



* Pb Free Part



MSL1

Customer Name	Standard	TAIYO YUDEN Mobile Technology Co., Ltd.	
System	Band XIII Duplexer	Date	Jan. 25, 2012
Part Number	D5NL782M0P1JZ	Version 7.1ec	Final

Table 1-1 Electrical Specification

Item		Condition (MHz)	Specification			Unit	Remarks
			Min	Typ	Max		
Tx to Ant	Insertion Loss	777 ~ 787	-	1.9	3.1(*1)	dB	-30~+85 deg.C
		777.5~786.5	-	-	2.8	dB	-30~+85 deg.C
				1.8	2.5	dB	+25~+85 deg.C
	Ripple	777~787	-	1.2	2.0	dB	
	VSWR	777 ~ 787	-	1.3	2.0	-	
			-	1.3	2.0	-	
	Input Power	777 ~ 787	+29dBm, 50oC, 50000hrs			-	CW tone
	Absolute attenuation	DC ~ 716	30	42	-	dB	
		716 ~ 728	40	48	-	dB	
		728 ~ 746	30	52	-	dB	
		746 ~ 756	45	51	-	dB	
		758 ~ 767.5	30	35	-	dB	
		767.5 ~ 768	30	36	-	dB	
		768 ~ 769	15	37	-	dB	
		769 ~ 770	7	20	-	dB	
		770 ~ 771	4	11	-	dB	
		771 ~ 772	3	6	-	dB	
		793 ~ 805	1	3	-	dB	
		869 ~ 894	30	50	-	dB	
		1554 ~ 1565	25	48	-	dB	
		1565 ~ 1585	45	48	-	dB	
		1597 ~ 1607	45	48	-	dB	
		1805 ~ 1880	30	43	-	dB	
		1930 ~ 1990	30	42	-	dB	
		2110 ~ 2170	30	41	-	dB	
		2331 ~ 2361	20	40	-	dB	
		2400 ~ 2484	35	39	-	dB	
		3108 ~ 3148	15	27	-	dB	

(*1) Specification of insertion loss excludes loss that comes from the test board. (Approximately 0.05dB)



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Table 1-2 Electrical Specification

Item			Condition (MHz)	Specification			Unit	Remarks
				Min	Typ	Max		
Ant to Rx	Insertion Loss		746 ~ 756	-	-	3.1(*1)	dB	
				-	2.2	2.5(*1)	dB	+25 +/-2 deg.C
			746.5 ~ 755.5	-	2.2	2.7(*1)	dB	
	Ripple		746 ~ 756	-	0.5	1.3	dB	
	Phase balance		746 ~ 756	-10	-3/+3	+10	deg	
	Amplitude balance		746 ~ 756	-1.0	-0.5/+0.5	+1.0	dB	
	VSWR	Ant	746 ~ 756	-	1.5	2.0	-	
		Rx		-	1.5	2.0	-	
	Absolute attenuation		1 ~ 736	32	37	-	dB	
			777 ~ 787	55	61	-	dB	
			793 ~ 805	35	49	-	dB	
			805 ~ 6000	20	30	-	dB	
	Tx to Rx	Isolation		777 ~ 787	60	66	-	dB
60					66	-	dB	Common mode rejection
746 ~ 756		50	52	-	dB	Differential rejection		
		60	70		dB	Common mode rejection		
IIP3 The first tone is applied to the Tx port at f1(=787MHz) The second tone is applied to the antenna port at f2(=827MHz) *The first tone power at +24dBm, The second tone power at +13dBm				TBD	+78	-	dBm	at 747MHz
Terminating Impedance			Tx port	50			Ohm	Single-ended
			Rx port	100			Ohm	Differential
			Ant port	50 // 10nH			Ohm	Single-ended
Operating Temperature				-30 to +85			°C	
Device size (LxWxH)				3.0 x 2.5 x 0.7			mm	

(*1) Specification of insertion loss excludes loss that comes from the test board. (Approximately 0.05dB)

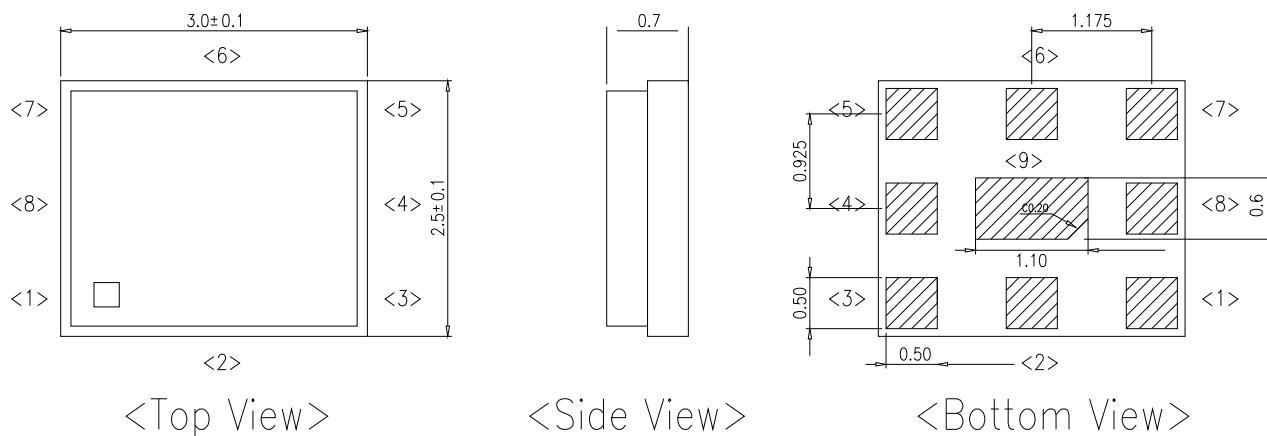


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Dimensions



Unit: mm

Pin Configuration

Pin No.	Pin name	Description
1	Rx	Receiver Pin (Balanced)
2	GND	Ground Pin
3	Tx	Transmitter Pin
4	GND	Ground Pin
5	GND	Ground Pin
6	ANT	Antenna Pin
7	GND	Ground Pin
8	Rx	Receiver Pin (Balanced)
9	GND	Ground Pin

