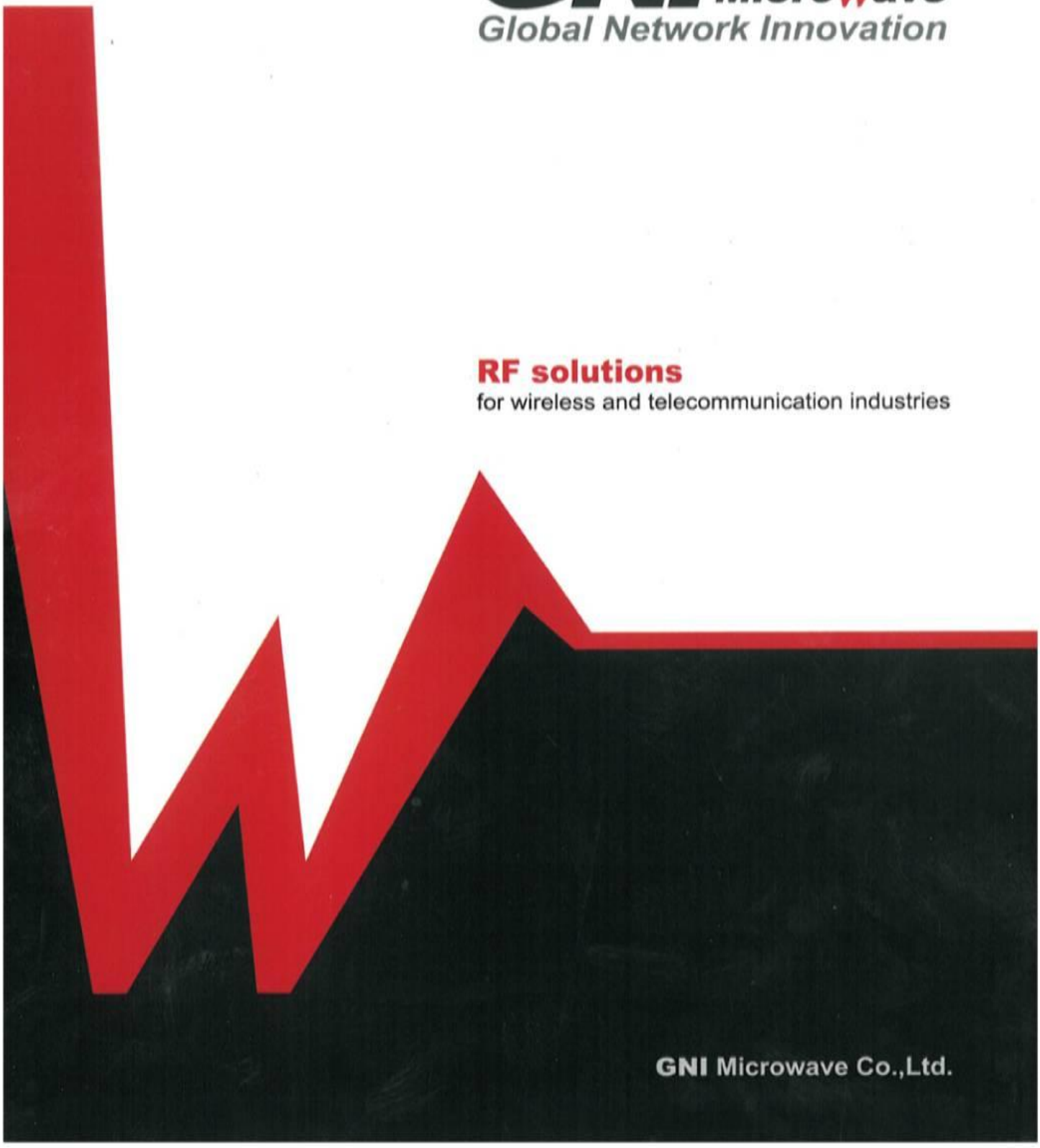
GNI MicroWave

Global Network Innovation



RF solutions

for wireless and telecommunication industries

GNI Microwave Co.,Ltd.

About GNI

GNI is a company consisting of the best talent with much experience and the most advanced technology in the wireless communication industries. We have been making efforts to produce better products to satisfy our customers based on our outstanding technology by constant research and development. GNI Microwave is one of the leading suppliers of RF solutions for wireless and telecommunication industries. The company focuses on developing RF devices, modules and subsystems for mobile communication (CDMA, PCS, WCDMA, GSM, Wimax). The company's facility is fully furnished with the state-of-the-art R&D, productions and quality control equipment, including RF design and test equipment, environmental test laboratory, burn-in room, and machining centers. The company is ISO 9001, ISO14001 certified and maintains a strict quality control system in accordance with the international quality standards.

