 gr	
Connectors	SMA, Female	
Housing	Aluminum, Anodized, Black	
Mount	Wall / Ceiling Mounting	
<i>Environmental</i>		
Operating Temperature Range	- 10°C to + 50°C	
Humidity, min.	95%	
Service Life	>10 years	

Specifications subject to change without notice

GSM Bi – Directional Amplifier
MR-PBGS55-X

MARS Personal BDA provides a cost effective solution for enhancing radio communication in offices and other small area spaces. Amplifier features small size and is easy to install.



Specifications:

<i>Electrical</i>		
Frequency range	Down Link 935 – 960 MHz	Up Link 890 – 915 MHz
Operational Frequency Band, MHz (Other Available on Request)	947 – 960	902 – 915
Gain at, min. Attenuation	55 dB	
Pass Band Ripple	± 2 dB	
Output Power @ 1 dB Compression	13 dBm	
Noise Figure max.	7 dB	
Step Attenuator (2 dB Step)	2 to 31 dB	
Impedance	50 Ohm	
VSWR, max.	2 : 1	
Output IP3, min.	23 dBm	
Input Power, max.	-20 dBm	
Biasing (Through Separate DC Connector)	6V / 400 mA (Adaptor MR-PS13 should be Ordered Separately)	
<i>Mechanical</i>		
Dimensions	120 x 70 x 35 mm	
Weight	200 g	
Connectors	SMA, Female	
Housing	Aluminum, Anodized, Black	
Mount	Wall / Ceiling Mount	
<i>Environmental</i>		
Operating Temperature Range	- 10°C to + 50°C	
Humidity, min.	95%	
Service Life	>10 years	

Specifications subject to change without notice

**SMR / IDEN Bi – Directional Amplifier
MR-PBSMR55-X**

MARS Personal BDA provides a cost effective solution for enhancing radio communication in offices and other small area spaces. Amplifier features small size and is easy to install.



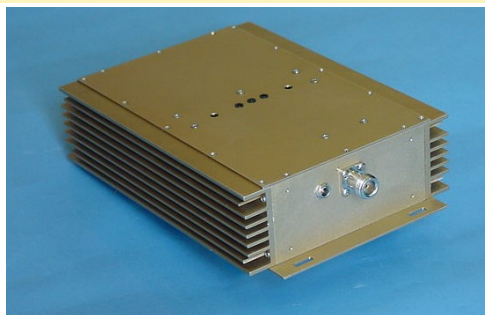
Specifications:

<i>Electrical</i>		
Frequency range	Down Link 851 – 866 MHz	Up Link 806 – 821 MHz
Operational Frequency Band, MHz (Other Available on Request)	851 – 866	806 – 821
Gain at, min. Attenuation	55 dB	
Pass Band Ripple	± 2 dB	
Output Power @ 1 dB Compression	13 dBm	
Noise Figure max.	7 dB	
Step Attenuator (2 dB Step)	2 to 31 dB	
Impedance	50 Ohm	
VSWR, max.	2 : 1	
Output IP3, min.	23 dBm	
Input Power, max.	-20 dBm	
Biasing (Through Separate DC Connector)	6V / 400 mA (Adaptor MR-PS13 should be Ordered Separately)	
<i>Mechanical</i>		
Dimensions	120 x 70 x 35 mm	
Weight	200 gr.	
Connectors	SMA, Female	
Housing	Aluminum, Anodized, Black	
Mount	Wall / Ceiling Mounting	
<i>Environmental</i>		
Operating Temperature Range	- 10°C to + 50°C	
Humidity, min.	95%	
Service Life	>10 years	

Specifications subject to change without notice

Bi – Directional Amplifier 1 Watt
MR-BDA60-X1W

MARS BDA series of products provides a cost effective answer for enhancing radio communication in buildings, basements, parking garages and other RF shielded environments. BDA products are designed to receive and amplify RF signals strength in both the "Down Link" and the "Up Link" communication paths.



