



* Pb Free Part



Customer Name	Standard	TAIYO YUDEN Mobile Technology Co., Ltd.	
System	Band 28 Block A Duplexer	Date	Mar. 06, 2018
Part Number	D5FC773M0K3NC	Version 4.1daC	Final

Table 1-1. Electrical Specification

Item		Condition (MHz)	Specification			Unit	Remarks
			Min.	Typ.	Max.		
Tx to Ant	Insertion loss	703 - 733	-	2.0	2.9	dB (*1)	
		703.25 - 732.75	-	2.0	2.7	dB (*1)	
	Ripple	703 - 733	-	1.3	2.4	dB	
	VSWR	Tx	703 - 733	-	1.9	2.2	-
		Ant	703 - 733	-	1.8	2.1	-
	Input Power	703 - 733	+29dBm, CW, +50°C,5000h			-	
			+29dBm, LTE 3MHz 1RB, +50°C,5000h			-	
			+29.5dBm, CW, +50°C,2000h			-	
			+29.5dBm, LTE 3MHz 1RB, +50°C,2000h			-	
			+30dBm, CW, +50°C,1000h			-	
			+30dBm, LTE 3MHz 1RB, +50°C,1000h			-	
	Absolute attenuation	10 - 694	18	30	-	dB	
		694 - 698	3	11	-	dB	
		758 - 788	47	54	-	dB	Rx
		1406 - 1466	23	29	-	dB	2f0
		1565 - 1606	20	24	-	dB	GPS
		2109 - 2199	30	34	-	dB	3f0
		2400 - 2500	35	40	-	dB	ISM



* Pb Free Part



Customer Name	Standard	TAIYO YUDEN Mobile Technology Co., Ltd.	
System	Band 28 Block A Duplexer	Date	Mar. 06, 2018
Part Number	D5FC773M0K3NC	Version 4.1daC	Final

Table 1-2. Electrical Specification

Item			Condition (MHz)	Specification			Unit	Remarks
				Min.	Typ.	Max.		
Ant to Rx	Insertion loss		758 - 788	-	1.8	2.6	dB (*1)	
	Insertion loss		758.25 - 787.75	-	1.7	2.4	dB (*1)	
	Ripple		758 - 788	-	0.9	2.0	dB	
	VSWR	Ant	758 - 788	-	1.8	2.0	-	
		Rx	758 - 788	-	1.8	2.0	-	
	Absolute attenuation		703 - 733	50	64	-	dB	Tx
			2400 - 2500	30	68	-	dB	ISM
Tx to Rx	Isolation		703 - 733	60	63	-	dB	Tx
			758 - 788	55	58	-	dB	Rx
Terminating Impedance			Tx port	50//12 nH			Ω	
			Rx port	50			Ω	
			Ant port	50//8.2 nH			Ω	
Operating Temperature				-30 to +85			℃	
Maximum DC in all ports				-	-	5	VDC	Device only
DC impedance to ground				100			MΩ	Device only
Device size (L max. x W max. x H max.)				1.8 x 1.4 x 0.44			mm	

