

Repeater specifications

1. GSM Optical Fiber Repeater GZF900-III (43dBm)



Specification:

Item	Specification	
	Uplink	Downlink
Frequency range*	890~915MHz	935~960MHz
Maximum output power	-5dBm±2dB	43dBm±2dB
Gain	≥58dB	≥63dB
Max input power	-40dBm	3dBm
Gain adjustment range	≥30dB	
Gain adjustment step	1dB	
Gain adjustment error	≤±1.0dB within 0-20dB ≤±1.5dB within 20-30dB	
Ripple in band	≤3dB	
Noise Figure	≤4dB	
VSWR	≤1.4	
Group Delay	≤5μsec	
Spurious Emission	9 KHz ~ 1 GHz	≤ -36 dBm/100KHz
	1 GHz ~ 12.75 GHz	≤ -30 dBm/1 MHz
Inter-modulation	≤-50dBc/3kHz	
Built-In Power Supply*	AC220V±15%, -48V±10%	
Monitoring and alarming*	Door, Temperature, Power Supply, Output Power, etc This function need extra GSM terminal per equipment for remote NMS monitoring	
Input/output impedance	50Ω	
Operating temperature	-25 ~ +55℃	
Relative humidity	5%~95%	
Connector	N type(Female)	
Optical wavelength	1.31um or 1.55um	
Optical Connector	FC/APC	
Transmission distances (Max.)	15km	

*Note: The star shows this item shall be customized.

2. GSM Optical Fiber Repeater GZF900-III (40/37/33dBm)



Specification:

Item	Specification	
	Uplink	Downlink
Frequency range*	890~915MHz	935~960MHz
Maximum output power	-5dBm±2dB	40/37/33dBm±2dB
Gain	≥58dB(40/37dBm)	≥63dB(40/37dBm)
	≥53dB(33dBm)	≥53dB(33dBm)
Gain adjustment range	≥30dB	
Gain adjustment step	1dB	
Gain adjustment error	≤±1.0dB within 0-20dB	
	≤±1.5dB within 20-30dB	
Ripple in band	≤3dB	
Noise Figure	≤4dB	
VSWR	≤1.4	
Group Delay	≤5μsec	
Spurious Emission	9 KHz ~ 1 GHz	≤ -36 dBm/100KHz
	1 GHz ~ 12.75 GHz	≤ -30 dBm/1 MHz
Inter-modulation	≤-50dBc/3kHz	
Built-In Power Supply*	AC220V±15%, -48V±10%	
Monitoring and alarming*	Door, Temperature, Power Supply, Output Power, etc This function need extra GSM terminal per equipment for remote NMS monitoring	
Input/output impedance	50Ω	
Operating temperature	-25 ~ +55℃	
Relative humidity	5%~95%	
Connector	N type(Female)	
Optical wavelength	1.31um or 1.55um	
Optical Connector	FC/APC	
Transmission distances (Max.)	15km	

*Note: The star shows this item shall be customized.

3. GSM Optical Fiber Repeater GZF900-IV (43/40/37/33dBm)

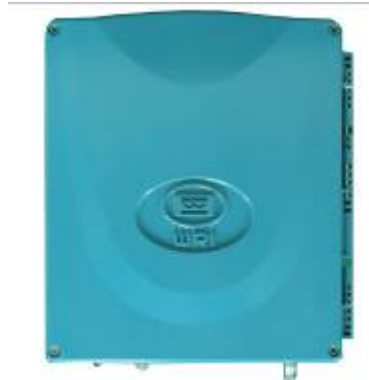


Specification:

Item	Specification	
	Uplink	Downlink
Frequency range*	890~915MHz	935~960MHz
Maximum output power	-5dBm±2dB	43/40/37/33dBm±2dB
Gain	≥58 (40/37dBm)	≥63dB(40/37dBm)
	≥53dB(33dBm)	≥53dB(33dBm)
Gain adjustment range	≥30dB	
Gain adjustment step	1dB	
Gain adjustment error	≤±1.0dB within 0-20dB	
	≤±1.5dB within 20-30dB	
Ripple in band	≤3dB	
Noise Figure	≤4dB	
VSWR	≤1.4	
Group Delay	≤5μsec	
Spurious Emission	9 KHz ~ 1 GHz	≤ -36 dBm/100KHz
	1 GHz ~ 12.75 GHz	≤ -30 dBm/1 MHz
Inter-modulation	≤-50dBc/3kHz	
Built-In Power Supply*	AC220V±15%, -48V±10%	
Monitoring and alarming*	Door, Temperature, Power Supply, Output Power, etc This function need extra GSM terminal per equipment for remote NMS monitoring	
Input/output impedance	50Ω	
Operating temperature	-25 ~ +55℃	
Relative humidity	5%~95%	
Connector	N type(Female)	
Optical wavelength	1.31um or 1.55um	
Optical Connector	FC/APC	
Transmission distances (Max.)	15km	

*Note: The star shows this item shall be customized.

4. GSM Wireless Access High Power Repeater GZF900-V (33dBm band selective)



Specification:

Item		Specification	
		Uplink	Downlink
Frequency range*		890~915MHz	935~960MHz
Maximum output power		23dBm±2dB	33dBm±2dB
Gain		≥80dB	
ALC(Auto Level Control)		Within 2dB or shut off	
Gain adjustment range		≥30dB	
Gain adjustment step		≤2dB	
Gain adjustment error		≤±1.0dB within 0-20dB ≤±1.5dB within 20-30dB	
Out-band suppression	≥0.4MHz	≥15dB	
	≥0.6MHz	≥35dB	
	≥1MHz	≥45dB	
	≥5MHz	≥50dB	
Ripple in band		≤3dB	
Noise Figure		≤4dB	
VSWR		≤1.4	
Group Delay		≤5.0 μsec	
Spurious Emission	9 KHz ~ 1 GHz	≤ -36 dBm/100 KHz	
	1 GHz ~ 12.75 GHz	≤ -30 dBm/1 MHz	
Inter-modulation	In-band		≤-50dBc/3kHz
	Out- band	9 KHz ~ 1 GHz	≤ -36 dBm/100 KHz
		1 GHz ~ 12.75GHz	≤ -30 dBm/1 MHz
Built-In Power Supply		AC220V±15%, -48V±10%	
Monitoring and alarming*		Door, Temperature, Power Supply, Output Power, etc This function need extra GSM terminal per equipment for remote NMS monitoring	
Input/output impedance		50Ω	
Operating temperature		-25 ~ +55℃	
Relative humidity		5%~95%	
Connector		N type(Female)	

*Note: The star shows this item shall be customized. The frequency range shall be adjustable if required.

5. GSM Wireless Access High Power Repeater GZF900-V
(43/37dBm band selective)



Specification:

Item		Specification	
		Uplink	Downlink
Frequency range*		890~915MHz	935~960MHz
Maximum output power		33/30dBm±2dB	43/37dBm±2dB
Gain		≥85dB	
ALC(Auto Level Control)		Within 2dB or shut off	
Gain adjustment range		≥30dB	
Gain adjustment step		≤2dB	
Gain adjustment error		≤±1.0dB within 0-20dB ≤±1.5dB within 20-30dB	
Out-band suppression	≥0.4MHz	≥15dB	
	≥0.6MHz	≥35dB	
	≥1MHz	≥45dB	
	≥5MHz	≥50dB	
Ripple in band		≤3dB	
Noise Figure		≤4dB	
VSWR		≤1.4	
Group Delay		≤5.0 μsec	
Spurious Emission	9 KHz ~ 1 GHz	≤ -36 dBm/100 KHz	
	1 GHz ~ 12.75 GHz	≤ -30 dBm/1 MHz	
Inter-modulation	In-band		≤-50dBc/3kHz
	Out-band	9 KHz ~ 1 GHz	≤ -36 dBm/100 KHz
		1 GHz ~ 12.75 GHz	≤ -30 dBm/1 MHz
Built-In Power Supply*		AC220V±15%, -48V±10%	
Monitoring and alarming*		Door, Temperature, Power Supply, Output Power, etc This function need extra GSM terminal per equipment for remote NMS monitoring	
Input/output impedance		50Ω	
Operating temperature		-25 ~ +55°C	
Relative humidity		5%~95%	
Connector		N type(Female)	

*Note: The star shows this item shall be customized. The frequency range shall be adjustable if required.

6. GSM Wireless Access High Power Repeater GZF900-V (33dBm Downlink channel selective)



Specification:

Item		Specification		
		Uplink	Downlink	
Frequency range*		890~915MHz	935~960MHz	
Maximum output power		23dBm±2dB	33dBm±2dB	
Gain		≥80dB		
Channel selective range		-	2/4/6/8	
ALC(Auto Level Control)		Within 2dB or shut off		
Gain adjustment range		≥30dB		
Gain adjustment step		≤2dB		
Gain adjustment error		≤±1.0dB within 0-20dB ≤±1.5dB within 20-30dB		
Out- band suppression	Band selective	≥0.4MHz	≥15dB	-
		≥0.6MHz	≥35dB	-
		≥1MHz	≥45dB	-
		≥5MHz	≥50dB	-
	Channel selective	F0±400KHZ	-	≤-40dBC
		F0±600KHZ	-	≤-45dBC
Ripple in band		≤3dB	-	
Noise Figure		≤4dB		
VSWR		≤1.4		
Group Delay		≤5μsec		
Spurious Emission	9 KHz ~ 1GHz		≤ -36 dBm/100 KHz	
	1 GHz ~ 12.75GHz		≤ -30 dBm/1 MHz	
Inter-modulation	In-band		≤-50dBc/3kHz	
	Out-band	9 KHz ~ 1 GHz	≤ -36 dBm/100 KHz	
		1 GHz ~ 12.75GHz	≤ -30 dBm/1 MHz	
Built-In Power Supply*		AC220V±15%, -48V±10%		
Monitoring and alarming*		Door, Temperature, Power Supply, Output Power, etc. This function need extra GSM terminal per equipment for remote NMS monitoring		
Input/output impedance		50Ω		
Operating temperature		-25 ~ +55℃		
Relative humidity		5%~95%		
Connector		N type(Female)		

*Note: The star shows this item shall be customized.