Certification and Industrial property right

CERTIFICATION

- ISO 9001 Certified
- ISO 14001 Certified

STATUS OF CORPORATE ANNEX LABORATORY

- Selected as a INNO-BIZ
- Selected as a promising company
- Selected as a venture company
- Corporate Annex Laboratory
- Certified as a CLEAN Workplace

PATENT CERTIFICATES

- Data transfer device for two-way radio communication and its method
- Three-dimensional stacked circuit device and its manufacturing method
- Structure of very large scale integration circuits for one-dimensional wavelet transform

Registered ISO 9001:2000 UKAS QUALITY MANAGEMENT 127

INNOBIZ

특허청

Quality and Environment Policy

"Supplying the best products and service timely to satisfy our customers with the quality-oriented spirit and the environmental spirit"

We, GNI Microwave Inc., understand and appreciate the importance and value of environmental preservation in every field and area and take the lead in preserving the clean natural environment by minimizing environmental impacts caused by management activities through establishment of environmental management systems

Quality Policy	Environment Policy
Zero percent faulty process Zero percent customer complaints Zero percent safety management	20% Reduction of waste 10% Reduction in energy consumption

[Quality Objectives Promotion Strategy]

1. We, GNI Microwave Inc., distribute to the world by "supplying the best products and the best service for our customers in time" as a developer, manufacturer and vendor.
2. Our quality system described in the quality manual follows the requirements of ISO9001:2000, and I. as a representative director of GNI, will continuously improve its efficiency through periodic examination into appropriateness of our quality management system.
3. All our staffs should understand our quality policy and continually improve their relevant work processes for efficient performance.

[Environmental Objectives Promotion Strategy]

1. Our executives and the other staffs establish and carry out environmental improvement objectives and promotion plans by building up environmental management system based on ISO 14001:2004 International Environmental Management Standards to improve environment and to prevent pollution.
2. Our executives and the other staffs take the initiative in preserving our planet, the earth, by enhancing environment friendliness to perform our management activities giving priority to preventing all environmental problems and improving environment

Product

PASSIVE COMPONENTS	ACTIVE MODULES	SUBSYSTEM
FILTER	LNA	TMA
COMBINER	UDCU	(Accessories : Bias Tee ,
SPLITTER	RF SWITCH	Power Distribution Unit)
COUPLER	DETECTOR (VSWR)	BTS FRONT-END UNIT
ARRESTER		
ATTENUATOR		

Delay Filter

FEATURES

- Flat group delay, Low insertion loss
- Low IMD
- Frequency ranges are available

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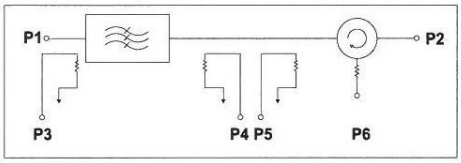
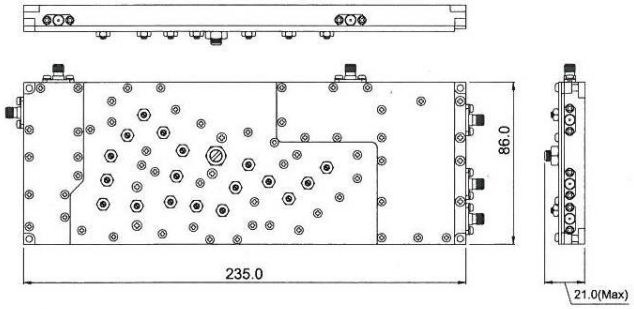