Specifications:

<i>Electrical</i>		
Frequency range	Down Link 869 – 894 MHz	Up Link 824 – 849 MHz
Operational Frequency Band, MHz (Other Available on Request)	869 – 879	824 – 834
Gain at, min. Attenuation	60 dB	
Pass Band Ripple	± 1.5 dB	
Output Power @ 1 dB Compression	30 dBm	
Noise Figure max.	7 dB	
Gain Control, manual, 2 dB Step	30 dB	
Impedance	50 Ohm	
VSWR, max.	2 : 1	
Output IP3, min.	40 dBm	
Input Power, No Damage, max.	-15 dBm	
Biassing (Through Separate DC Connector)	6.7VDC / 3 A (Adaptor MR-PS30 should be Ordered Separately)	
<i>Mechanical</i>		
Dimensions	243 x 160 x 57 mm	
Weight	2 kg	
Connectors	N-Type, Female	
<i>Environmental</i>		
Operating Temperature Range	- 10°C to + 50°C	
Humidity, min.	95%	
Splash, Dust	Protected	
Service Life	>10 years	

Specifications subject to change without notice

GSM Bi – Directional Amplifier 1 Watt

MR-BGSM60-X1W

MARS BDA series of products provides a cost effective answer for enhancing radio communication in buildings, basements, parking garages and other RF shielded environments. BDA products designed to receive and amplify RF signals strength in both "Down Link" and "Up Link" communication paths.



Specifications:

<i>Electrical</i>		
Frequency range	Down Link 935 – 960 MHz	Up Link 890 – 915 MHz
Operational Frequency Band, MHz (Other Available on Request)	947 – 960	902 – 915
Gain at, min. Attenuation	60 dB	
Pass Band Ripple	± 1.5 dB	
Output Power @ 1 dB Compression	30 dBm	
Noise Figure max.	7 dB	
Gain Control, manual, 2 dB Step	30 dB	
Impedance	50 Ohm	
VSWR, max.	2 : 1	
Output IP3, min.	40 dBm	
Input Power, No Damage, max.	-15 dBm	
Biasing (Through Separate DC Connector)	6.7V / 3 A	
(Adaptor MR-PS30 should be Ordered Separately)		
<i>Mechanical</i>		
Dimensions	243 x 160 x 57 mm	
Weight	2 kg	
Connectors	N-Type, Female	
<i>Environmental</i>		
Operating Temperature Range	- 10°C to + 50°C	
Humidity, min.	95%	
Splash, Dust	Protected	
Service Life	>10 years	

Specifications subject to change without notice

SMR / IDEN Bi – Directional Amplifier 1 Watt
MR-BSMR60-X1W

Mars BDA series of products provides a cost effective answer for enhancing radio communication in buildings, basements, parking garages and other RF shielded environments. BDA products are designed to receive and amplify RF signals strength in both the "Down Link" and the "Up Link" communication paths.



Specifications:

<i>Electrical</i>		
	Down Link	Up Link
Frequency range	851 – 866 MHz	806 – 821 MHz
Operational Frequency Band, MHz (Other Available on Request)	851 – 866	806 – 821
Gain at, min. Attenuation	60 dB	
Pass Band Ripple	± 1.5 dB	
Output Power @ 1 dB Compression	30 dBm	
Noise Figure max.	7 dB	
Gain Control, manual, 2 dB Step	30 dB	
Impedance	50 Ohm	
VSWR, max.	2 : 1	
Output IP3, min.	40 dBm	
Input Power, No Damage, max.	-15 dBm	
Biasing (Through Separate DC Connector)	6.7V / 3 A	
(Adaptor MR-PS30 should be Ordered Separately)		
<i>Mechanical</i>		
Dimensions	243 x 160 x 57 mm	
Weight	2 kg	
Connectors	N-Type, Female	
<i>Environmental</i>		
Operating Temperature Range	- 30°C to + 70°C	
Humidity, min.	95%	
Splash, Dust	Protected	
Service Life	>10 years	

Specifications subject to change without notice