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



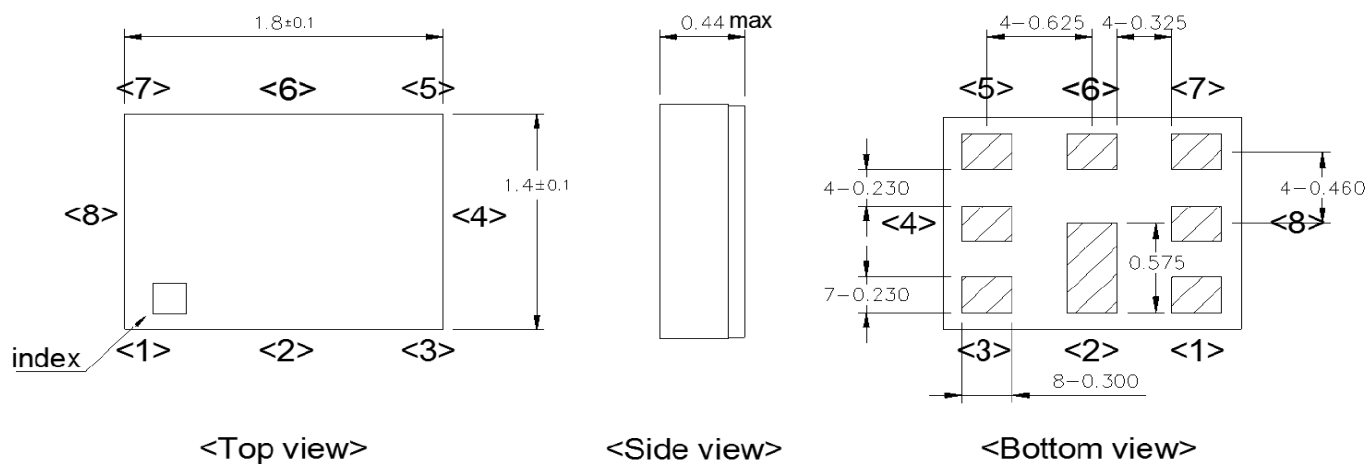
* Pb Free Part



MSL1

Customer Name	Standard	TAIYO YUDEN Mobile Technology Co., Ltd.	
System	Band 28 Block A Duplexer	Date	Mar. 06, 2018
Part Number	D5FC773M0K3NC	Version 4.1daC	Final

Dimensions



Unit: mm

Figure 1. Dimensions

Pin Assignment

Table 2. Pin Assignment

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



* Pb Free Part



MSL1

Customer Name	Standard	TAIYO YUDEN Mobile Technology Co., Ltd.	
System	Band 28 Block A Duplexer	Date	Mar. 06, 2018
Part Number	D5FC773M0K3NC	Version 4.1daC	Final