7. GSM Wireless Access High Power Repeater GZF900-V
(43/37 dBm Downlink channel selective)



Specification:

Item		Specification		
		Uplink	Downlink	
Frequency range*		890~915MHz	935~960MHz	
Maximum output power		33/30dBm±2dB	43/37dBm±2dB	
Gain		≥90dB		
Channel selective range		-	2/4/6/8	
ALC(Auto Level Control)		Within 2dB or shut off		
Gain adjustment range		≥30dB		
Gain adjustment step		≤2dB		
Gain adjustment error		≤±1.0dB within 0-20dB ≤±1.5dB within 20-30dB		
Out-band suppression	Uplink Band selective	≥0.4MHz	≥15dB	-
		≥0.6MHz	≥35dB	-
		≥1MHz	≥45dB	-
		≥5MHz	≥50dB	-
	Downlink Channel selective	F0±400KHZ	-	≤-40dBC
		F0±600KHZ	-	≤-45dBC
Ripple in band		≤3dB	-	
Noise Figure		≤4dB		
VSWR		≤1.4		
Group Delay		≤5μsec		
Spurious Emission	9 KHz ~ 1 GHz		≤ -36 dBm/100 KHz	
	1 GHz ~ 12.75 GHz		≤ -30 dBm/1 MHz	
Inter-modulation	In-band		≤-50dBC/3kHz	
	Out-band	9 KHz ~ 1 GHz	≤ -36 dBm/100 KHz	
		1 GHz ~ 12.75GHz	≤ -30 dBm/1 MHz	
Built-In Power Supply*		AC220V±15%, -48V±10%		
Monitoring and alarming*		Door, Temperature, Power Supply, Output Power, etc This function need extra GSM terminal per equipment for remote NMS monitoring		
Input/output impedance		50Ω		
Operating temperature		-25 ~ +55℃		
Relative humidity		5%~95%		
Connector		N type(Female)		

*Note: The star shows this item shall be customized.

8. GSM Wireless Access High Power Repeater GZF900-V (33dBm Downlink/Uplink channel selective)



Specification:

Item		Specification	
		Uplink	Downlink
Frequency range*		890~915MHz	935~960MHz
Maximum output power		23dBm±2dB	33dBm±2dB
Gain		≥80dB	
Channel selective range		2/4/6/8	
ALC(Auto Level Control)		Within 2dB or shut off	
Gain adjustment range		≥30dB	
Gain adjustment step		≤2dB	
Gain adjustment error		≤±1.0dB within 0-20dB ≤±1.5dB within 20-30dB	
Out-band suppression	F0±400KHZ	≤-40dBC	
	F0±600KHZ	≤-45dBC	
Noise Figure		≤4dB	
VSWR		≤1.4	
Group Delay		≤5μsec	
Spurious Emission	9KHz ~ 1GHz	≤ -36 dBm/100 KHz	
	1GHz ~ 12.75GHz	≤ -30 dBm/1 MHz	
Inter-modulation	In-band		≤-50dBc/3kHz
	Out-band	9KHz ~ 1GHz	≤ -36 dBm/100 KHz
		1GHz ~ 12.75GHz	≤ -30 dBm/1 MHz
Built-In Power Supply*		AC220V±15%, -48V±10%	
Monitoring and alarming*		Door, Temperature, Power Supply, Output Power, etc. This function need extra GSM terminal per equipment for remote NMS monitoring	
Input/output impedance		50Ω	
Operating temperature		-25 ~ +55℃	
Relative humidity		5%~95%	
Connector		N type(Female)	

*Note: The star shows this item shall be customized.

9. GSM Wireless Access High Power Repeater GZF900-V
(43/37 dBm Downlink/Uplink channel selective)



Specification

Item		Specification	
		Uplink	Downlink
Frequency range*		890~915MHz	935~960MHz
Maximum output power		33/30dBm±2dB	43/37dBm±2dB
Gain		≥90dB	
Channel selective range		2/4/6/8	
ALC(Auto Level Control)		Within 2dB or shut off	
Gain adjustment range		≥30dB	
Gain adjustment step		≤2dB	
Gain adjustment error		≤±1.0dB within 0-20dB ≤±1.5dB within 20-30dB	
Out-band suppression	F0±400KHZ	≤-40dB	
	F0±600KHZ	≤-45dB	
Noise Figure		≤4dB	
VSWR		≤1.4	
Group Delay		≤5μsec	
Spurious Emission	9 KHz ~ 1 GHz	≤ -36 dBm/100 KHz	
	1GHz ~ 12.75GHz	≤ -30 dBm/1 MHz	
Inter-modulation	In-band		≤-50dBc/3kHz
	Out-band	9 KHz ~ 1 GHz	≤ -36 dBm/100 KHz
		1GHz ~ 12.75GHz	≤ -30 dBm/1 MHz
Built-In Power Supply*		AC220V±15%, -48V±10%	
Monitoring and alarming*		Door, Temperature, Power Supply, Output Power, etc This function need extra GSM terminal per equipment for remote NMS monitoring	
Input/output impedance		50Ω	
Operating temperature		-25 ~ +55℃	
Relative humidity		5%~95%	
Connector		N type(Female)	

*Note: The star shows this item shall be customized.

10. GSM Solar Power Repeater GZF900-VP (33/37dBm band selective)



Specification

Item		Specification	
		Uplink	Downlink
Frequency range*		890~915MHz	935~960MHz
Maximum output power		30/23dBm±2dB	37/33dBm±2dB
Gain		≥80dB	
ALC(Auto Level Control)		Within 2dB or shut off	
Gain adjustment range		≥30dB	
Gain adjustment step		≤2dB	
Gain adjustment error		≤±1.0dB within 0-20dB ≤±1.5dB within 20-30dB	
Out-band suppression	≥0.4MHz	≥15dB	
	≥0.6MHz	≥35dB	
	≥1MHz	≥45dB	
	≥5MHz	≥50dB	
Ripple in-band		≤3dB	
Noise Figure		≤4dB	
VSWR		≤1.4	
Group Delay		≤5.0μsec	
Spurious Emission	9 KHz ~ 1 GHz	≤ -36 dBm/100 KHz	
	1 GHz ~ 12.75 GHz	≤ -30 dBm/1 MHz	
Inter-modulation		≤-36dBc/30KHz	
Built-In Power Supply*		Solar battery support	
Working time in rainy days		4-5 days	
Power consumption		60W(37dBm); 45W(33dBm)	
Monitoring and alarming*		Door, Temperature, Power Supply, Output Power, etc This function need extra GSM terminal per equipment for remote NMS monitoring	
Input/output impedance		50Ω	
Operating temperature		-25 ~ +55℃	
Relative humidity		5%~95%	
Connector		N type(Female)	

*Note: The star shows this item shall be customized. The frequency range shall be adjustable if required

11. GSM Solar Power Repeater GZF900-VP
(37/33dBm Downlink/Uplink channel selective)



Specification:

Item		Specification	
		Uplink	Downlink
Frequency range*		890~915MHz	935~960MHz
Maximum output power		30/23dBm±2dB	37/33dBm±2dB
Gain		≥80dB	≥80dB
Channel selective range		2/4	
ALC(Auto Level Control)		Within 2dB or shut off	
Gain adjustment range		≥30dB	
Gain adjustment step		≤2dB	
Gain adjustment error		≤±1.0dB within 0-20dB ≤±1.5dB within 20-30dB	
Out-band suppression	F0±400KHZ	≤-40dBC	
	F0±600KHZ	≤-45dBC	
Noise Figure		≤4dB	
VSWR		≤1.4	
Group Delay		≤5μsec	
Spurious Emission	9 KHz ~ 1 GHz	≤ -36 dBm/100 KHz	
	1 GHz ~ 12.75 GHz	≤ -30 dBm/1 MHz	
Inter-modulation	In-band		≤-36dBc/30KHz
	Out-band	9 KHz ~ 1 GHz	≤ -36 dBm/100 KHz
		1 GHz ~ 12.75GHz	≤ -30 dBm/1 MHz
Built-In Power Supply*		Solar battery support	
Working time in rainy days		4-5 days	
Power consumption		60W(37dBm); 45W (33dBm)	
Monitoring and alarming*		Door, Temperature, Power Supply, Output Power, etc This function need extra GSM terminal per equipment for remote NMS monitoring	
Input/output impedance		50Ω	
Operating temperature		-25 ~ +55℃	
Relative humidity		5%~95%	
Connector		N type(Female)	

*Note: The star shows this item shall be customized.

12. GSM Wireless Access Low power Repeater GZF900-VIF-II (27dBm band selective)



Specification:

Item		Specification	
		Uplink	Downlink
Frequency range*		890~915MHz	935~960MHz
Maximum output power		20dBm±2dB	27dBm±2dB
Gain		≥75dB	
ALC(Auto Level Control)		Within 2dB or shut off	
Gain adjustment range		≥30dB	
Gain adjustment step		≤2dB	
Gain adjustment error		≤±1.0dB within 0-20dB ≤±1.5dB within 20-30dB	
Out-band suppression	≥0.4MHz	≥15dB	
	≥0.6MHz	≥35dB	
	≥1MHz	≥45dB	
	≥5MHz	≥50dB	
Ripple in-band		≤3dB	
Noise Figure		≤6dB	
VSWR		≤1.4	
Group Delay		≤5.0μsec	
Spurious Emission	9 KHz ~ 1 GHz	≤ -36 dBm/100 KHz	
	1 GHz ~ 12.75 GHz	≤ -30 dBm/1 MHz	
Inter-modulation	In-band		≤-50dBc/3kHz
	Out-band	9 KHz ~ 1 GHz	≤ -36 dBm/100 KHz
		1 GHz ~ 12.75 GHz	≤ -30 dBm/1 MHz
Built-In Power Supply*		AC220V±15%, -48V±10%	
Monitoring and alarming*		Door, Temperature, Power Supply, Output Power, etc This function need extra GSM terminal per equipment for remote NMS monitoring	
Input/output impedance		50Ω	
Operating temperature		-25 ~ +55℃	
Relative humidity		5%~95%	
Connector		N type(Female)	

*Note: The star shows this item shall be customized. The frequency range shall be adjustable if required

13. GSM Wireless Access Low power Repeater GZF900-VIF-II
(27dBm Downlink/Uplink channel selective)



Specification:

Item		Specification	
		Uplink	Downlink
Frequency range*		890~915MHz	935~960MHz
Maximum output power		20dBm±2dB	
Gain		≥75dB	
Channel selective range		2/4/6/8	
ALC(Auto Level Control)		Within 2dB or shut off	
Gain adjustment range		≥30dB	
Gain adjustment step		≤2dB	
Gain adjustment error		≤±1.0dB within 0-20dB ≤±1.5dB within 20-30dB	
Out-band suppression	F0±400KHZ	≤-40dBC	
	F0±600KHZ	≤-45dBC	
Noise Figure		≤6dB	
VSWR		≤1.4	
Group Delay		≤5μsec	
Spurious Emission	9 KHz ~ 1 GHz	≤ -36 dBm/100 KHz	
	1 GHz ~ 12.75 GHz	≤ -30 dBm/1 MHz	
Inter-modulation	In-band		≤-50dBc/3kHz
	Out- band	9 KHz ~ 1 GHz	≤ -36 dBm/100 KHz
		1 GHz ~ 12.75 GHz	≤ -30 dBm/1 MHz
Built-In Power Supply*		AC220V±15%, -48V±10%	
Monitoring and alarming*		Door, Temperature, Power Supply, Output Power, etc This function need extra GSM terminal per equipment for remote NMS monitoring	
Input/output impedance		50Ω	
Operating temperature		-25 ~ +55℃	
Relative humidity		5%~95%	
Connector		N type(Female)	

*Note: The star shows this item shall be customized.