Figure 1. Dimensions and Pin assignment



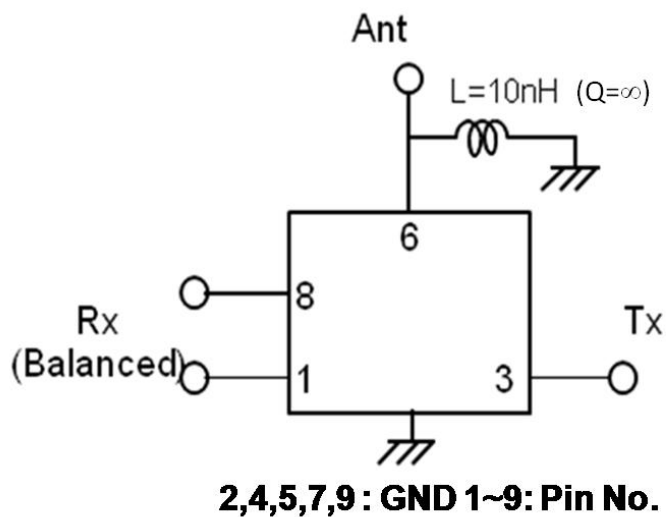
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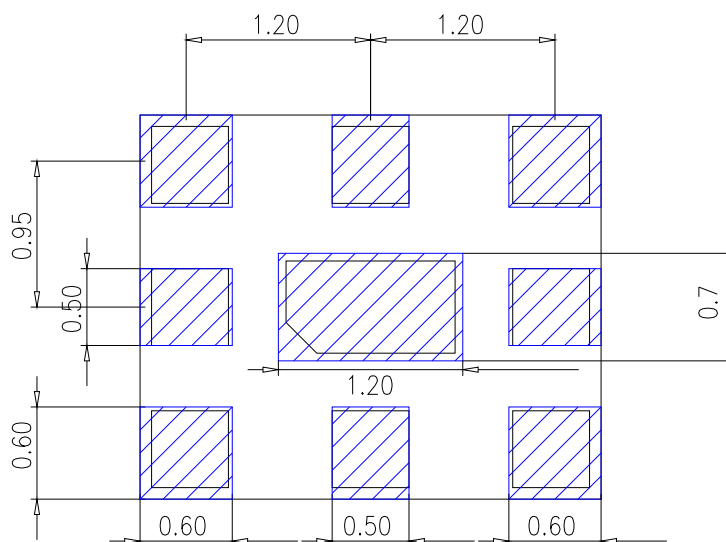
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Evaluation Circuit



Recommended foot print pattern



Unit : mm

< Top View >

Figure 2. Recommended foot print pattern



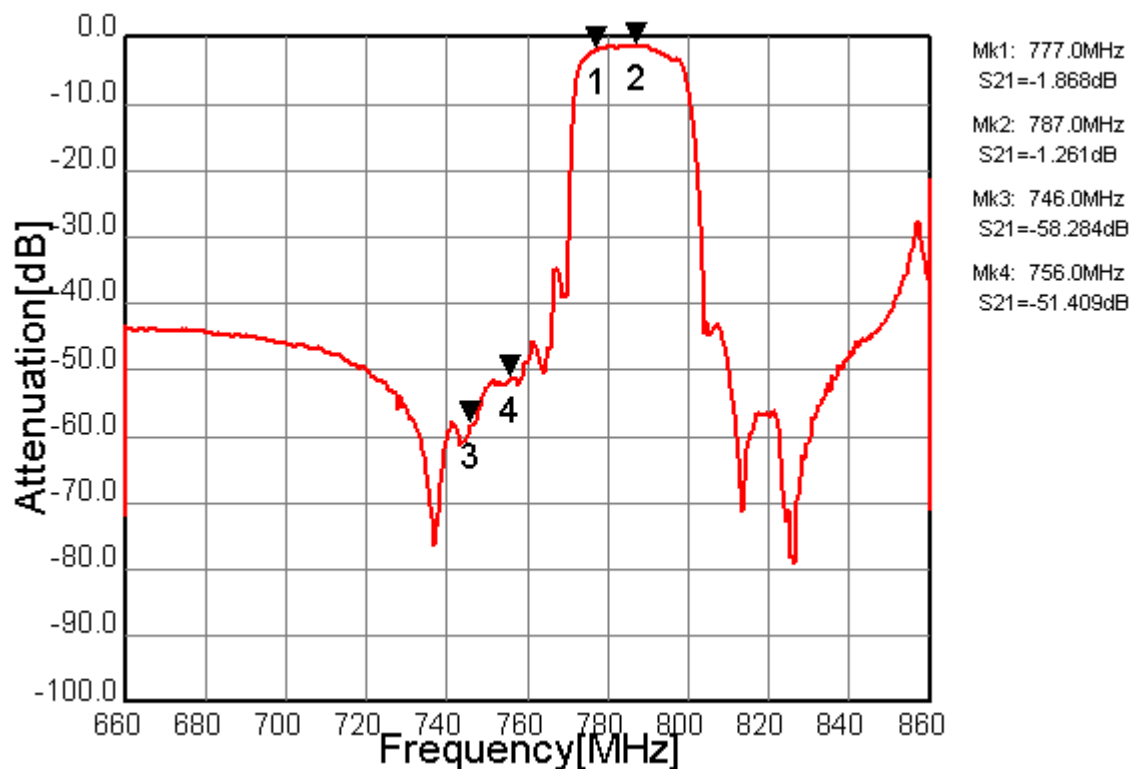
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Tx to Ant