Evaluation Circuit

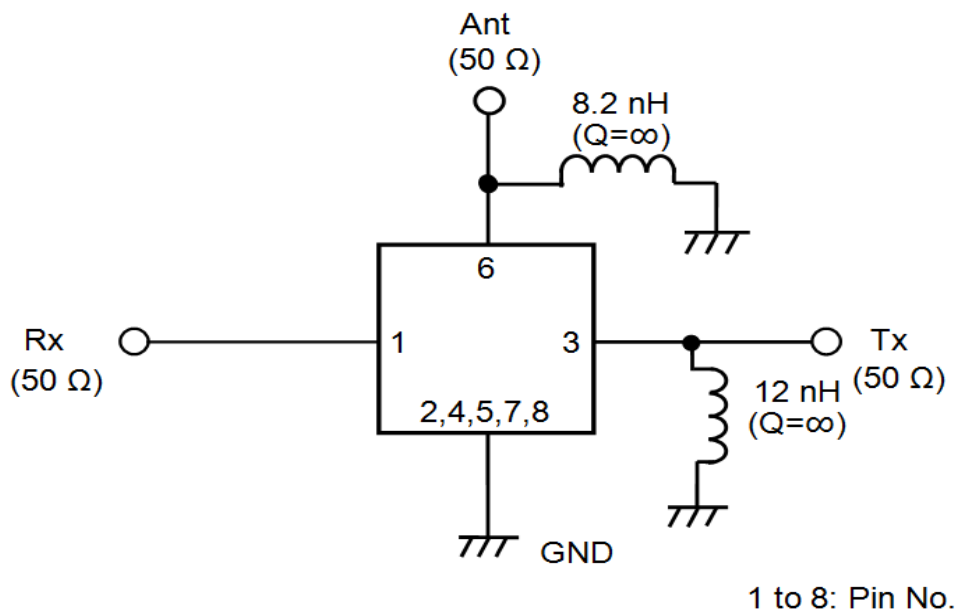


Figure 2. Evaluation Circuit

Recommended Foot Print Pattern

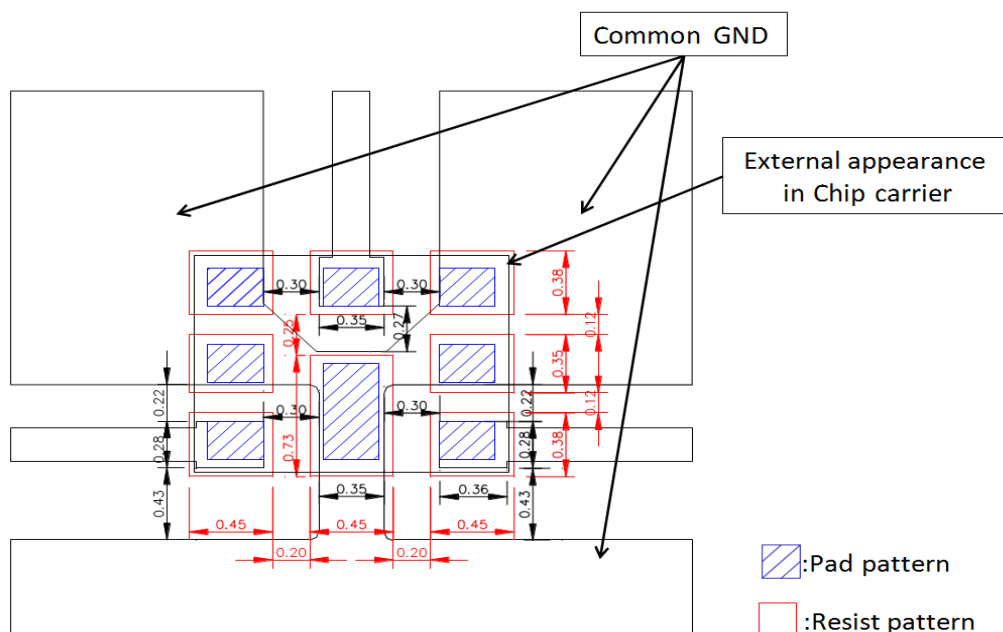


Figure 3. Recommended Foot Print Pattern



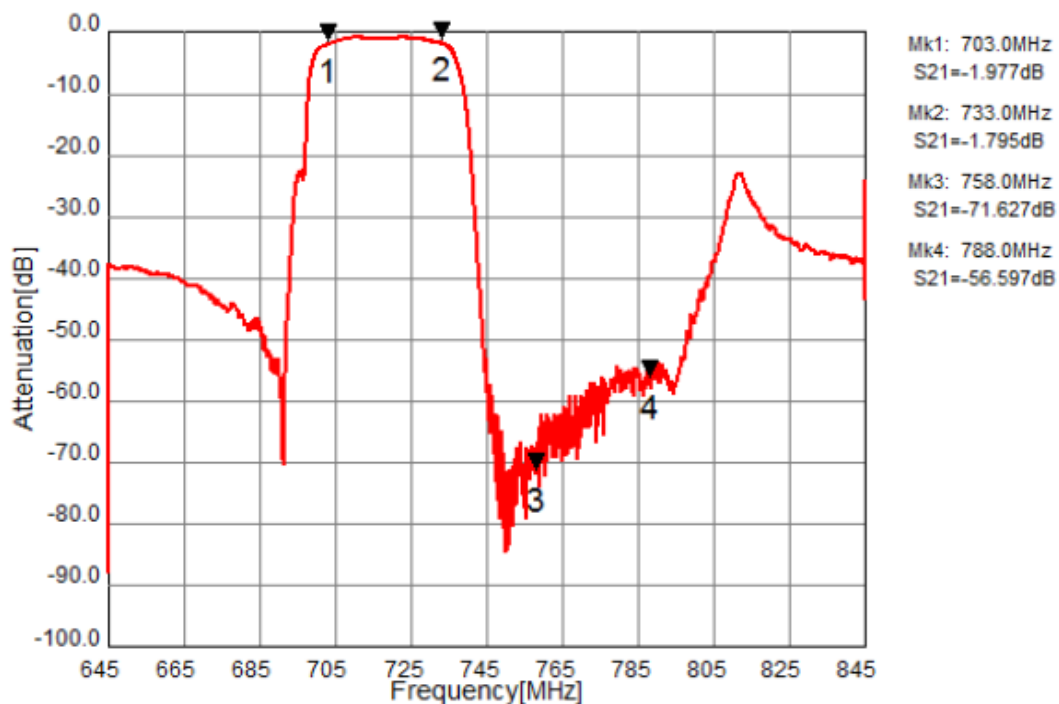
* Pb Free Part



MSL1

Customer Name	Standard	TAIYO YUDEN Mobile Technology Co., Ltd.	
System	Band 28 Block A Duplexer	Date	Mar. 06, 2018
Part Number	D5FC773M0K3NC	Version 4.1daC	Final