MECHANICAL DIAGRAM



SPECIFICATION

PARAMETER		SPECIFICATION	COMMENT
Frequency Range		2090.0 ~ 2190.0MHz	
Insertion Loss (J1 - J2)		1.3dB Max.	1.2dB Max. @Temp.
Pass Band Ripple (J1 - J2)		±0.1dB Max.	
Return Loss	J1, J2	18.0dB Min.	20.0dB Min. @Temp.
	J3 ,J4, J5, J6	20.0dB Min.	
Delay (J1 - J2)		12.0ns Max.	
Delay Deviation (J1 - J2)		±300.0ps Max.	±150.0ps @Temp.
Phase Deviation (J1 - J2)		±1.0°	@Electrical Delay
Coupling Value	Coupler1 (J1 - J3)	30.0 ± 0.5dB	
	Coupler2 (J4 - J2)	10.0 ± 0.3dB	
	Coupler3 (J1 - J5)	30.0 ± 0.7dB	
	Coupler4 (J2 - J6)	30.0 ± 1.5dB	
Frequency Range	Coupler1 (J3 - J2)	48.0dB Min.	
	Coupler2 (J1 - J4)	28.0dB Min.	
	Coupler3 (J5 - J2)	48.0dB Min.	
	Coupler4 (J1 - J6)	48.0dB Min.	
Cancellation		30.0dB Min.	
IMD		70.0dBc Min.	
Operating Temperature		-30 ~ +70℃	
Connectors		SMA (F)	
Size (mm)		235.0 X 86.0 X 21.0	

Waveguide Filter

FEATURES

- Excellent out-of-band rejection
- Low insertion Loss, High power handling, Low IMD
- Passband frequency ranges are available

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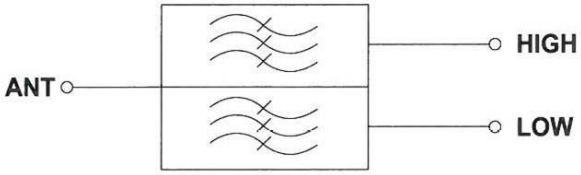
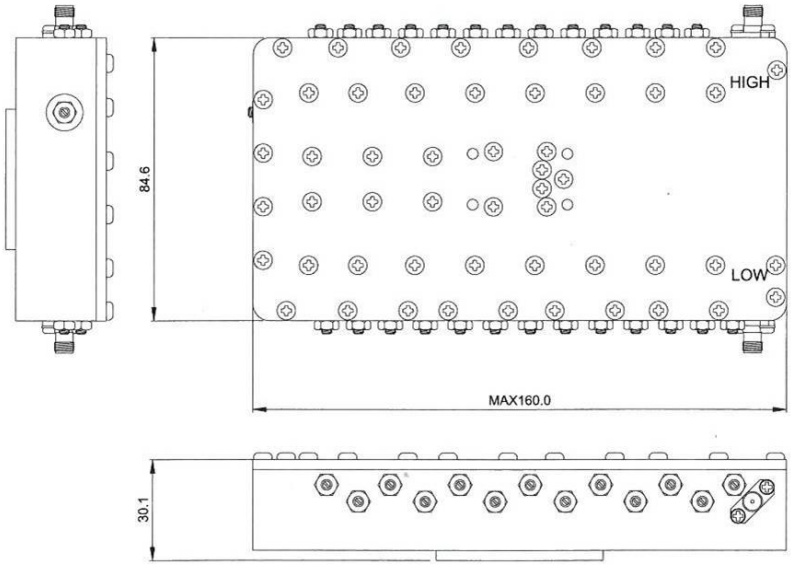


MECHANICAL DIAGRAM



SPECIFICATION

PARAMETER	SPECIFICATION	
	LOW	HIGH
Frequency Range	10675.0 ~ 10855.0MHz	11165.0 ~ 11345.0MHz
Insertion Loss	1.0dB Max.	
Pass Band Ripple	0.4dB Max.	
Return Loss	18.0dB Min.	
Isolation	70.0dB Min.	
Operating Temperature	-40.0 ~ +50.0℃	
Connectors	SMA (F)	
Size (mm)	160.0 X 30.1 X 84.6	

1800MHz Duplexer

FEATURES

- Broad selection of high-Q duplexer
- Excellent out-of-band rejection
- Low insertion Loss, High power handling, Low IMD
- Passband frequency ranges are available

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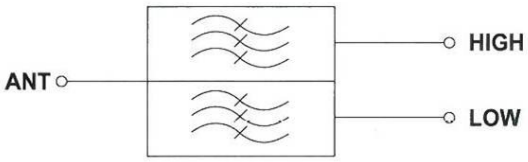