Ant to Rx

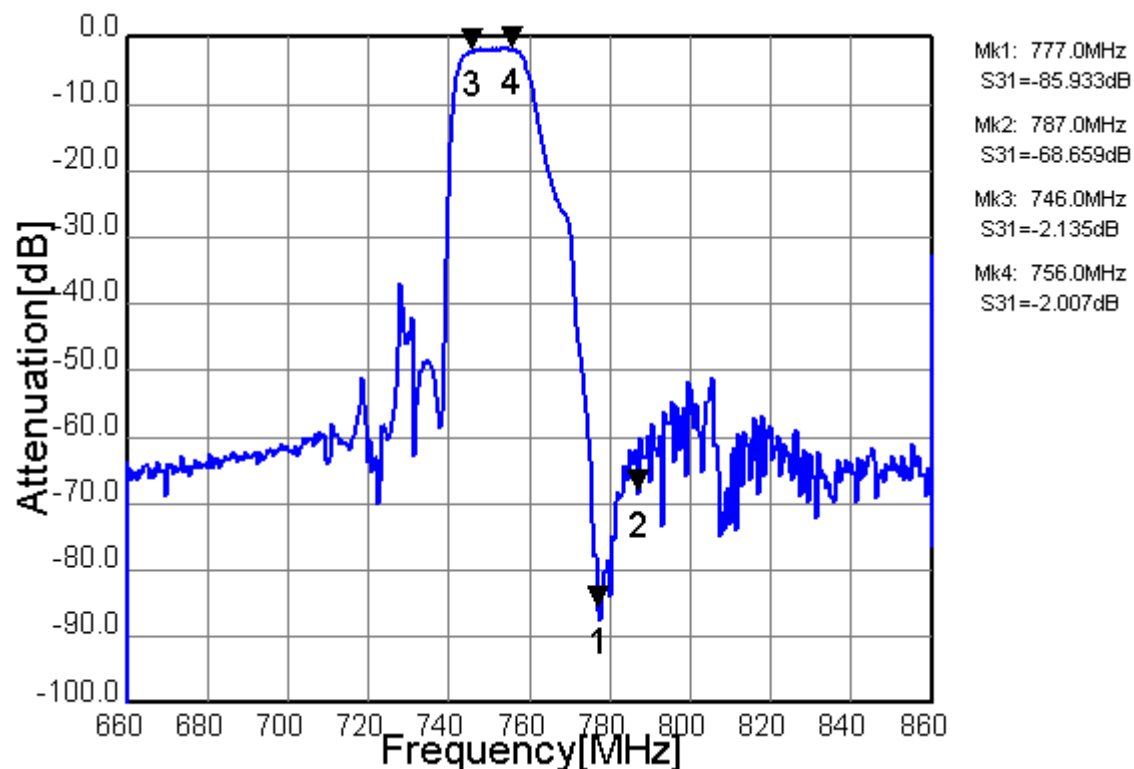


Figure 3-1. Electrical Characteristics

These data **include** loss that comes from the test board. (Approximately 0.05dB)



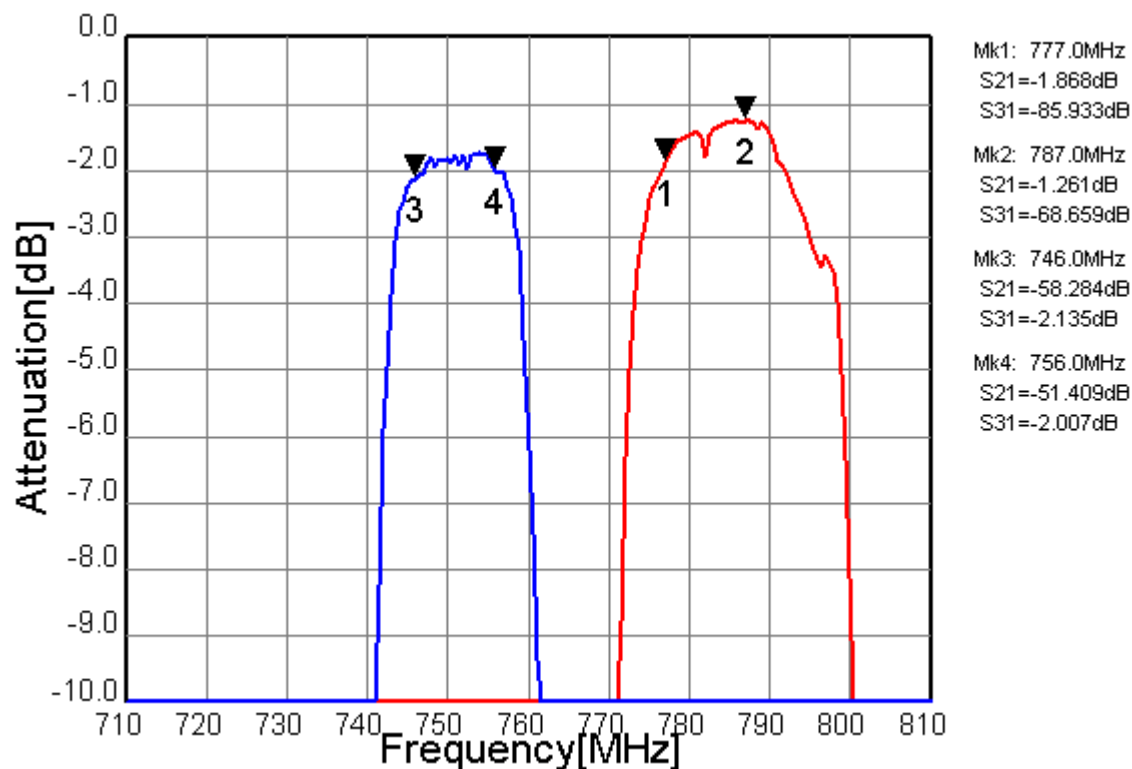
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Tx to Ant, Ant to Rx