14. GSM Wireless Access Low power Repeater GZF900-VIF-III (23/20/17dBm)



Specification:

Item	Specification	
	Uplink	Downlink
Frequency range*	890~915MHz	935~960MHz
Maximum output power	20/17/17dBm±2dB	23/20/17dBm±2dB
Gain	≥70dB	
ALC(Auto Level Control)	Within 2dB or shut off	
Gain adjustment range	≥30dB	
Gain adjustment error	≤±1.0dB within 0-20dB ≤±1.5dB within 20-30dB	
Out-band suppression	≥0.4MHz	≥15dB
	≥0.6MHz	≥35dB
	≥1MHz	≥45dB
	≥5MHz	≥50dB
Ripple in-band	≤3dB	
Noise Figure	≤6dB	
VSWR	≤1.6	
Group Delay	≤5.0μsec	
Spurious Emission	9 KHz ~ 1 GHz	≤ -36 dBm/100 KHz
	1 GHz ~ 12.75 GHz	≤ -30 dBm/1 MHz
Inter-modulation	≤-36dBm/30KHz @+14dBm/ch/2ch	
Built-In Power Supply*	AC220V±15%, -48V±10%	
Monitoring and alarming*	Door, Temperature, Power Supply, Output Power, etc This function need extra GSM terminal per equipment for remote NMS monitoring	
Input/output impedance	50Ω	
Operating temperature	-25 ~ +55℃	
Relative humidity	5%~95%	
Connector	N type(Female)	

*Note: The star shows this item shall be customized. The frequency range shall be adjustable if required

15. GSM Trunk Repeater GZF900-VIB (37/33dBm)



Specification:

Item	Specification	
	Uplink	Downlink
Frequency range*	890~915MHz	935~960MHz
Maximum output power	-5dBm±2dB	37/33dBm±2dB
Gain	≥40dB	≥40dB
ALC(Auto Level Control)	Within 2dB or shut off	
Gain adjustment range	≥20dB	
Gain adjustment step	≤2dB	
Gain adjustment error	≤±1.0dB within 0-10dB ≤±1.0dB within 10-20dB	
Out-band rejection	≥70dB	
Ripple in-band	≤3dB	
Noise Figure	≤5dB	-
VSWR	≤1.6	
Group Delay	≤1.5μsec	
Spurious Emission	9 KHz ~ 1 GHz	≤ -36 dBm/100 KHz
	1 GHz ~ 12.75 GHz	≤ -30 dBm/1 MHz
Inter-modulation	≤-50dBc/3KHz	
Built-In Power Supply*	AC220V±15%, -48V±10%	
Monitoring and alarming*	Door, Temperature, Power Supply, Output Power, etc This function need extra GSM terminal per equipment for remote NMS monitoring	
Input/output impedance	50Ω	
Operating temperature	-25 ~ +55℃	
Relative humidity	5%~95%	
Connector	N type(Female)	

*Note: The star shows this item shall be customized. The frequency range shall be adjustable if required.

16. GSM Cable Access Frequency Shifting Repeater GZF918-V (band selective)



Specification(master unit)

Item		Specification	
		Uplink	Downlink
Frequency range*		890~915MHz	935~960MHz
Shifting/Transmission Frequency *		1710~1755MHz	1805~1850MHz
Maximum output power		-10±2dBm	33±2dBm
Gain		≥40dB	
ALC(Auto Level Control)		Within 2dB or shut off	
Gain adjustment range		≥20dB	
Max input power		+10dBm	
Gain adjustment step		≤2dB	
Gain adjustment error		≤±1.0dB within 0-10dB ≤±1.0dB within 10-20dB	
Frequency error		±5×10 ⁻⁸	
Ripple in-band		≤3dB	
Noise Figure		≤4dB	-
VSWR		≤1.4	
Group Delay		≤10μsec(system delay)	
Spurious Emission	9 KHz ~ 1 GHz	≤ -36 dBm/100 KHz	
	1 GHz ~ 12.75 GHz	≤ -30 dBm/1 MHz	
Inter-modulation		≤-50dBc/3kHz	
Built-In Power Supply*		AC220V±15%, -48V±10%	
Monitoring and alarming*		Door, Temperature, Power Supply, Output Power, etc This function need extra GSM terminal per equipment for remote NMS monitoring	
Input/output impedance		50Ω	
Operating temperature		-25 ~ +55℃	
Relative humidity		5%~95%	
Connector		N type(Female)	

Specification (slave unit)

Item		Specification	
		Uplink	Downlink
Frequency range*		890~915MHz	935~960MHz
Shifting/Transmission Frequency*		1710~1755MHz	1805~1850MHz
Maximum output power		27dBm±2dBm	43/40/37±2dBm
Gain		≥90dB	
ALC(Auto Level Control)		Within 2dB or shut off	
Gain adjustment range		≥30dB	
Gain adjustment step		≤2dB	
Gain adjustment error		≤±1.0dB within 0-20dB ≤±1.5dB within 20-30dB	
Frequency error		±5×10 ⁻⁸	
Ripple in-band		≤3dB	
Noise Figure		≤4dB	
VSWR		≤1.4	
Group Delay		≤10μsec(System delay)	
Spurious Emission	9 KHz ~ 1 GHz	≤ -36 dBm/100 KHz	
	1 GHz ~ 12.75 GHz	≤ -30 dBm/1 MHz	
Inter-modulation		≤-45dBc/3KHz	≤-50dBc/3kHz
Out-band suppression	≥0.4MHz	≥15dB	-
	≥0.6MHz	≥35dB	-
	≥1MHz	≥45dB	-
	≥5MHz	≥50dB	-
Built-In Power Supply*		AC220V±15%, -48V±10%	
Monitoring and alarming*		Door, Temperature, Power Supply, Output Power, etc This function need extra GSM terminal per equipment for remote NMS monitoring	
Input/output impedance		50Ω	
Operating temperature		-25 ~ +55℃	
Relative humidity		5%~95%	
Connector		N type(Female)	

*Note: The star shows this item shall be customized.

17. GSM Wireless Access Frequency Shifting Repeater GZF918-V (band selective)



Specification (master unit)

Item		Specification	
		Uplink	Downlink
Frequency range*		890~915MHz	935~960MHz
Shifting/Transmission Frequency *		1710~1755MHz	1805~1850MHz
Maximum output power		27dBm±2dBm	33±2dBm
Gain		≥80dB	
ALC(Auto Level Control)		Within 2dB or shut off	
Gain adjustment range		≥30dB	
Max input power		-10dBm	
Gain adjustment step		≤2dB	
Gain adjustment error		≤±1.0dB within 0-20dB ≤±1.5dB within 20-30dB	
Frequency error		±5×10 ⁻⁸	
Ripple in-band		≤3dB	
Noise Figure		≤4dB	
VSWR		≤1.5	
Group Delay		≤10μsec (System delay)	
Spurious Emission	9 KHz ~ 1 GHz	≤ -36 dBm/100 KHz	
	1 GHz ~ 12.75 GHz	≤ -30 dBm/1 MHz	
Inter-modulation		≤-50dBc/3kHz	≤-45dBc/3kHz
Out-band suppression	≥0.4MHz	-	≥15dB
	≥0.6MHz	-	≥35dB
	≥1MHz	-	≥45dB
	≥5MHz	-	≥50dB
Built-In Power Supply*		AC220V±15%, -48V±10%	
Monitoring and alarming*		Door, Temperature, Power Supply, Output Power, etc This function need extra GSM terminal per equipment for remote NMS monitoring	
Input/output impedance		50Ω	
Operating temperature		-25 ~ +55℃	
Relative humidity		5%~95%	
Connector		N type(Female)	

Specification (slave unit)

Item		Specification	
		Uplink	Downlink
Frequency range*		890~915MHz	935~960MHz
Shifting/Transmission Frequency*		1710~1755MHz	1805~1850MHz
Maximum output power		27dBm±2dBm	43/40/37±2dBm
Gain		≥90dB	
ALC(Auto Level Control)		Within 2dB or shut off	
Gain adjustment range		≥30dB	
Gain adjustment step		≤2dB	
Gain adjustment error		≤±1.0dB within 0-20dB ≤±1.5dB within 20-30dB	
Frequency error		±5×10 ⁻⁸	
Ripple in-band		≤3dB	
Noise Figure		≤4dB	
VSWR		≤1.4	
Group Delay		≤10μsec(System delay)	
Spurious Emission	9 KHz ~ 1 GHz	≤ -36 dBm/100 KHz	
	1 GHz ~ 12.75 GHz	≤ -30 dBm/1 MHz	
Inter-modulation		≤-45dBc/3KHz	≤-50dBc/3kHz
Out-band suppression	≥0.4MHz	≥15dB	-
	≥0.6MHz	≥35dB	-
	≥1MHz	≥45dB	-
	≥5MHz	≥50dB	-
Built-In Power Supply*		AC220V±15%, -48V±10%	
Monitoring and alarming*		Door, Temperature, Power Supply, Output Power, etc This function need extra GSM terminal per equipment for remote NMS monitoring	
Input/output impedance		50Ω	
Operating temperature		-25 ~ +55℃	
Relative humidity		5%~95%	
Connector		N type(Female)	

*Note: The star shows this item shall be customized.