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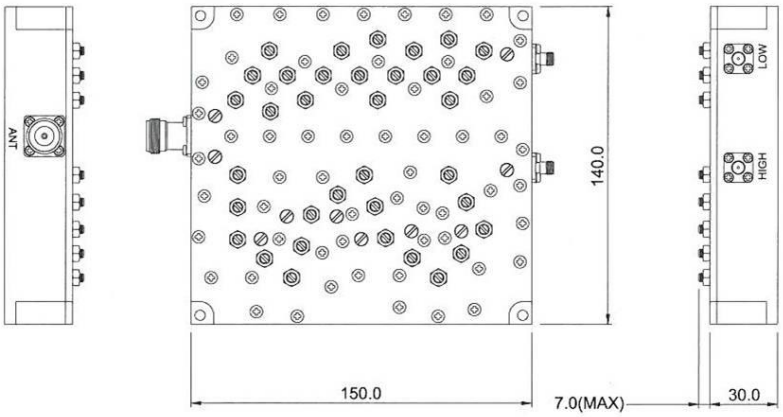

SPECIFICATION

PARAMETER		SPECIFICATION	
		LOW	HIGH
Frequency Range		1710.0~1785.0MHz	1805.0~1880.0MHz
Insertion Loss		1.3dB Max.	
Return Loss		17.0dB Min	
Attenuation	1475.0~1590.0MHz	50.0dB Min	-
	1805.0 ~ 1880.0MHz	75.0dB Min	-
	2110.0 ~ 2170.0MHz	60.0dB Min	-
	1560.0 ~ 1685.0MHz	-	60.0dB Min
	1710.0 ~ 1765.0MHz	-	85.0dB Min
	1765.0 ~ 1785.0MHz	-	85.0dB Min
Port Isolation	1710.0 ~ 1765.0MHz	95.0dB Min	
	1765.0 ~ 1785.0MHz	90.0dB Min	
	1785.0 ~ 1805.0MHz	55.0dB Min	
	1805.0 ~ 1880.0MHz	80.0dB Min	
Operation Temperature		-30 ~ +70℃	
Connectors		N (F) , SMA(F)	
Size (mm)		150.0 X 140.0 X 37.0	

1900MHz Dual Duplexer

FEATURES

- Broad Selection of high-Q duplexer
- Excellent out-of -band rejection
- Low insertion loss, High power handling
- Low IMD
- Passband frequency ranges are available

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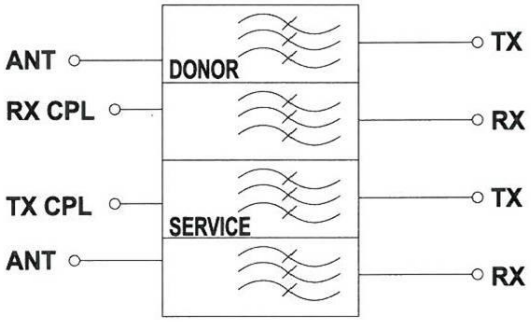

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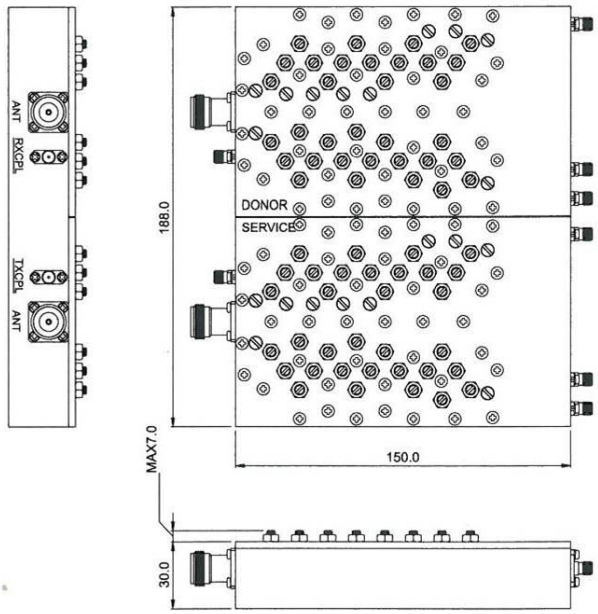
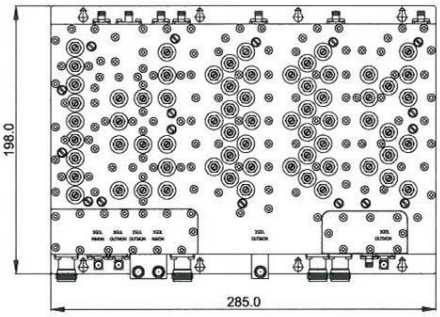