Tx to Rx Isolation

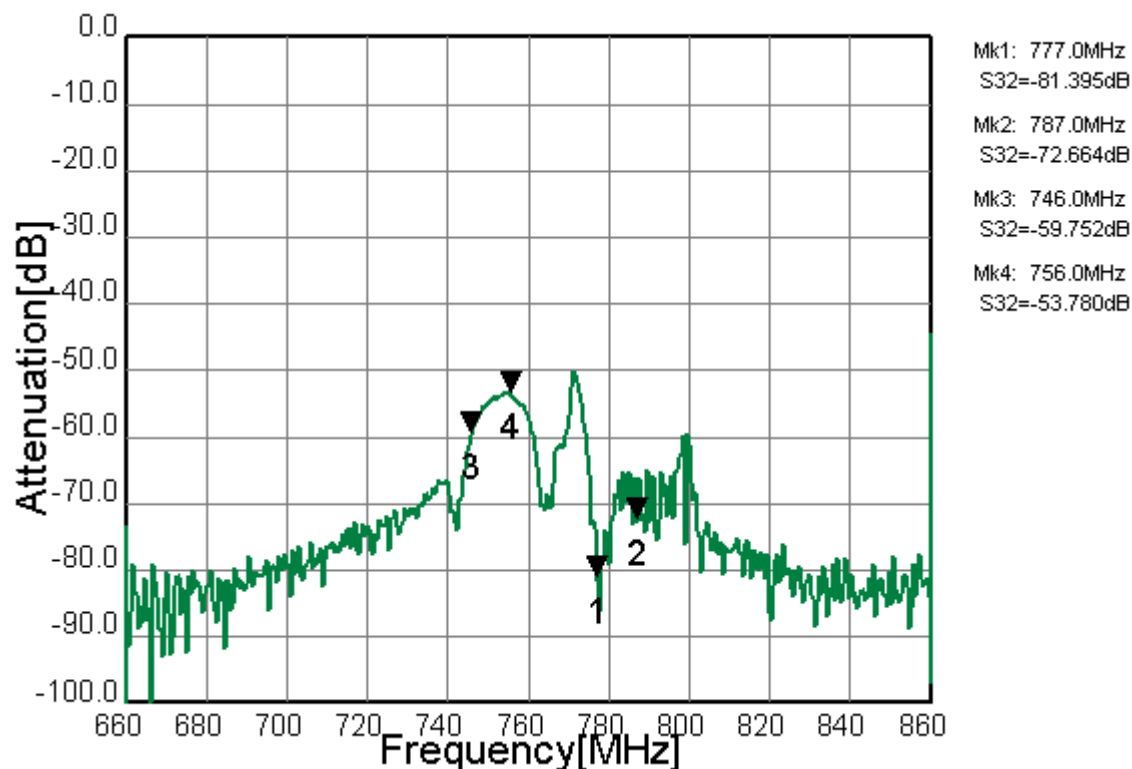


Figure 3-2. Electrical Characteristics

These data **include** loss that comes from the test board. (Approximately 0.05dB)



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Tx Port

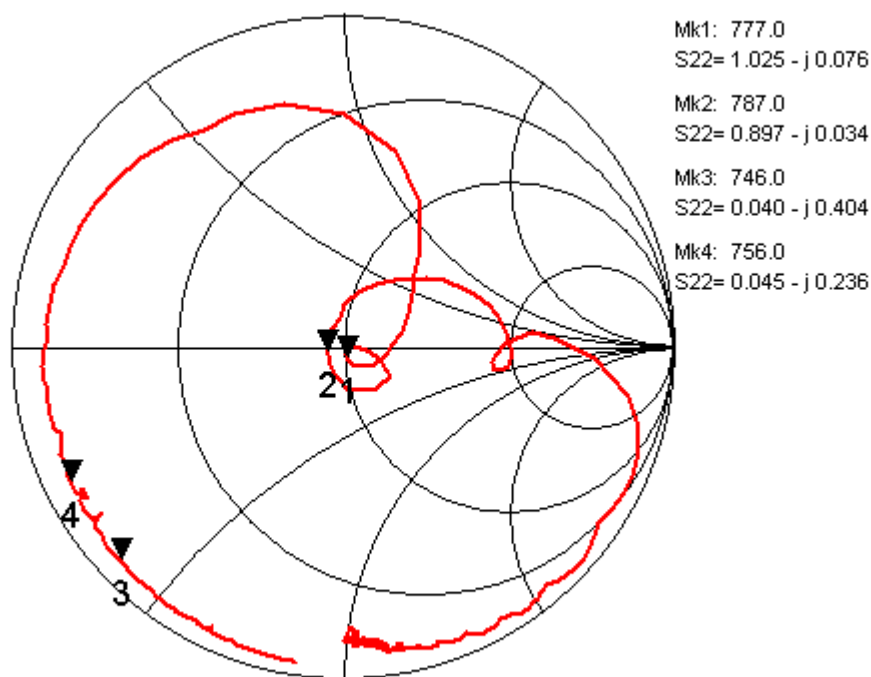
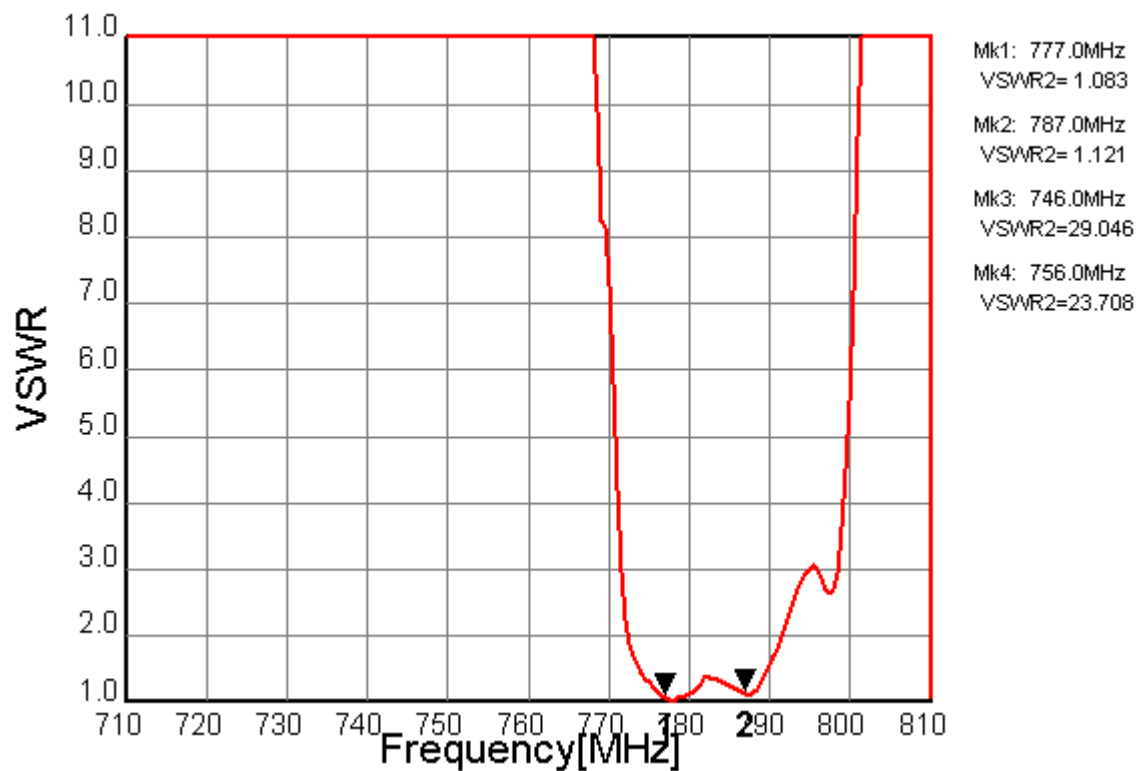