18. GSM Cable Access Frequency Shifting Repeater GZF918-V (channel selective)



Specification (master unit)

Item	Specification	
	Uplink	Downlink
Frequency range*	890~915MHz	935~960MHz
Shifting/Transmission Frequency*	1710~1755MHz	1805~1850MHz
Maximum output power	-10±2dBm	33±2dBm
Gain	≥40dB	
Channel number	2/4/6/8	
ALC(Auto Level Control)	Within 2dB or shut off	
Gain adjustment range	≥20dB	
Max input power	+10dBm	
Gain adjustment step	≤2dB	
Gain adjustment error	≤±1.0dB within 0-10dB ≤±1.0dB within 10-20dB	
Frequency error	±5×10 ⁻⁸	
Noise Figure	≤4dB	-
VSWR	≤1.4	
Group Delay	≤10μsec(System delay)	
Spurious Emission	9 KHz ~ 1 GHz	≤ -36 dBm/100 KHz
	1 GHz ~ 12.75 GHz	≤ -30 dBm/1 MHz
Inter-modulation	≤-50dBc/3kHz	≤-45dBc/3kHz
Built-In Power Supply*	AC220V±15%, -48V±10%	
Monitoring and alarming*	Door, Temperature, Power Supply, Output Power, etc This function need extra GSM terminal per equipment for remote NMS monitoring	
Input/output impedance	50Ω	
Operating temperature	-25 ~ +55℃	
Relative humidity	5%~95%	
Connector	N type(Female)	

Specification (slave unit)

Item	Specification		
	Uplink	Downlink	
Frequency range*	890~915MHz	935~960MHz	
Shifting/Transmission Frequency *	1710~1755MHz	1805~1850MHz	
Maximum output power	27dBm±2dBm	43/40/37±2dBm	
Maximum Gain	≥90dB		
ALC(Auto Level Control)	Within 2dB or shut off		
Channel number	2/4/6/8		
Gain adjustment range	≥30dB		
Gain adjustment step	≤2dB		
Gain adjustment error	≤±1.0dB within 0-20dB ≤±1.5dB within 20-30dB		
Frequency error	±5×10 ⁻⁸		
Ripple in-band	≤3dB		
Noise Figure	≤4dB		
VSWR	≤1.4		
Group Delay	≤10μsec(System delay)		
Spurious Emission	9 KHz ~ 1 GHz	≤ -36 dBm/100 KHz	
	1 GHz ~ 12.75 GHz	≤ -30 dBm/1 MHz	
Inter-modulation	≤-45dBc/3KHz		
Out-band suppression	≥400KHz	≥15dB	-
	≥600KHz	≥45dB	-
Built-In Power Supply*	AC220V±15%, -48V±10%		
Monitoring and alarming*	Door, Temperature, Power Supply, Output Power, etc This function need extra GSM terminal per equipment for remote NMS monitoring		
Input/output impedance	50Ω		
Operating temperature	-25 ~ +55℃		
Relative humidity	5%~95%		
Connector	N type(Female)		

*Note: The star shows this item shall be customized.

19. GSM Wireless Access Frequency Shifting Repeater GZF918-V (channel selective)



Specification (master unit)

Item	Specification		
	Uplink	Downlink	
Frequency range*	890~915MHz	935~960MHz	
Shifting/Transmission Frequency*	1710~1755MHz	1805~1850MHz	
Maximum output power	27dBm±2dBm	30±2dBm	
Gain	≥80dB		
ALC(Auto Level Control)	Within 2dB or shut off		
Channel number	2/4/6/8		
Gain adjustment range	≥30dB		
Max input power	-10dBm		
Gain adjustment step	≤2dB		
Gain adjustment error	≤±1.0dB within 0-20dB ≤±1.5dB within 20-30dB		
Frequency error	±5×10 ⁻⁸		
Noise Figure	≤4dB		
VSWR	≤1.5		
Group Delay	≤10μsec(System delay)		
Spurious Emission	9 KHz ~ 1 GHz	≤ -36 dBm/100 KHz	
	1 GHz ~ 12.75 GHz	≤ -30 dBm/1 MHz	
Inter-modulation	≤-50dBc/3kHz	≤-45dBc/3kHz	
Out-band suppression	≥400KHz	-	≥15dB
	≥600KHz	-	≥35dB
Built-In Power Supply*	AC220V±15%, -48V±10%		
Monitoring and alarming*	Door, Temperature, Power Supply, Output Power, etc This function need extra GSM terminal per equipment for remote NMS monitoring		
Input/output impedance	50Ω		
Operating temperature	-25 ~ +55℃		
Relative humidity	5%~95%		
Connector	N type(Female)		

Specification (slave unit)

Item	Specification		
	Uplink	Downlink	
Frequency range*	890~915MHz	935~960MHz	
Shifting/Transmission Frequency *	1710~1755MHz	1805~1850MHz	
Maximum output power	27dBm±2dBm	43/40/37±2dBm	
Maximum Gain	≥90dB		
ALC(Auto Level Control)	Within 2dB or shut off		
Channel number	2/4/6/8		
Gain adjustment range	≥30dB		
Gain adjustment step	≤2dB		
Gain adjustment error	≤±1.0dB within 0-20dB ≤±1.5dB within 20-30dB		
Frequency error	±5×10 ⁻⁸		
Ripple in-band	≤3dB		
Noise Figure	≤4dB		
VSWR	≤1.4		
Group Delay	≤10μsec(System delay)		
Spurious Emission	9 KHz ~ 1 GHz	≤ -36 dBm/100 KHz	
	1 GHz ~ 12.75 GHz	≤ -30 dBm/1 MHz	
Inter-modulation	≤-45dBc/3KHz		
Out-band suppression	≥400KHz	≥15dB	-
	≥600KHz	≥45dB	-
Built-In Power Supply*	AC220V±15%, -48V±10%		
Monitoring and alarming*	Door, Temperature, Power Supply, Output Power, etc This function need extra GSM terminal per equipment for remote NMS monitoring		
Input/output impedance	50Ω		
Operating temperature	-25 ~ +55℃		
Relative humidity	5%~95%		
Connector	N type(Female)		

*Note: The star shows this item shall be customized.

20. GSM Wireless Access Frequency Shifting Repeater GZF909-V (channel selective)



Specification (master unit)

Item	Specification	
	Uplink	Downlink
Frequency range*	890~915MHz	935~960MHz
Shifting/Transmission Frequency *	890~915MHz	935~960MHz
Maximum output power	33dBm±2dBm	37±2dBm
Maximum Gain	≥90dB	
ALC(Auto Level Control)	Within 2dB or shut off	
Channel number	2/4	
Gain adjustment range	≥30dB	
Max input power	-10dBm	
Gain adjustment step	≤2dB	
Gain adjustment error	≤±1.0dB within 0-20dB ≤±1.5dB within 20-30dB	
Frequency error	±5×10 ⁻⁸	
Noise Figure	≤5dB	
VSWR	≤1.5	
Group Delay	≤10μsec(System delay)	
Out-band suppression	F0±400KHz	≤-40dBc
	F0±600KHz	≤-45dBc
Spurious Emission	9 KHz ~ 1 GHz	≤ -36 dBm/100 KHz
	1 GHz ~ 12.75 GHz	≤ -30 dBm/1 MHz
Inter-modulation	In-band	≤-50dBc/3kHz
	Out-band	9kHz-1GHz: -36dBm/100kHz 1GHz-12.75GHz: -30dBm/1MHz
Built-In Power Supply*	AC220V±15%, -48V±10%	
Monitoring and alarming*	Door, Temperature, Power Supply, Output Power, etc This function need extra GSM terminal per equipment for remote NMS monitoring	
Input/output impedance	50Ω	
Operating temperature	-25 ~ +55℃	
Relative humidity	5%~95%	
Connector	N type(Female)	

Specification (slave unit)

Item	Specification	
	Uplink	Downlink
Frequency range*	890~915MHz	935~960MHz
Shifting/Transmission Frequency *	890~915MHz	935~960MHz
Maximum output power	25dBm±2dB	43/40/37dBm±2dB
Maximum Gain	≥90dB	
ALC(Auto Level Control)	Within 2dB or shut off	
Channel number	2/4/	
Gain adjustment range	≥30dB	
Gain adjustment step	≤2dB	
Gain adjustment error	≤±1.0dB within 0-20dB ≤±1.5dB within 20-30dB	
Frequency error	±5×10 ⁻⁸	
Ripple in band	≤3dB	
Noise Figure	≤5dB	
VSWR	≤1.4	
Group Delay	≤10μsec(System delay)	
Out band suppression	F0±400KHz	≤-40dBc
	F0±600KHz	≤-45dBc
Spurious Emission	9 KHz ~ 1 GHz	≤ -36 dBm/100 KHz
	1 GHz ~ 12.75 GHz	≤ -30 dBm/1 MHz
Inter-modulation	In-band	≤-50dBc/3kHz
	Out-band	9kHz-1GHz: -36dBm/100kHz 1GHz-12.75GHz: -30dBm/1MHz
Built-In Power Supply*	AC220V±15%, -48V±10%	
Monitoring and alarming*	Door, Temperature, Power Supply, Output Power, etc This function need extra GSM terminal per equipment for remote NMS monitoring	
Input/output impedance	50Ω	
Operating temperature	-25 ~ +55℃	
Relative humidity	5%~95%	
Connector	N type(Female)	

*Note: The star shows this item shall be customized.

