



 \* Pb Free Part

 Customer Name
 Standard
 TAIYO YUDEN Mobile Technology Co.,Ltd.

 System
 Band 17 Duplexer
 Date
 Aug. 19, 2013

 Part Number
 D5PE740M0P3NZ
 Ver.2.1abA
 Final

#### Table 1. Electrical Specification

ltom		Condition	S	pecificatio	n	Linit	Davida	
	Item		(MHz)	Min	Тур	Max	Unit	Remarks
Тx	Insertion loss		704 - 716	-	1.9	2.6 <mark>(*1)</mark>	dB	
to	Ripple		704 - 716	-	0.8	1.5	dB	
ANT		ANT		-	1.5	2.0	-	
	VSWR	Тх	704 - 716	-	1.7	2.1	-	
	Input Pow	/er	704 - 716	+29dBm	n, 50oC, 5	0000hrs	-	CW tone
	Absolute	attenuation	DC - 686	30	42	-	dB	
			686 - 698	1	3.5	-	dB	
			722 - 728	2	5.5	-	dB	
			728 - 734	18	48	-	dB	
			734 - 746	45	58	-	dB	
			746 - 768	30	42	-	dB	
			768 - 805	25	39	-	dB	
			869 - 894	30	39	-	dB	
			1408 - 1432	35	51	-	dB	
			1574 - 1577	45	51	-	dB	
			1805 - 1880	30	42	-	dB	
			1930 - 1990	30	40	-	dB	
			2110 - 2170	34	38	-	dB	
			2400 - 2500	30	34	-	dB	
			2500 - 3000	15	30	-	d B	

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





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#### Table 1. Electrical Specification

ltere		Condition		Specification	1	Linit	Dementer	
	Item		(MHz)	Min	Тур	Max	Unit	Remarks
ANT	ANT Insertion loss		734 - 746	-	2.0	2.6 <mark>(*1)</mark>	dB	
to	Ripple		734 - 746	-	0.8	1.4	dB	
Rx		ANT	704 740	-	1.5	2.0	-	
	VSVVR	Rx	734 - 746	-	1.6	2.0	-	
	Phase ba	lance	734 - 746	-10	-3/+3	+10	deg	
	Amplitude	e balance	734 - 746	-1.3	-0.7/+0.7	+1.3	dB	
	Absolute	attenuation	DC - 704	53	61		dB	
			704 - 716	50	64	-	dB	
			716 - 722	40	59	-	dB	
			722 - 727	15	39	-	dB	
			727 - 728	2	38	-	dB	
			776 - 805	35	38	-	dB	
			805 - 6000	30	49	-	dB	
Тх	Isolation		704 740	55	63	-	dB	Differential mode
to			704 - 716	60	69	-	dB	Common mode
Rx			734 - 746	50	60	-	dB	
Terminating Impedance		Tx port	50		Ohm	Single-ended		
		Rx port	100		Ohm	Differential		
		Ant port	50//12nH(Q=∞)		Ohm	Single-ended		
Operating Temperature		-30 to +85		°C				
Device	e size (LxW	/xH)		2.0(typ)	x 1.6(typ) x (	0.5(max)	mm	

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





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#### **Dimensions**



#### 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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#### **Evaluation Circuit**



#### **Recommended foot print pattern**



Figure 2. Recommended foot print pattern





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





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# Tx to Ant, Ant to Rx



#### Figure 3-2. Electrical Characteristics

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

Pb-free



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Figure 3-3. Electrical Characteristics

Pb-free



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## Rx Port



Figure 3-4. Electrical Characteristics

Pb-free



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### Ant Port



Figure 3-5. Electrical Characteristics

Pb-free Pb Free Part	Ro	HS	MSL1	

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### Ant to Rx (Amplitude balance)







#### Figure 3-6. Electrical Characteristics

**TAIYO YUDEN** 

# Mk1: 704.0MHz

P Bal=48.436deg

Mk2: 716.0MHz P Bal=113.964deg

Mk3: 734.0MHz P Bal=-2.355deg

Mk4: 746.0MHz P Bal=-0.697deg





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# Tx to Ant (Wide Span)







#### Figure 3-7. Electrical Characteristics





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#### **Ordering Code**

Ordering Code	Packing	Reel size	Status
D5PE740M0P3NZ-Z	Tape & Reel	3,000 pcs.	MP
D5PE740M0P3NZ-ZA	Tape & Reel	less than 3,000 pcs.	MP
D5PE740M0P3NZ-Y	Tape & Reel	15,000 pcs.	MP
D5PE740M0P3NZ-YA	Tape & Reel	less than 15,000 pcs.	MP
D5PE740M0P3NZ-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 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.