Figure 3-3. Electrical Characteristics



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Rx Port

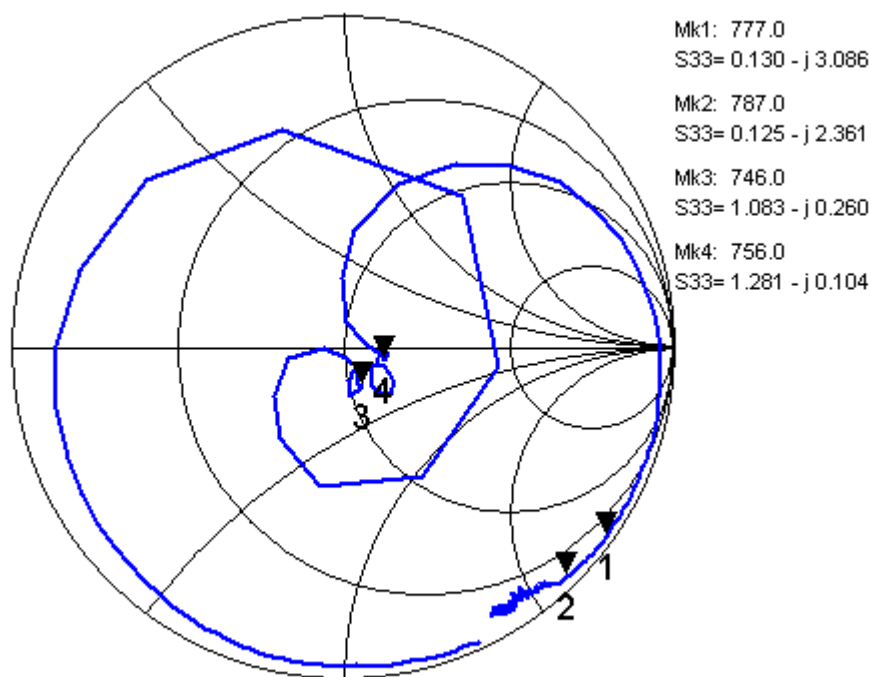
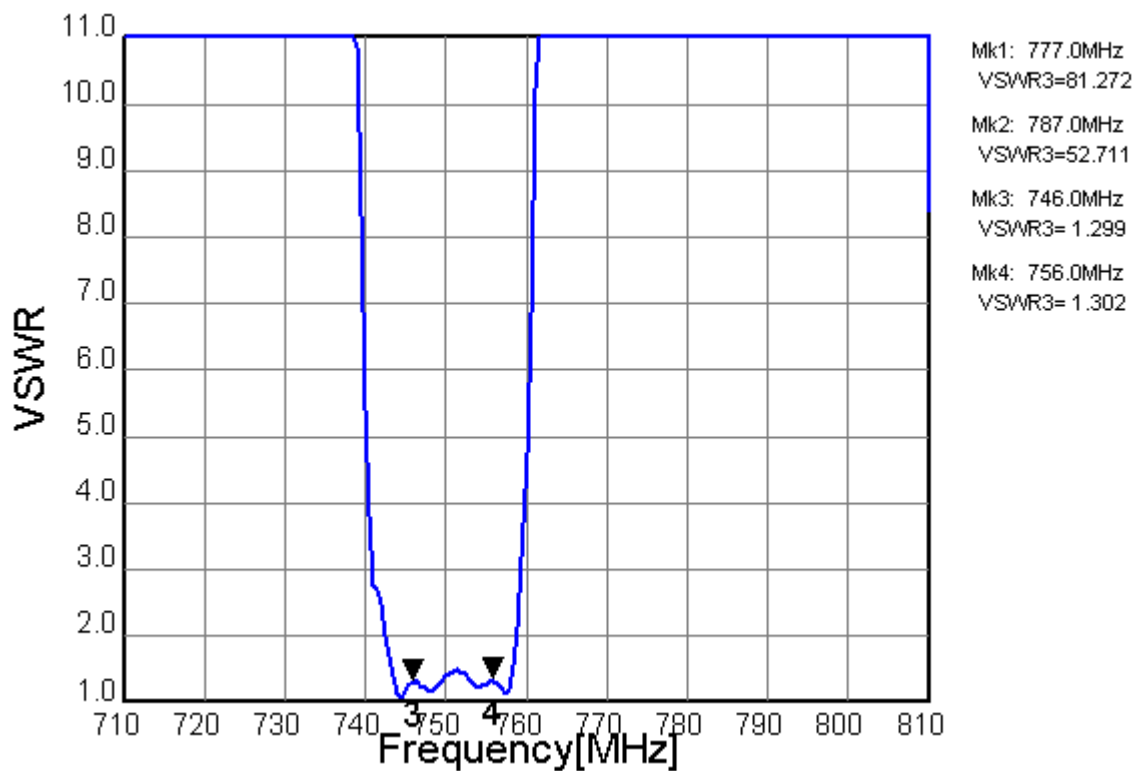