21. GSM Dual band Repeater GZF04-VIF-C (Dual band)



Specification(two sub-bands):

Item	Specification	
	Uplink	Downlink
Frequency range*	898.2—906.2MHz/1722~1724MHz	943—951MHz/1816~1818MHz
Maximum output power	19dBm±2dB	
Gain	≥70dB	
ALC(Auto Level Control)	Within 2dB or shut off	
Gain adjustment range	≥31dB	
Gain adjustment step	≤1dB	
Gain adjustment error	≤±1.0dB within 0-20dB ≤±1.5dB within 20-30dB	
Frequency error	±5×10 ⁻⁸	
Ripple in-band	≤4dB	
Noise Figure	≤5dB	
VSWR	≤1.6	
Group Delay	≤10μsec(System delay)	
Out-band suppression	≥0.4MHz	≥15dB
	≥0.6MHz	≥35dB
	≥1MHz	≥45dB
	≥5MHz	≥50dB
Spurious Emission	9 KHz ~ 1 GHz	≤ -36 dBm/100 KHz
	1 GHz ~ 12.75 GHz	≤ -30 dBm/1 MHz
Inter-modulation	≤-36dBm	≤-30dBm
Built-In Power Supply*	AC220V±15%	
Monitoring and alarming*	Output Power Alarm	
Input/output impedance	50Ω	
Operating temperature	-5 ~ +55℃	
Relative humidity	5%~95%	
Connector	N type(Female)	

Specification (three sub-bands):

Item	Specification
Frequency range*	<p><u>Continuous 8Mhz in GSM band</u> GSM 900: ARFCN 41-80</p> <p><u>Two uncontinuous 2Mhz in DCS band</u> GSM 1800: ARFCN 512-521 & ARFCN 571-580</p>
Maximum output(each band)	20dBm
Maximum gain	70dB
Gain adjustability	30dB in step of 1dB
Gain adjustment error	$\leq \pm 1.0\text{dB}$ within 0-20dB $\leq \pm 1.5\text{dB}$ beyond 20dB
Bandwidth	8MHz in 900MHz band 2MHz in 1800MHz band (total 4Mhz)
Ripple In-band (Typical)	$\leq 3\text{dB}$
Noise Figure(Uplink)	$\leq 6\text{dB}$
VSWR	≤ 1.5
Group Delay	$\leq 5\mu\text{s}$
Spurious Emission & Inter-modulation	9KHz--1GHz: $\leq -36\text{dBm}/100\text{KHz}$ 1GHz--12.75GHz: $\leq -30\text{dBm}/1\text{MHz}$
Out-band Suppression (Typical Value)	$\geq 50\text{dB @ } 1\text{MHz}$ from edge of operation band
Filter Used	Highly selective SAW Filter
Power Supply	AC 220V, 50Hz
Power Consumption	100W
Operating temperature	-5 ~ +55°C
RF Connector	N-Female
Visual Indication	Equipment Failure, AC/DC Failure, Transmit Power Low

*Note: The star shows this item shall be customized.

22. CDMA Optical Fiber Repeater GZF800-III (43/40/37/33dBm)



43dBm



40/37/33dBm

Specification:

Item	Specification		
	Uplink	Downlink	
Frequency range*	825MHz~835MHz	870MHz~880MHz	
Maximum output power	-2dBm±2dB	43/40/37/33dBm±2dB	
Gain	≥58dB	≥68dB (43dBm) ≥63dB (40/37/33dBm)	
Max input power	-40dBm	10dBm	
Frequency error	≤40Hz		
Gain adjustment range	≥30dB	≥40dB	
Gain adjustment step	≤2dB		
Gain adjustment error	≤±1.0dB within 0dB~20dB ≤±1.5dB within 20dB~30dB		
Waveform Quality	≥0.96	≥0.95	
Out-band suppression	≥2.5MHz: ≤-40dB OR ≤-13dBm/30KHz		
	≤2.5MHz: ≤-40dB OR ≤-13dBm/30KHz		
	≥10MHz: ≤-60dB OR ≤-33dBm/30KHz		
	≤10MHz: ≤-60dB OR ≤-33dBm/30KHz		
Ripple In-band	≤3dB		
Noise Figure	≤5dB		
VSWR	≤1.4		
Group Delay	≤5μsec		
Spurious Emission	In each carrier	Δf ≥900kHz: ≤-42dBc/30kHz or ≤-32dBm/30kHz	Δf ≥750kHz: ≤ -45dBc/30kHz Δf ≥1.98MHz: ≤-60dBc/30kHz
		Δf ≥1.98MHz: ≤-54dBc/30kHz or ≤-44dBm/30kHz	Δf ≥1.98MHz: ≤-60dBc/30kHz
	In working band	≤-15dBm/30kHz	
	Out of 1MHz transition band from edge of working band	9kHz~150kHz	≤-36dBm/1kHz (peak value)
		150kHz~30MHz	≤-36dBm/10kHz(peak value)
	30MHz~1GHz (excluding 806MHz~821MHz、885MHz-915MHz and 930MHz-960MHz)	≤-36dBm/100kHz(peak value)	

		1GHz~12.75GHz(excluding 1.71GHz-1.92GHz and 3.4GHz-3.53GHz)	≤-30dBm/1MHz(peak value)
		806MHz~821MHz	≤-67dBm/100kHz(effective value)
		885MHz~915MHz	≤-67dBm/100kHz(effective value)
		930MHz~960MHz	≤-47dBm/100kHz(peak value)
		1.71GHz~1.92GHz	≤-47dBm/100kHz(peak value)
	3.4GHz~3.53GHz	≤-47dBm/100kHz(peak value)	
	Within 1MHz transition band from edge of working band	≤-22dBm/100kHz(effective value)	
Inter- modulation	In working band	≤-15dBm/30kHz	
	1MHz away from edge of working band	9kHz~1GHz(Including 1GHz): -36dBm/100kHz 1GHz ~12.75GHz: -36dBm/1MHz	
Built-In Power Supply*		AC220V±15%, -48V±10%	
Relative humidity		5%~95%	
Connector		N type(Female)	
Optical wavelength		1.31um or 1.55um	
Transmission distances (Max.)		15km	
Optical Connector		FC/APC	
Input/output impedance		50Ω	
Monitoring and alarming*		Door, Temperature, Power Supply, Output Power, etc. This function need extra CDMA terminal per equipment for remote NMS monitoring	
Operating temperature		-25°C ~ +55°C	

*Note: The star shows this item shall be customized.

23. CDMA Optical Fiber Repeater GZF800-IV (43/40/37/33dBm)



43dBm



40/37/33dBm

Specification:

Item	Specification		
	Uplink	Downlink	
Frequency range*	825 MHz~835MHz	870 MHz~880MHz	
Maximum output power	-2dBm±2dB	43/40/37/33dBm±2dB	
Gain	≥58dB	≥68dB (43dBm) ≥63dB (40/37/33dBm)	
Max Input Power	-40dBm	10dBm	
Frequency error	≤40Hz		
Gain adjustment range	≥30dB	≥40dB	
Gain adjustment step	≤2dB		
Gain adjustment error	≤±1.0dB within 0dB~20dB ≤±1.5dB within 20dB~30dB		
Waveform Quality	≥0.96	≥0.95	
Out-band suppression	≥2.5MHz: ≤-40dB OR ≤-13dBm/30kHz		
	≤2.5MHz: ≤-40dB OR ≤-13dBm/30kHz		
	≥10MHz: ≤-60dB OR ≤-33dBm/30kHz		
	≤10MHz: ≤-60dB OR ≤-33dBm/30kHz		
Ripple In-band	≤3dB		
Noise Figure	≤6dB		
VSWR	≤1.4		
Group Delay	≤5μsec		
Spurious Emission	In each carrier	Δf ≥900kHz: ≤-42dBc/30kHz or ≤-32dBm/30kHz	Δf ≥750kHz: ≤ -45dBc/30kHz
		Δf ≥1.98MHz: ≤-54dBc/30kHz or ≤-44dBm/30kHz	Δf ≥1.98MHz: ≤-60dBc/30kHz
	In working band	≤-15dBm/30kHz	
	Out of 1MHz transition band from edge of working band	9kHz~150kHz	≤-36dBm/1kHz(peak value)
		150kHz~30MHz	≤-36dBm/10kHz(peak value)
	30MHz~1GHz (excluding 806MHz~821MHz、885MHz~915MHz and 930MHz~960MHz)	≤-36dBm/100kHz(peak value)	
	1GHz~12.75GHz(excluding 1.71GHz~1.92GHz and 3.4GHz~3.53GHz)	≤-30dBm/1MHz(peak value)	

	Within 1MHz transition band from edge of working band	806MHz~821MHz	≤-67dBm/100kHz(effective value)
		885MHz~915MHz	≤-67dBm/100kHz(effective value)
		930MHz~960MHz	≤-47dBm/100kHz(peak value)
		1.71GHz~1.92GHz	≤-47dBm/100kHz(peak value)
		3.4GHz~3.53GHz	≤-47dBm/100kHz(peak value)
		≤-22dBm/100kHz(effective value)	
Inter-modulation	In working band	≤-15dBm/30kHz	
	1MHz away from edge of working band	9kHz~1GHz(Including 1GHz): -36dBm/100kHz 1GHz~12.75GHz: -36dBm/1MHz	
Built-In Power Supply*		AC220V±15% , -48V±10%	
Relative humidity		5%~95%	
Connector		N type(Female)	
Optical wavelength		1.31um or 1.55um	
Transmission distances (Max.)		15km	
Optical Connector		FC/APC	
Input/output impedance		50Ω	
Monitoring and alarming*		Door, Temperature, Power Supply, Output Power, etc This function need extra CDMA terminal per equipment for remote NMS monitoring	
Operating temperature		-25°C ~ +55°C	

*Note: The star shows this item shall be customized.

