



PD-ITee Pb Free Part

Customer Name	Standard	TAIYO YUDEN Mobile	Technology Co., Ltd.
System	Band V / BC0 Duplexer	Date	Mar.15, 2012
Part Number	D5NL881M5P1HY	Ver. 7.1df	Final

Table 1 Electrical Specification

Item			Condition		Specification	ı	Linit	Remarks
			(MHz)	Min	Тур	Max	Onic	Remains
	Insertion I	Loss	824~849	-	1.6	2.0	dB(*1)	
	Ripple		824 ~ 849	-	0.5	1.2	dB	
		Ant	004 040	-	1.6	2.0	-	
	VSWR	Tx	824 ~ 849	-	1.9	2.2	-	
	Input Pow	<i>i</i> er	824 ~ 849	+29dBr	n, 50oC, 50000	hrs		
	Absolute	attenuation	DC~804	30	33	-	dB	
			860~869	5	19	-	dB	
			869~894	42	47	-	dB	
Тх			1574~1577	37	40	-	dB	
to			1638~1708	20	41	-	dB	
Ant			1844.9~1879.9	30	46	-	dB	
			1884.5~1919.6	30	47	-	dB	
			1930 ~ 1990	44	46	-	dB	
			2110~2170	44	49	-	dB	
			2400~2557	35	44	-	dB	
			3286~3406	20	32	-	dB	
			4110~4255	10	26	-	dB	
			4934~6000	5	18	-	dB	

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





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Item			Condition		Specificatio	n	Linit	Remarks
			(MHz)	Min	Тур	Max	Offic	
	Insertion L	.OSS	869~894	-	2.6	3.0	dB(*1)	
	Ripple			-	-	1.2	dB	5MHz in-band
			869~894		0.9	1.6	dB	
	Phase bal	ance	869~894	-8	-2/0	+8	deg	
	Amplitude	balance	869~894	-0.8	-0.1/+0.1	+0.8	dB	
		Ant		-	1.7	2.3	-	
Ant	VSWR	Rx	869~894	-	1.8	2.1	-	
to	Absolute a	Ittenuation	0.2~447	45	81	-	dB	
RX			447~824	30	57	-	dB	
			824~849	45	60	-	dB	
			849~854	10	36	-	dB	
			909~1000	7	20	-	dB	
			1000~4480	35	47	-	dB	
			4480~6000	20	34	-	dB	
Тx	Isolation		004 040	55	60	-	dB	Differential rejection
to			824 ~ 849	55	60	-	dB	Common mode rejection
Rx			869 ~ 894	45	51	-	dB	Differential rejection
IIP3	-		-					
The fir	st tone is app	lied to the Tx port a	at f1(=824MHz)					
The second tone is applied to the anter		applied to the ante	nna port at f2(=779MHz)	-	+78		dBm	at 869MHz
*The first tone power at +24dBm,		er at +24dBm,						
The	second tone p	oower at +13dBm						
Terminating Impedance		Tx port		50		Ohm	Single-ended	
			Rx port		100		Ohm	Differential
			Ant port		50 // 7.5nH	1	Ohm	Single-ended
0	perating Te	emperature			-30 to +85	5	٥C	
[Device size	(LxWxH)			3.0 x 2.5 x 0).7	mm	

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Dimensions



Unit: mm

Pin Configuration

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

Figure 1. Dimensions and Pin assignment





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Evaluation Circuit



Recommended foot print pattern



Figure 2. Recommended foot print pattern





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Tx to Ant



These data $\ensuremath{\text{include}}$ loss that comes from the test board. (Approximately 0.05dB.)





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Tx to Ant, Ant to Rx



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





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Figure 3-3. Electrical Characteristics





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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)



TAIYO YUDEN

Mk1: 824.0MHz P Bal=-66.871deg

Mk2: 849.0MHz P Bal=208.554deg

Mk3: 869.0MHz P Bal= 0.954deg

Mk4: 894.0MHz P Bal= 2.008deg





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Tx to Ant (Wide Span)







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Ordering Code

Ordering Code	Packing	Reel size	Status
D5NL881M5P1HY-Z	Tape & Reel	3,000 pcs.	MP
D5NL881M5P1HY-ZA	Tape & Reel	less than 3,000 pcs.	MP
D5NL881M5P1HY-Q	Bulk	few pcs.	MP

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

Notice

All of the contents specified herein are subject to change without notice due to technical improvements, etc.

Please contact Taiyo Yuden Co., Ltd. for further details of product specifications.

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

This product is for general electronics equipment such as Audio-Visual equipment, household electronics, office supplies, information services and telecommunications; therefore, in case this product is used for any medical equipment, space equipment, nuclear equipment or disaster prevention equipment, please contact Taiyo Yuden in advance.

In case this product is used for general electronics equipment or circuits which require high safety and high reliability, thoroughly evaluate on safety and add a protection circuit if necessary.