Figure 3-4. Electrical Characteristics



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Ant Port

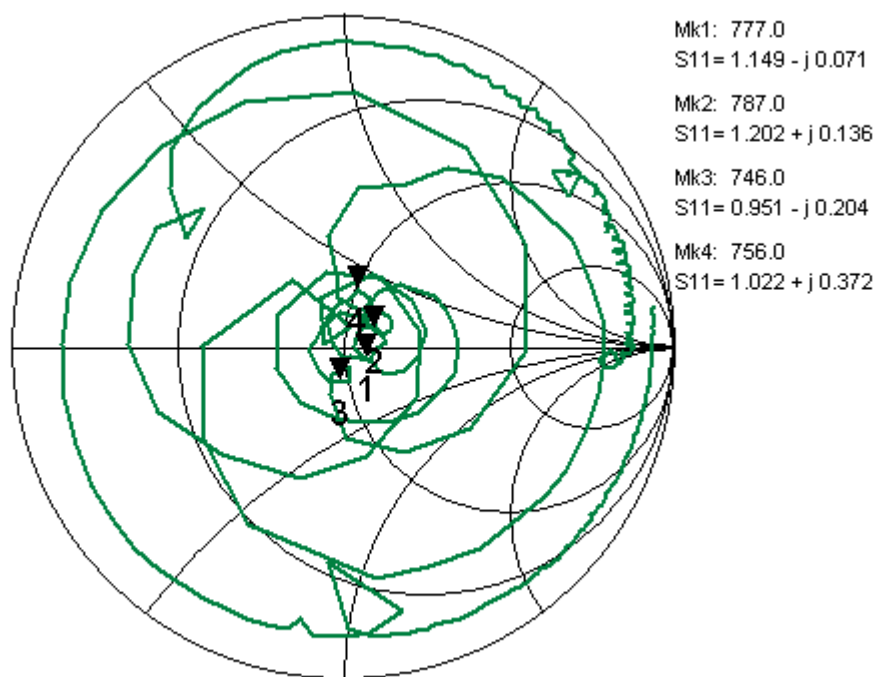
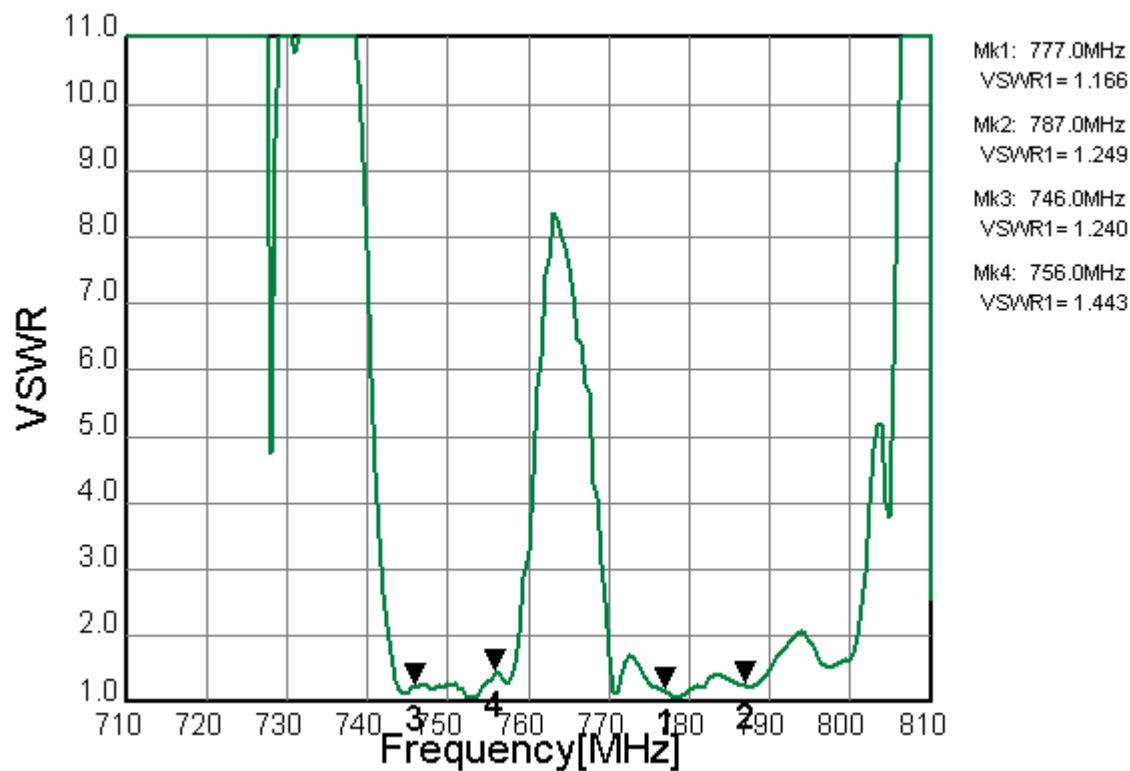