24. CDMA Wireless Access Low Power Repeater GZF800-VID (27/23/17dBm)



Specification:

Item	Specification		
	Uplink	Downlink	
Frequency range*	825MHz~835MHz	870 MHz~880MHz	
Maximum output power	27/23/17dBm±2dB		
Gain	≥80dB (27/23dBm) ≥75dB (17dBm)		
ALC(Auto Level Control)	When the input increases 10dB, the output should not exceed 2dB or it is shut off automatically.		
Frequency error	≤40Hz		
Gain adjustment range	0dB~30dB		
Gain adjustment step	≤1dB		
Gain adjustment error	≤±1.0dB within 0dB~20dB ≤±1.5dB within 20dB~30dB		
Waveform Quality	≥0.96	≥0.95	
Out-band suppression	≥2.5MHz: ≤-40dB OR ≤-13dBm/30kHz		
	≤2.5MHz: ≤-40dB OR ≤-13dBm/30kHz		
	≥10MHz: ≤-60dB OR ≤-33dBm/30kHz		
	≤10MHz: ≤-60dB OR ≤-33dBm/30kHz		
Ripple In-band	≤3dB		
Noise Figure	≤6dB		
VSWR	≤1.5		
Group Delay	≤5μsec		
Spurious Emission	In each carrier	Δf ≥900kHz: ≤-42dBc/30kHz or ≤-32dBm/30kHz	Δf ≥750kHz: ≤ -45dBc/30kHz
		Δf ≥1.98MHz: ≤-54dBc/30kHz or ≤-44dBm/30kHz	Δf ≥1.98MHz: ≤-60dBc/30kHz
	In working band	≤-15dBm/30kHz	
	Out of 1MHz transition band from edge of working band	9kHz~150kHz	≤-36dBm/1kHz(peak value)
		150kHz~30MHz	≤-36dBm/10kHz(peak value)
	30MHz~1GHz(excluding 806MHz~821MHz、885MHz~915 MHz and 930 MHz~960MHz)	≤-36dBm/100kHz(peak value)	
	1GHz~12.75GHz(excluding 1.71GHz~1.92GHz and 3.4 GHz~3.53GHz)	≤-36dBm/1MHz(peak value)	

		806MHz~821MHz	≤-67dBm/100kHz(effective value)
		885MHz~915MHz	≤-67dBm/100kHz(effective value)
		930MHz~960MHz	≤-47dBm/100kHz(peak value)
		1.71GHz~1.92GHz	≤-47dBm/100kHz(peak value)
		3.4GHz~3.53GHz	≤-47dBm/100kHz(peak value)
	Within 1MHz transition band from edge of working band	≤-22dBm/100kHz(effective value)	
Inter-modulation	In working band	≤-15dBm/30kHz	
	1MHz away from edge of working band	9kHz~1GHz(Including 1GHz):	-36dBm/100kHz
		1GHz ~12.75GHz:	-36dBm/1MHz
Built-In Power Supply*		AC220V±15%, -48V±10%	
Relative humidity		5%~95%	
Connector		N type(Female)	
Input/output impedance		50Ω	
Monitoring and alarming*		Door, Temperature, Power Supply, Output Power, etc This function need extra CDMA terminal per equipment for remote NMS monitoring	
Operating temperature		-25°C ~ +55°C	

*Note: The star shows this item shall be customized.

25. CDMA Wireless Access High Power Repeater GZF800-V (43/40/37dBm)



43dBm



40/37dBm

Specification:

Item	Specification		
	Uplink	Downlink	
Frequency range*	825MHz~835MHz	870 MHz~880MHz	
Maximum output power	37/33/33±2dBdBm (43/40/37dBm)	43/40/37 dBm ±2dB(43/40/37dBm)	
Gain	≥98dB (43/40/37dBm)	≥100dB (43dBm) ≥95dB (40/37dBm)	
Frequency error	≤40Hz		
Gain adjustment range	≥30dB		
Gain adjustment step	≤2dB		
Gain adjustment error	≤±1.0dB within 0dB~20dB ≤±1.5dB within 20dB~30dB		
Waveform Quality	≥0.96	≥0.95	
Out- band suppression	≥2.5MHz: ≤-40dB OR ≤-13dBm/30kHz		
	≤2.5MHz: ≤-40dB OR ≤-13dBm/30kHz		
	≥10MHz: ≤-60dB OR ≤-33dBm/30kHz		
	≤10MHz: ≤-60dB OR ≤-33dBm/30kHz		
Ripple In-band	≤3dB		
Noise Figure	≤5dB		
VSWR	≤1.4		
Group Delay	≤5μsec		
Spurious Emission	In each carrier	Δf ≥900kHz: ≤-42dBc/30kHz or ≤-32dBm/30kHz	Δf ≥750kHz: ≤ -45dBc/30kHz
		Δf ≥1.98MHz: ≤-54dBc/30kHz or ≤-44dBm/30kHz	Δf ≥1.98MHz: ≤-60dBc/30kHz
	In working band	≤-15dBm/30kHz	
		9kHz~150kHz	≤-36dBm/1kHz(peak value)
Out of 1MHz transition band from edge of working band	150kHz~30MHz	≤-36dBm/10kHz(peak value)	
	30MHz~1GHz(excluding 806 MHz~821MHz、885 MHz~915MHz and 930 MHz~960MHz)	≤-36dBm/100kHz(peak value)	

		1GHz~12.75GHz(excluding 1.71GHz~1.92GHz and 3.4GHz~3.53GHz)	≤-36dBm/1MHz(peak value)
		806MHz~821MHz	≤-67dBm/100kHz(effective value)
		885MHz~915MHz	≤-67dBm/100kHz(effective value)
		930MHz~960MHz	≤-47dBm/100kHz(peak value)
		1.71GHz~1.92GHz	≤-47dBm/100kHz(peak value)
		3.4GHz~3.53GHz	≤-47dBm/100kHz(peak value)
	Within 1MHz transition band from edge of working band	≤-22dBm/100kHz(effective value)	
Inter- modulation	In working band	≤-15dBm/30kHz	
	1MHz away from edge of working band	9kHz~1GHz(Including 1GHz):	-36dBm/100kHz
		1GHz~12.75GHz:	-36dBm/1MHz
Built-In Power Supply*		AC220V±15%, -48V±10%	
Relative humidity		5%~95%	
Connector		N type(Female)	
Input/output impedance		50Ω	
Monitoring and alarming*		Door, Temperature, Power Supply, Output Power, etc This function need extra CDMA terminal per equipment for remote NMS monitoring	
Operating temperature		-25°C~+55°C	

*Note: The star shows this item shall be customized.

26. CDMA Wireless Access High Power Repeater GZF800-V
(43/40/37dBm Channel Selective)



43dBm



40/37dBm

Specification:

Item		Specification		
		Uplink	Downlink	
Frequency range*		825 MHz ~835MHz	870 MHz ~880MHz	
Maximum output power		37/33/33±2dBdBm (43/40/37dBm)	43/40/37 dBm ±2dB(43/40/37dBm)	
Gain		≥100dB (43/40/37dBm)	≥105dB (43dBm) ≥100dB (40/37dBm)	
Channel number*		Support 2 CDMA channels		
Frequency error		≤40Hz		
Gain adjustment range		≥30dB		
Gain adjustment step		≤2dB		
Gain adjustment error		≤±1.0dB within 0dB~20dB ≤±1.5dB within 20dB~30dB		
Waveform Quality		≥0.96	≥0.95	
Out-band suppression	In each carrier	≥2.5MHz: ≤-40dB OR≤-13dBm/30kHz		
		≤2.5MHz: ≤-40dB OR≤-13dBm/30kHz		
		≥10MHz: ≤-60dB OR≤-33dBm/30kHz		
		≤10MHz: ≤-60dB OR≤-33dBm/30kHz		
	In each channel (Out of 1.98MHz band from edge of assigned CDMA frequency)	≤-38dBc/30kHz OR ≤-13dBm/30kHz	≤-44dBc/30kHz OR ≤-17dBm/30kHz	
Noise Figure		≤5dB		
VSWR		≤1.4		
Group Delay		≤5μsec		
Spurious Emission	In each carrier	Δf ≥900kHz:≤-42dBc/30kHz	Δf ≥750kHz: ≤ -45dBc/30kHz	
		Δf≥1.98MHz:≤-54dBc/30kHz	Δf ≥1.98MHz: ≤-60dBc/30kHz	
	In working band		≤-15dBm/30kHz	
	Out of 1MHz transition band from		9kHz~150kHz	≤-36dBm/1kHz(peak value)
		150kHz~30MHz	≤-36dBm/10kHz(peak value)	

	edge of working band	30MHz~1GHz(excluding 806MHz~821MHz、885MHz~915MHz and 930MHz~960MHz)	≤-36dBm/100kHz(peak value)
		1GHz~12.75GHz(excluding 1.71 GHz~1.92GHz and 3.4 GHz~3.53GHz)	≤-36dBm/1MHz(peak value)
		806MHz~821MHz	≤-67dBm/100kHz(effective value)
		885MHz~915MHz	≤-67dBm/100kHz(effective value)
		930MHz~960MHz	≤-47dBm/100kHz(peak value)
		1.71GHz~1.92GHz	≤-47dBm/100kHz(peak value)
		3.4GHz~3.53GHz	≤-47dBm/100kHz(peak value)
	Within 1MHz transition band from edge of working band	≤-22dBm/100kHz(effective value)	
Inter-modulation	In working band	≤-15dBm/30kHz	
	1MHz away from edge of working band	9kHz~1GHz(Including 1GHz): -36dBm/100kHz 1GHz ~12.75GHz: -36dBm/1MHz	
Built-In Power Supply*		AC220V±15%, -48V±10%	
Relative humidity		5%~95%	
Connector		N type(Female)	
Input/output impedance		50Ω	
Monitoring and alarming*		Door, Temperature, Power Supply, Output Power, etc This function need extra CDMA terminal per equipment for remote NMS monitoring	
Operating temperature		-25°C ~ +55°C	

*Note: The star shows this item shall be customized.