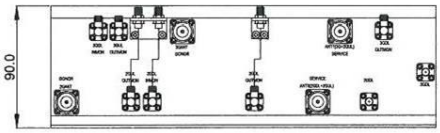
SPECIFICATION

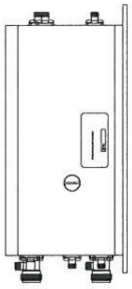
PARAMETER		SPECIFICATION	
		RX	TX
Frequency Range		1850.625~1914.375MHz	1930.625~1994.375MHz
Insertion Loss		1.8dB Max.	
Pass Band Ripple		1.2dB Max.	
Return Loss		20.0dB Min.	
Attenuation	1922.5MHz	25.0dB Min.	
Isolation		85.0dB Min.	
Operation Temperature		-30 ~ +70℃	
Connectors		N (F), SMA (F)	
Size (mm)		188.0 X 150.0 X 37.0	

Multiplexer

MECHANICAL DIAGRAM







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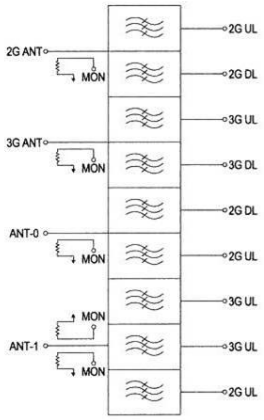
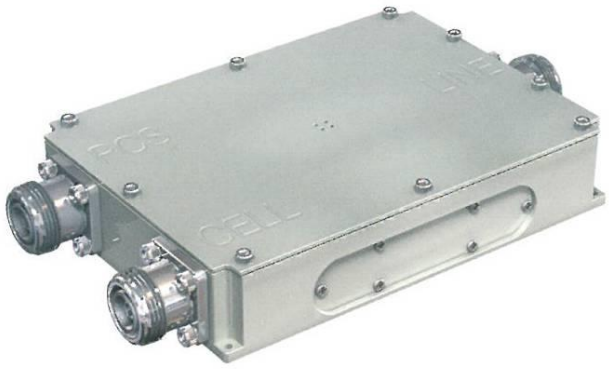


SPECIFICATION

PARAMETER		SPECIFICATION			
		2G U/L	2G D/L	3G U/L	3G D/L
Frequency Range		824.025~848.985 MHz	869.025~893.985 MHz	1940.5~1960.0 MHz	2130.5~2140.0 MHz
Insertion Loss		1.5dB Max.	2.0dB Max.	1.5dB Max.	2.0dB Max.
Pass Band Ripple		1.0dB Max.	1.0dB Max.	1.0dB Max.	1.0dB Max.
Return Loss		18.0dB Min.	18.0dB Min.	18.0dB Min.	18.0dB Min.
Attenuation	2127.5MHz	-	-	-	10.0dBc Min.
	2152.5MHz	-	-	-	10.0dBc Min.
	9.0KHz~800.0MHz	-	-	60.0dBc Min.	60.0dBc Min.
	800.0~18070.0MHz	-	-	80.0dBc Min.	80.0dBc Min.
	2.3~2.7GHz	-	-	80.0dBc Min.	80.0dBc Min.
	2.7~12.75GHz	-	-	40.0dBc Min.	40.0dBc Min.
	Isolation (Min.)	110.0dBc Min.	110.0dBc Min.	110.0dBc Min.	110.0dBc Min.
2nd Harmonic (Min.)		-	80.0dBc Min.	-	80.0dBc Min.
Delay Variation	FA	25.0ns Max.	25.0ns Max.	25.0ns Max.	25.0ns Max.
Input Power		-	50.0W (Avg.)	-	50.0W (Avg.)
Coupler	Coupling	30.0 ± 1.0dB	20.0 ± 1.0dB	30.0 ± 1.0dB	20.0 ± 1.0dB
	Directivity	15.0dBc Min.	15.0dBc Min.	15.0dBc Min.	15.0dBc Min.
Operating Temperature.		-30 ~ +70℃			
Connectors		N (F), SMA (F)			
Size (mm)		285.0 x 198.0 x 88.0			

Combiner



FEATURES

- Design provides high power handling
- Enables feeder sharing
- Suitable for indoor or outdoor applications
- DC by-pass between all ports
- DC stop available as an accessory