Figure 3-5. Electrical Characteristics



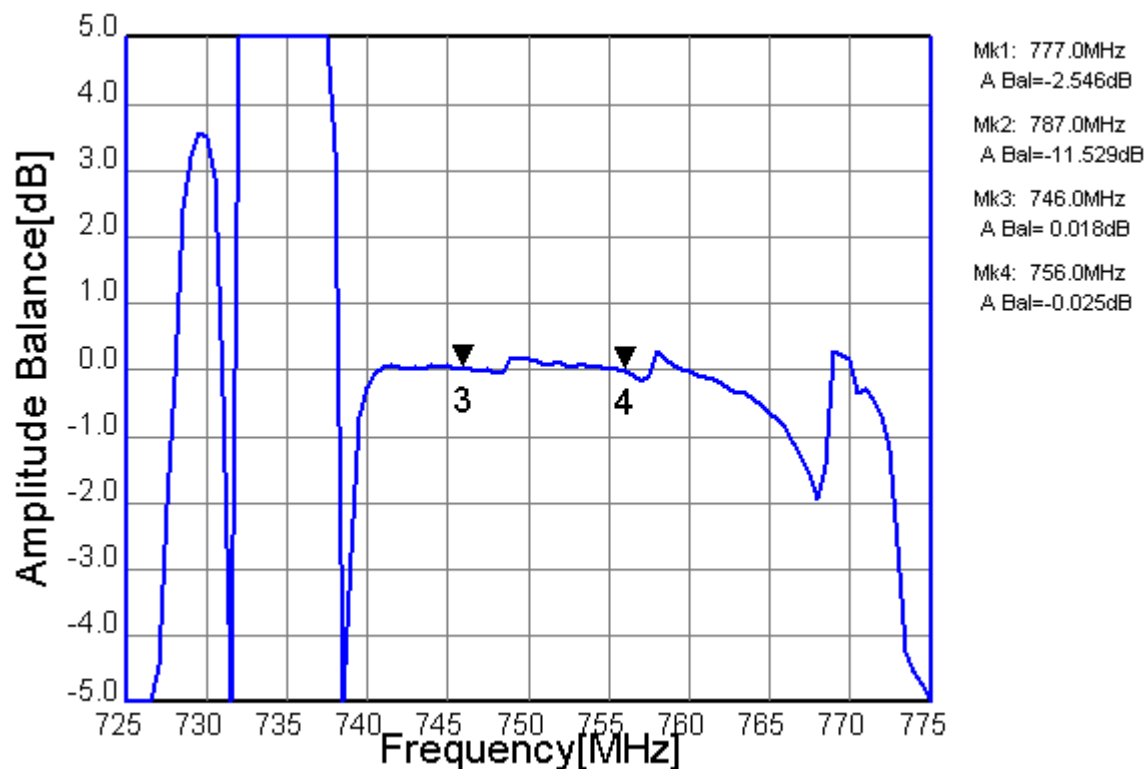
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Ant to Rx (Amplitude balance)



Ant to Rx (Phase balance)