27. CDMA Cable Access Frequency Shifting Repeater GZF808-V (Channel selective)



Specification(master unit):

Item		Specification		
		Uplink	Downlink	
Frequency range*		825MHz~835MHz	870MHz~880MHz	
Maximum output power		-15±2dBdBm	25dBm±2dB	
Gain		≥40dB		
Ripple In-band		≤3 dB		
Channel number*		Support 1/2 CDMA channels		
Frequency error		≤40Hz		
Gain adjustment range		30dB		
Waveform Quality		≥0.95		
Out-band suppression		≥2.5MHz: ≤-40dB		
		≤2.5MHz: ≤-40dB		
		≥10MHz: ≤-60dB		
		≤10MHz: ≤-60dB		
Noise Figure		≤4dB		
VSWR		≤1.4		
Group Delay		≤5μsec		
Spurious Emission	In each carrier	Δf ≥900kHz: ≤-42dBc/30kHz Δf ≥1.98MHz: ≤-59dBc/30kHz	Δf ≥750kHz: ≤-45dBc/30kHz Δf ≥1.98MHz: ≤-65dBc/30kHz	
	In working band	≤-22dBm/30kHz		
	Out of 1MHz transition band from edge of working band	9kHz~150kHz	≤-36dBm/1kHz(peak value)	
		150kHz~30MHz	≤-36dBm/10kHz(peak value)	
		30MHz~1GHz	≤-36dBm/100kHz(peak value)	
		1GHz~12.75GHz	≤-30dBm/1MHz(peak value)	
		806MHz~821MHz	≤-67dBm/100kHz(effective value)	
		885MHz~915MHz	≤-67dBm/100kHz(effective value)	
		930MHz~960MHz	≤-47dBm/100kHz(peak value)	
1.71GHz~1.92GHz	≤-47dBm/100kHz(peak value)			
3.4GHz~3.53GHz	≤-47dBm/100kHz(peak value)			
Inter-modulation		-15dBm		
Built-In Power Supply*		AC220V±15%, -48V±10%		
Relative humidity		5%~95%		

Connector	N type(Female)
Input/output impedance	50Ω
Monitoring and alarming*	Door, Temperature, Power Supply, Output Power, etc This function need extra CDMA terminal per equipment for remote NMS monitoring
Operating temperature	-25°C~+55°C

Specification(slave unit):

Item		Specification		
		Uplink	Downlink	
Frequency range*		825MHz~835MHz	870MHz~880MHz	
Maximum output power		25dBm±2dB	43/40/37/33dBm±2dB	
Maximum Gain		≥90dB		
Channel number*		Support 1/2 CDMA channels		
Frequency error		≤5*10 ⁻⁸		
Gain adjustment range		30dB		
Waveform Quality		≥0.95		
Out-of-band suppression		≥2.5MHz: ≤-40dB		
		≤2.5MHz: ≤-40dB		
		≥10MHz: ≤-60dB		
		≤10MHz: ≤-60dB		
Noise Figure		≤4dB		
VSWR		≤1.4		
Group Delay		≤5μsec		
Spurious Emission	In each carrier	Δf ≥900kHz:≤-42dBc/30kHz Δf≥1.98MHz:≤-58dBc/30kHz	Δf ≥750kHz: ≤ -45dBc/30kHz Δf ≥1.98MHz: ≤-65dBc/30kHz	
	In working band	≤-22dBm/30kHz		
	Out of 1MHz transition band from edge of working band	9kHz~150kHz	≤-36dBm/1kHz(peak value)	
		150kHz~30MHz	≤-36dBm/10kHz(peak value)	
		30MHz~1GHz	≤-36dBm/100kHz(peak value)	
		1GHz~12.75GHz	≤-30dBm/1MHz(peak value)	
		806MHz~821MHz	≤-67dBm/100kHz(effective value)	
		885MHz~915MHz	≤-67dBm/100kHz(effective value)	
		930MHz~960MHz	≤-47dBm/100kHz(peak value)	
1.71GHz~1.92GHz	≤-47dBm/100kHz(peak value)			
3.4GHz~3.53GHz	≤-47dBm/100kHz(peak value)			
Inter-modulation		-15dBm		
Built-In Power Supply*		AC220V±15%, -48V±10%		
Relative humidity		5%~95%		
Connector		N type(Female)		
Input/output impedance		50Ω		
Monitoring and alarming*		Door, Temperature, Power Supply, Output Power, etc This function need extra CDMA terminal per equipment for remote NMS monitoring		
Operating temperature		-25°C~+55°C		

*Note: The star shows this item shall be customized.

28. CDMA Wireless Access Frequency Shifting Repeater GZF808-V (Channel selective)



Specification(master unit)

Item		Specification		
		Uplink	Downlink	
Frequency range*		825MHz~835MHz	870MHz~880MHz	
Maximum output power		25dBm±2dB		
Maximum Gain		≥90dB		
Channel number*		Support 1/2 CDMA channels		
Frequency error		≤40Hz		
Gain adjustment range		≥30dB		
Ripple In-band		≤3 dB		
Waveform Quality		≥0.950		
Out-band suppression		≥2.5MHz: ≤-40dB		
		≤2.5MHz: ≤-40dB		
		≥10MHz: ≤-60dB		
		≤10MHz: ≤-60dB		
Noise Figure		≤4dB		
VSWR		≤1.4		
Group Delay		≤5μsec		
Spurious Emission	In each carrier	$\Delta f \geq 900\text{kHz}: \leq -42\text{dBc}/30\text{kHz}$ $\Delta f \geq 1.98\text{MHz}: \leq -59\text{dBc}/30\text{kHz}$	$\Delta f \geq 750\text{kHz}: \leq -45\text{dBc}/30\text{kHz}$ $\Delta f \geq 1.98\text{MHz}: \leq -65\text{dBc}/30\text{kHz}$	
	In working band	≤-22dBm/30kHz		
	Out of 1MHz transition band from edge of working band	9kHz~150kHz	≤-36dBm/1kHz(peak value)	
		150kHz~30MHz	≤-36dBm/10kHz(peak value)	
		30MHz~1GHz	≤-36dBm/100kHz(peak value)	
		1GHz~12.75GHz	≤-30dBm/1MHz(peak value)	
		806MHz~821MHz	≤-67dBm/100kHz(effective value)	
		885MHz~915MHz	≤-67dBm/100kHz(effective value)	
		930MHz~960MHz	≤-47dBm/100kHz(peak value)	
1.71GHz~1.92GHz	≤-47dBm/100kHz(peak value)			
3.4GHz~3.53GHz	≤-47dBm/100kHz(peak value)			
Inter-modulation		≤-15dBm		
Built-In Power Supply*		AC220V±15%, -48V±10%		
Relative humidity		5%~95%		
Connector		N type(Female)		

Input/output impedance	50Ω
Monitoring and alarming*	Door, Temperature, Power Supply, Output Power, etc This function need extra CDMA terminal per equipment for remote NMS monitoring
Operating temperature	-25°C ~ +55°C

Specification(slave unit)

Item		Specification		
		Uplink	Downlink	
Frequency range*		825MHz~835MHz	870MHz~880MHz	
Maximum output power		25dBm±2dB	43/40/37/33dBm±2dB	
Maximum Gain		≥90dB		
Channel number*		Support 1/2 CDMA channels		
Frequency error		≤5*10 ⁻⁸		
Gain adjustment range		30dB		
Waveform Quality		≥0.950		
Out-band suppression		≥2.5MHz: ≤-40dB		
		≤2.5MHz: ≤-40dB		
		≥10MHz: ≤-60dB		
		≤10MHz: ≤-60dB		
Noise Figure		≤4dB		
VSWR		≤1.4		
Group Delay		≤5μsec		
Spurious Emission	In each carrier	Δf ≥900kHz:≤-42dBc/30kHz Δf≥1.98MHz:≤-58dBc/30kHz	Δf ≥750kHz: ≤ -45dBc/30kHz Δf ≥1.98MHz: ≤-65dBc/30kHz	
	In working band	≤-22dBm/30kHz		
	Out of 1MHz transition band from edge of working band	9kHz~150kHz	≤-36dBm/1kHz(peak value)	
		150kHz~30MHz	≤-36dBm/10kHz(peak value)	
		30MHz~1GHz	≤-36dBm/100kHz(peak value)	
		1GHz~12.75GHz	≤-30dBm/1MHz(peak value)	
		806MHz~821MHz	≤-67dBm/100kHz(effective value)	
		885MHz~915MHz	≤-67dBm/100kHz(effective value)	
		930MHz~960MHz	≤-47dBm/100kHz(peak value)	
1.71GHz~1.92GHz	≤-47dBm/100kHz(peak value)			
3.4GHz~3.53GHz	≤-47dBm/100kHz(peak value)			
Inter-modulation		-15dBm		
Built-In Power Supply*		AC220V±15%, -48V±10%		
Relative humidity		5%~95%		
Connector		N type(Female)		
Input/output impedance		50Ω		
Monitoring and alarming*		Door, Temperature, Power Supply, Output Power, etc This function need extra CDMA terminal per equipment for remote NMS monitoring		
Operating temperature		-25°C~ +55°C		

*Note: The star shows this item shall be customized.

32. GSM 1900 Bandwidth Adjustable Repeater GZF1900-V



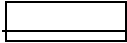
Specification

ITEMS		SPECIFICATION		
HARDWARE	Frequency Range*	A & D	1940.90~1949.90MHz	1860.90~1869.90MHz
		F	1970.10~1974.90MHz	1890.10~1894.90MHz
		F & C1	1970.10~1979.90MHz	1890.10~1899.90MHz
	Bandwidth Selective Range		ADF or ADFC1	
	Frequency Tolerance		$\leq 5 \times 10^{-8}$	
	Repeater Gain		96dB \pm 6%	
	Output Power		37dBm (downlink)/33dBm(uplink)	
	Out-Band Rejection		F0 \pm 400KHz: \leq -12dB	
			F0 \pm 2.5MHz: \leq -45dB	
	Flatness In-Band		\leq 5dB	
	Gain Adjustable Range		31dB	
	Gain Adjustable Step		0~31dB step by 1dB	
	Gain Adjustable Tolerance		0dB ~ 10dB: \leq 1dB	
			10dB ~ 20dB: \leq 1.5dB	
			20dB ~ 30dB: \leq 1.5dB	
	ALC		Auto Level Control	
	Inter-modulation		\leq -45dBc/30KHz	
	Spurious Emission		\leq -36dBm/100KHz@9kHz~1GHz	
			\leq -30dBm/1MHz@1GHz~12.75GHz	
	Noise Figure		\leq 5 (Max Gain)	
VSWR		\leq 1.4: 1		
Ambient temperature		-20°C ~ +55°C		
Storage temperature		-40°C ~ +85°C		
Relative humidity		5%~95%		
Air Pressure		70~106kPa		
Power Supply*		110VAC \pm 15%		
SOFTWARE	General Alarm	Forward Power Detect		
		PA Enable		
		PA Over Power		
		PA Over Temperature		
		Door Open		
	Serious Alarm	VSWR Over Limit (\geq 2: 1)		
		PLL Unlock		
		DC Power Lost		
		AC Power Lost		