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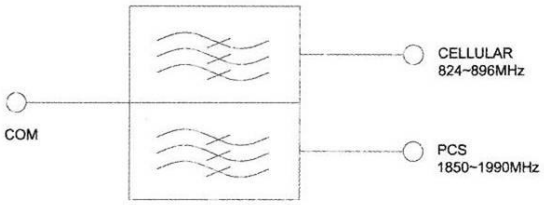
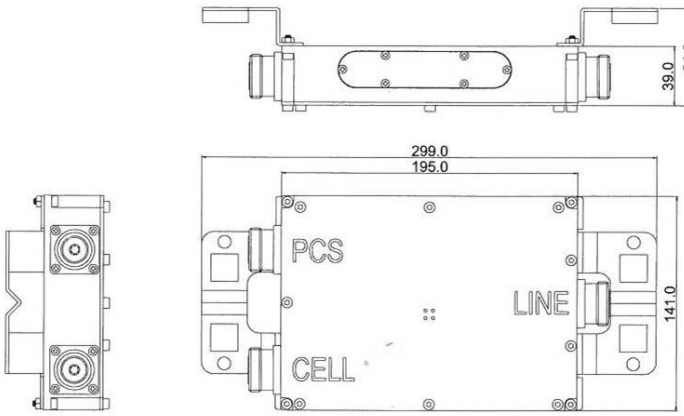


Dual Band Combiner

MECHANICAL DIAGRAM



SPECIFICATION

PARAMETER	SPECIFICATION		COMMENT
	CELLULAR	PCS	
Operating Band	824 ~ 896MHz	1850 ~ 1990MHz	
Center Frequency	860MHz	1920MHz	
Bandwidth	72.0MHz	140MHz	
Insertion Loss	0.15dB Typ.		
VSWR / Return Loss	1.2:1 / 20.8dB typ.		
Isolation	50dB Min.		
PIMD	150dBc typ.		
Operating Temperature	-40 ~ +65℃		
Connectors	7/16 DIN (F)		
Size (mm)	195.0X141.0X39.0		

Splitter

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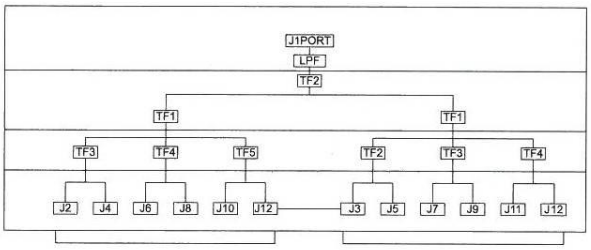

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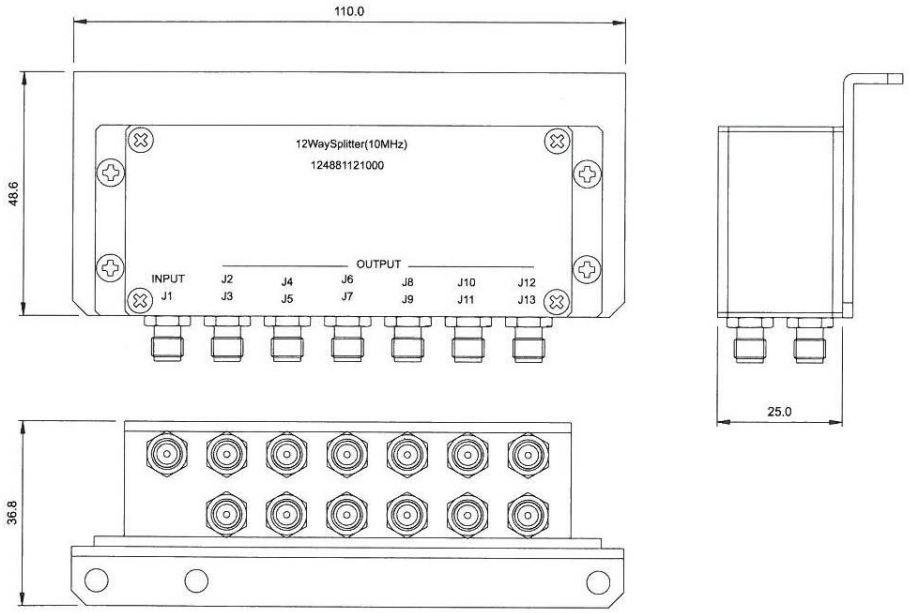

SPECIFICATION

PARAMETER		SPECIFICATION	COMMENT
Frequency Range		8.75MHz ~ 11.25MHz	
Insertion Loss		12.0dB Max.	
Return Loss		16.0dB Min.	
Attenuation	≥50MHz	40.0dB Min.	
Isolation		20.0dB Min.	
Amplitude Unbalance		0.3dB Max.	
Phase Unbalance		4° Max.	
Input Power		1W Max.	
Operating Temperature		-10℃ ~ +70℃	
Connectors		SMA(F)	
Size(mm)		110.0 X 48.6 X 25.0	