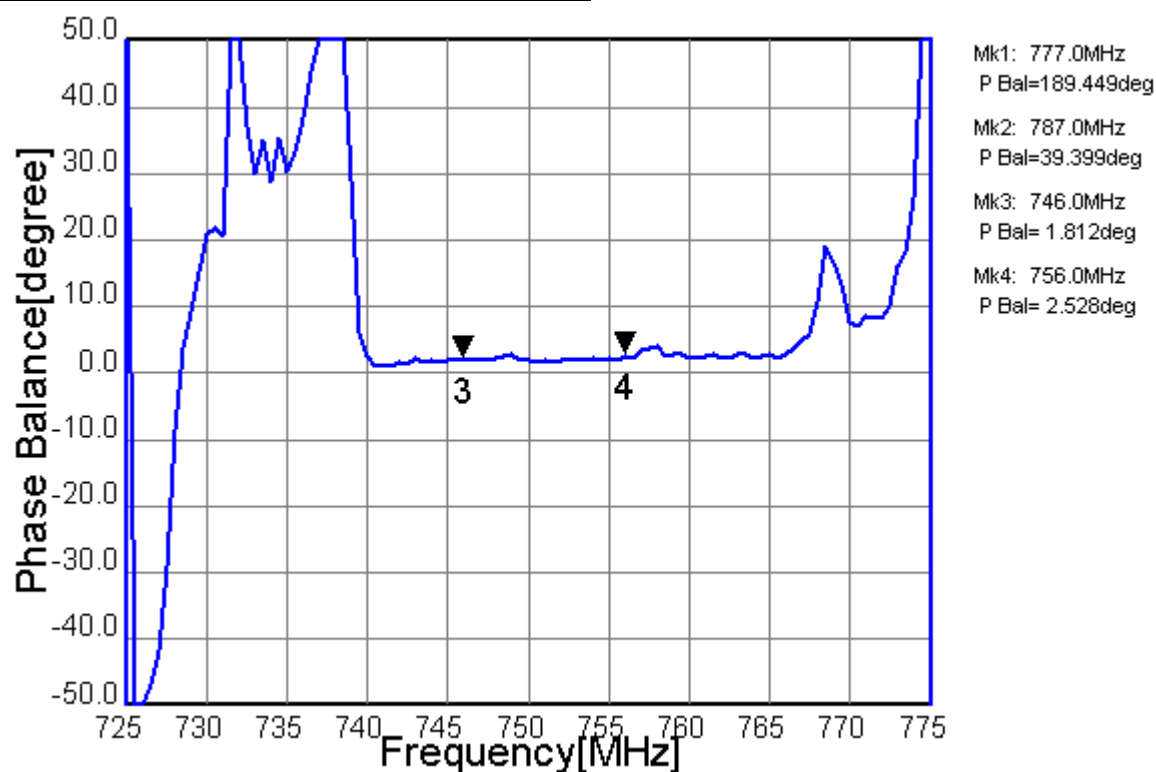


Figure 3-6. Electrical Characteristics



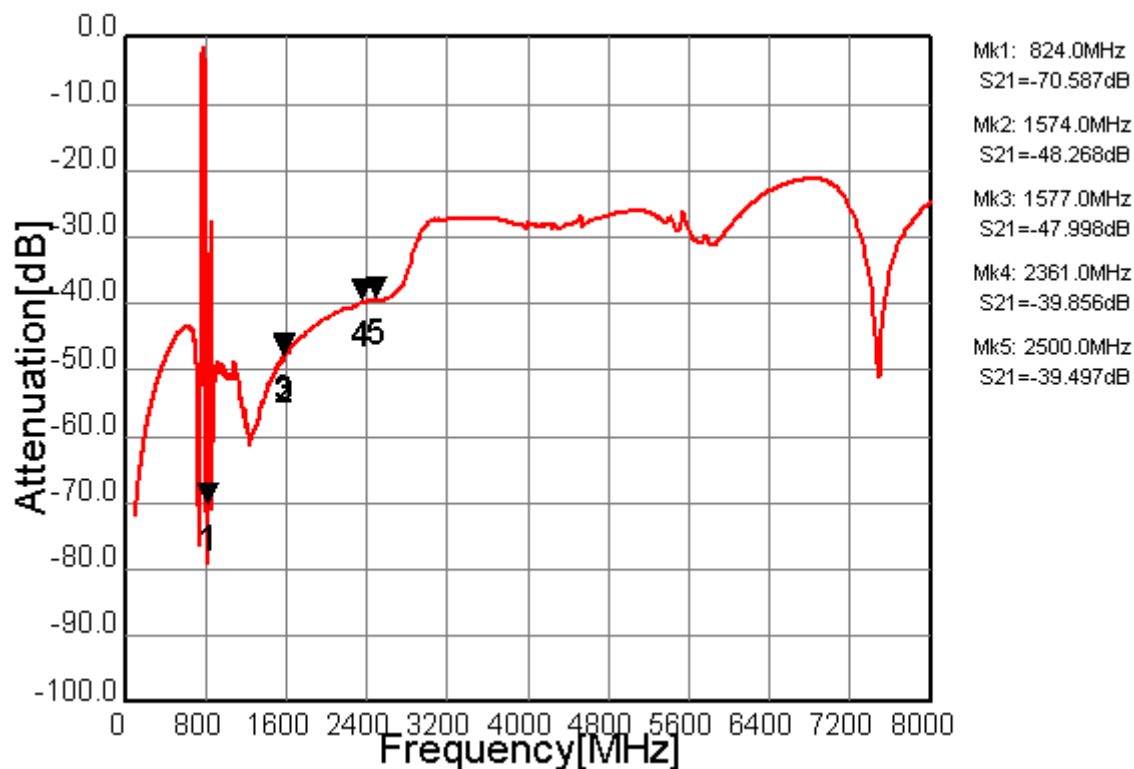
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Tx to Ant (Wide Span)



Ant to Rx (Wide Span)

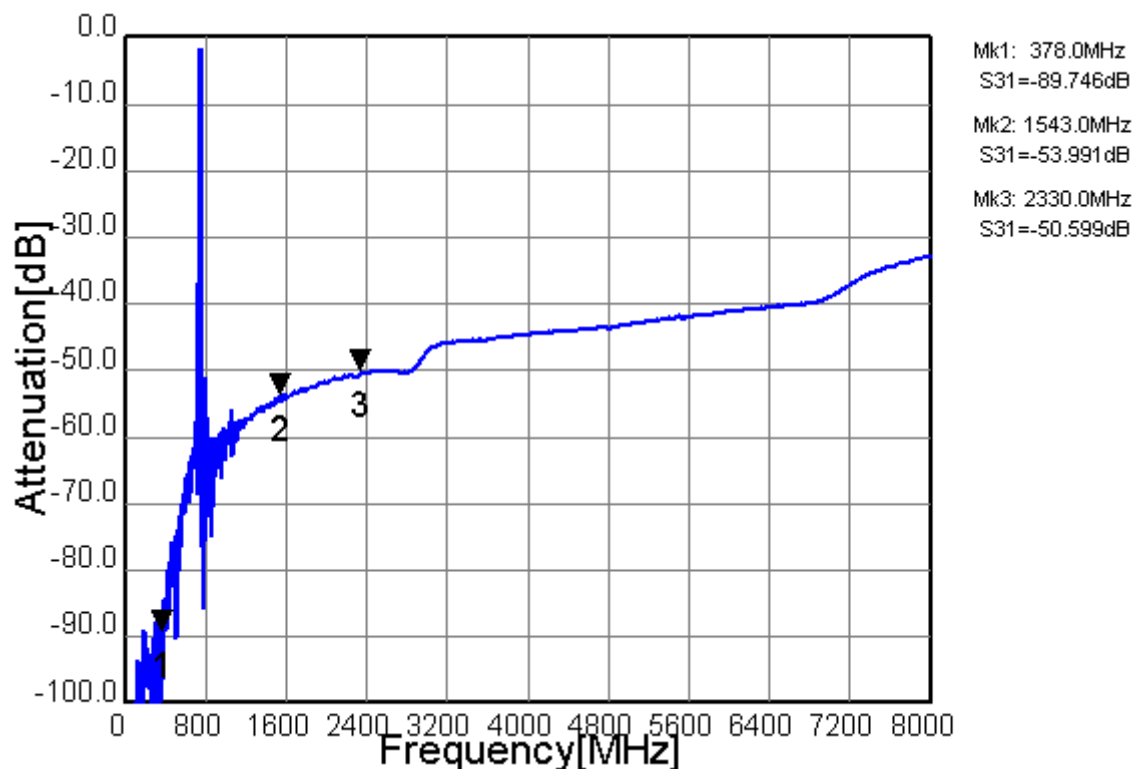


Figure 3-7. Electrical Characteristics



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Ordering Code

Ordering Code	Packing	Reel size	Status
D5NL782M0P1JZ-Z	Tape & Reel	3,000 pcs.	MP
D5NL782M0P1JZ-ZA	Tape & Reel	less than 3,000 pcs.	MP
D5NL782M0P1JZ-Q	Bulk	few pcs.	MP

*Minimum order quantity (MOQ) is assigned for each inquiry, Please contact to Sales Representatives..

*MP : Mass Production

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Please conduct validation and verification of products in actual condition of mounting and operating environment before commercial shipment of the equipment.