33.GSM 1900 Bandwidth Adjustable Repeater GZF19002-V



Specification



ITEMS			SPECIFICATION	
HARDWARE	Frequency Range	A & D	1940.90~1949.90MHz	1860.90~1869.90MHz
		F	1970.10~1974.90MHz	1890.10~1894.90MHz
		F & C1	1970.10~1979.90MHz	1890.10~1899.90MHz
	Bandwidth Selective Range		ADF or ADFC1	
	Frequency Tolerance		$\leq 5 \times 10^{-8}$	
	Repeater Gain		96dB \pm 6%	
	Output Power		37dBm (downlink)/33dBm(uplink)	
	Out-Band Rejection		F0 \pm 400KHz: \leq -12dB	
			F0 \pm 2.5MHz: \leq -45dB	
	Flatness In Band		\leq 5dB	
	Gain Adjustable Range		31dB	
	Gain Adjustable Step		0~31dB step by 1dB	
	Gain Adjustable Tolerance		0dB ~ 10dB: \leq 1dB	
			10dB ~ 20dB: \leq 1.5dB	
			20dB ~ 30dB: \leq 1.5dB	
	ALC		Auto Level Control	
	Inter-modulation		\leq -45dBc/30KHz	
	Spurious Emission		\leq -36dBm/100KHz@9kHz~1GHz	
			\leq -30dBm/1MHz@1GHz~12.75GHz	
	Noise Figure		\leq 5 (Max Gain)	
VSWR		\leq 1.4: 1		
Ambient temperature		-20°C ~ +55°C		
Storage temperature		-40°C ~ +85°C		
Relative humidity		5%~95%		
Air Pressure		70~106kPa		
Power Supply*		110VAC \pm 15%		
SOFTWARE	General Alarm	Forward Power Detect		
		PA Enable		
		PA Over Power		
		PA Over Temperature		
		Door Open		
	Serious Alarm	VSWR Over Limit (\geq 2: 1)		
		PLL Unlock		
		DC Power Lost		
		AC Power Lost		

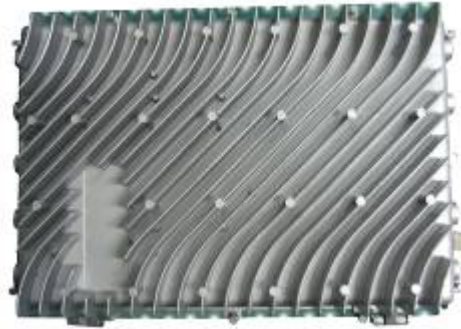
35.GSM 1900 Bandwidth Adjustable Repeater GZF1900-V



Specification:

ITEMS			SPECIFICATION	
HARDWARE	Frequency Range	A & D	1940.90~1949.90MHz	1860.90~1869.90MHz
		F	1970.10~1974.90MHz	1890.10~1894.90MHz
		F & C1	1970.10~1979.90MHz	1890.10~1899.90MHz
	Bandwidth Selective Range		ADF or ADFC1	
	Frequency Tolerance		$\leq 5 \times 10^{-8}$	
	Repeater Gain		101dB \pm 6%	
	Output Power		43dBm (downlink)/36dBm(uplink)	
	Out-Band Rejection		F0 \pm 400KHz: \leq -12dB	
			F0 \pm 2.5MHz: \leq -45dB	
	Flatness In-Band		\leq 5dB	
	Gain Adjustable Range		31dB	
	Gain Adjustable Step		0~31dB step by 1dB	
	Gain Adjustable Tolerance		0dB ~ 10dB: \leq 1dB	
			10dB ~ 20dB: \leq 1.5dB	
			20dB ~ 30dB: \leq 1.5dB	
	ALC		Auto Level Control	
	Inter-modulation		\leq -45dBc/30KHz	
	Spurious Emission		\leq -36dBm/100KHz@9kHz~1GHz	
			\leq -30dBm/1MHz@1GHz~12.75GHz	
	Noise Figure		\leq 5 (Max Gain)	
VSWR		\leq 1.4: 1		
Ambient temperature		-20°C ~ +55°C		
Storage temperature		-40°C ~ +85°C		
Relative humidity		5%~95%		
Air Pressure		70~106kPa		
Power Supply*		110VAC \pm 15%		
SOFTWARE	General Alarm		Forward Power Detect	
			PA Enable	
			PA Over Power	
			PA Over Temperature	
			Door Open	
	Serious Alarm		VSWR Over Limit (\geq 2: 1)	
			PLL Unlock	
			DC Power Lost	
		AC Power Lost		

30.WCDMA Repeater GZF2100-V (40/37/33dBm)



Specification

Item		Specification			
		Uplink		Downlink	
Frequency range*		1920~1980MHZ		2110~2170MHZ	
Maximum output power		33/30/27±2 dBm		40/37/33±2dBm	
Gain		≥96dBm		≥96dBm	
Frequency error		20Hz(±0.01ppm)(Max output)			
ALC(Auto Level Control)		Within 2dB or shut off			
Gain adjustment range		≥30dB			
Gain adjustment step		≤2dB			
Gain adjustment error		≤±1.0dB within 0-20dB ≤±1.5dB within 20-30dB			
Out-band suppression	2.7 ≤f_offset < 3.5 MHz	≤60 dB			
	3.5 ≤f_offset < 7.5 MHz	≤45 dB			
	7.5 ≤f_offset < 12.5 MHz	≤45 dB			
	12.5 MHz ≤f_offset	≤35 dB			
Ripple in band		≤2dB/3.84MHz			
Noise Figure		≤5dB			
Input/output VSWR		≤1.5			
Group Delay		≤5μsec			
Spurious Emission	In-band	Complied with 3GPP standard			
	Normal band	9KHz~150 KHz	≤-36dBm/1 kHz	9KHz~150KHz	≤-36dBm/1 kHz
		150 KHz~30MHz	≤-36dBm/10 kHz	150 KHz~30MHz	≤-36dBm/10 kHz
		30MHz~1GHz	≤-36dBm/100kHz	30MHz~1GHz	≤-36dBm/100kHz
		1GHz~1910MHz	≤-30dBm/1 MHz	1 GHz~2100MHz	≤-30dBm/1 MHz
		1910MHz~1990MHz	≤-15dBm/1 MHz	2100MHz~2180MHz	≤-15dBm/1 MHz
1990MHz~12.75GHz	≤-30dBm/1 MHz	2180MHz~12.75GHz	≤-30dBm/1 MHz		
Inter-modulation	Input IMD	At the central frequency point, the output increase should not exceed 10dB when adding interference signal			
	Output IMD	-		Meet the Spurious Emission requirement	
ACRR	P≥31dBm	33dB@ ±5MHz			
		33dB@ ±10MHz			
	P<31dBm	20dB@ ±5MHz			
		20dB@ ±5MHz			
EVM		≤12.5% @ Test Model 1 (At max gain)			

PCDE	≤-35 dB @ Test Model 3(At max gain)
Frequency step spacing	200KHz(Max output)
Built-In Power Supply*	AC220V±15%
Monitoring and alarming*	Door, Temperature, Power Supply, Output Power, etc This function need extra GSM terminal per equipment for remote NMS monitoring
Input/output impedance	50Ω
Operating temperature	-25 ~ +55℃
Relative humidity	≤95%
Connector	N type(Female)

*Note: The star shows this item shall be customized.

31. WCDMA Optical Repeater GZF2100-IV (40/37/33dBm)



Specification

Item		Specification			
		Uplink		Downlink	
Frequency range*		1920~1980MHz		2110~2170MHz	
Maximum output power		0dBm±2dBm		40/37/33dBm	
Maximum Gain		56 ⁺³ ₋₃ dBm			
Frequency error		20Hz(±0.01ppm)(Max output)			
ALC(Auto Level Control)		Within 2dB or shut off			
Gain adjustment range		≥30dB			
Gain adjustment step		≤2dB			
Gain adjustment error		≤±1.0dB within 0-20dB ≤±1.5dB within 20-30dB			
Out band Gain	2.7 ≤f_offset < 3.5 MHz	≤60 dB			
	3.5 ≤f_offset < 7.5 MHz	≤45 dB			
	7.5 ≤f_offset < 12.5 MHz	≤45 dB			
	12.5 MHz ≤f_offset	≤35 dB			
Ripple in band		≤2dB/3.84MHz			
Noise Figure		≤5dB			
VSWR		≤1.5			
Group Delay		≤5μsec			
Spurious Emission	In-band	Complied with 3GPP standard			
	Normal band	9KHz~150 KHz	≤-36dBm/1 kHz	9KHz~150KHz	≤-36dBm/1 kHz
		150 KHz~30MHz	≤-36dBm/10 kHz	150 KHz~30MHz	≤-36dBm/10 kHz
		30MHz~1GHz	≤-36dBm/100kHz	30MHz~1GHz	≤-36dBm/100kHz
		1 GHz~1910MHz	≤-30dBm/1 MHz	1 GHz~2100MHz	≤-30dBm/1 MHz
		1910MHz~1990MHz	≤-15dBm/1 MHz	2100MHz~2180MHz	≤-15dBm/1 MHz
		1990MHz~12.75GHz	≤-25dBm/1 MHz	2180MHz~12.75GHz	≤-30dBm/1 MHz
		9KHz~150 KHz	≤-36dBm/1 kHz	9KHz~150KHz	≤-36dBm/1 kHz
Inter-modulation	Input IMD	At the central frequency point, the output increase should not exceed 10dB when adding interference signal			

	Output IMD	-	Meet the Spurious Emission requirement
ACRR		≥20dBc @ ±5 MHz	≥33dBc @ ±5 MHz
		≥20dBc @ ±10MHz	≥33dBc @ ±10MHz
EVM		≤12.5% @ Test Model 1 (At max gain)	
PCDE		≤-35 dB @ Test Model 3(At max gain)	
Frequency step spacing		200KHz(Max output)	
Built-In Power Supply*		AC220V±15%, -48V±10%	
Monitoring and alarming*		Door, Temperature, Power Supply, Output Power, etc This function need extra GSM terminal per equipment for remote NMS monitoring	
Input/output impedance		50Ω	
Operating temperature		-25 ~ +55°C	
Relative humidity		5%~95%	
Connector		N type(Female)	

*Note: The star shows this item shall be customized.