Tx to Ant



Ant to Rx

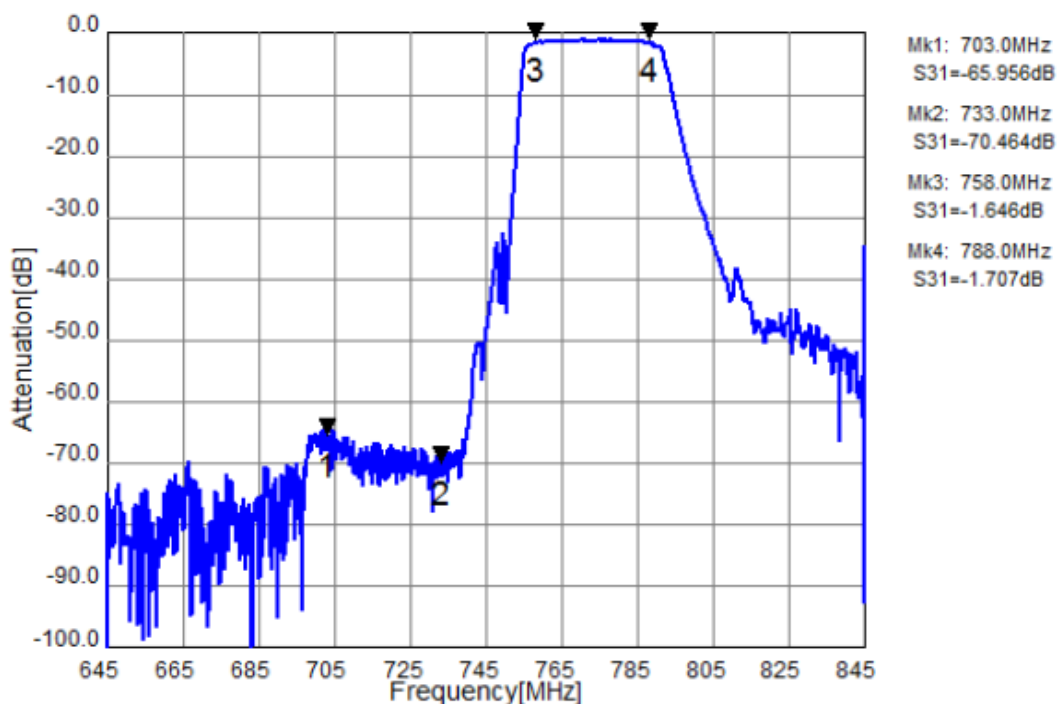


Figure 4-1. Electrical Characteristics

These data excludes loss that comes from the test board

TAIYO YUDEN



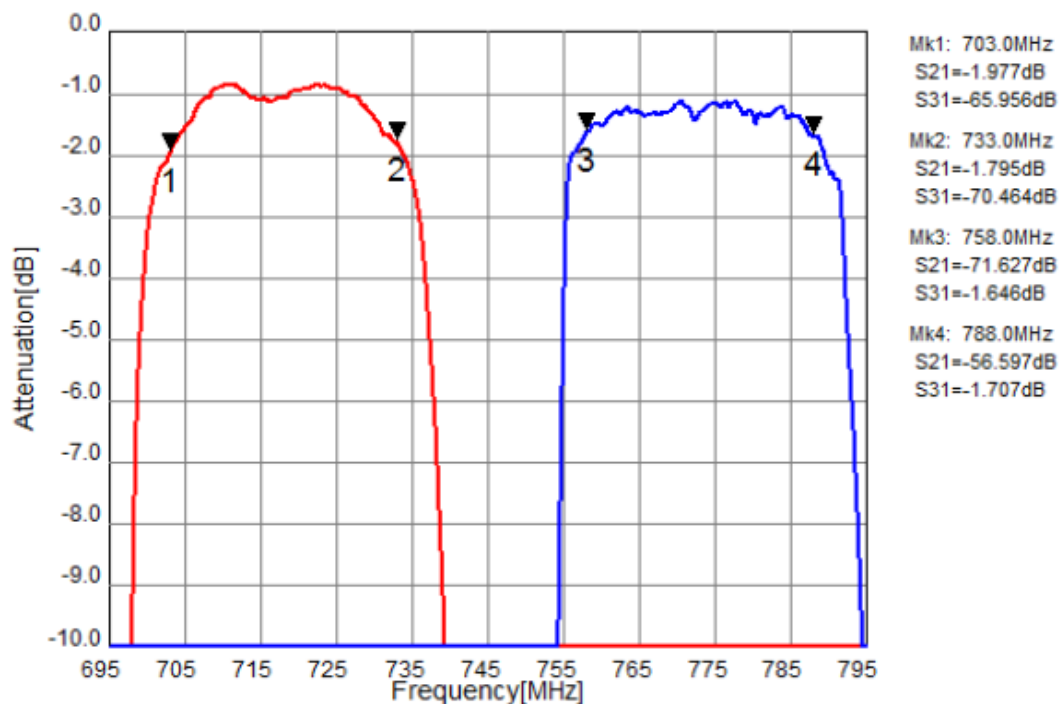
* Pb Free Part



MSL1

Customer Name	Standard	TAIYO YUDEN Mobile Technology Co., Ltd.	
System	Band 28 Block A Duplexer	Date	Mar. 06, 2018
Part Number	D5FC773M0K3NC	Version 4.1daC	Final

Tx to Ant, Ant to Rx



Tx to Rx Isolation

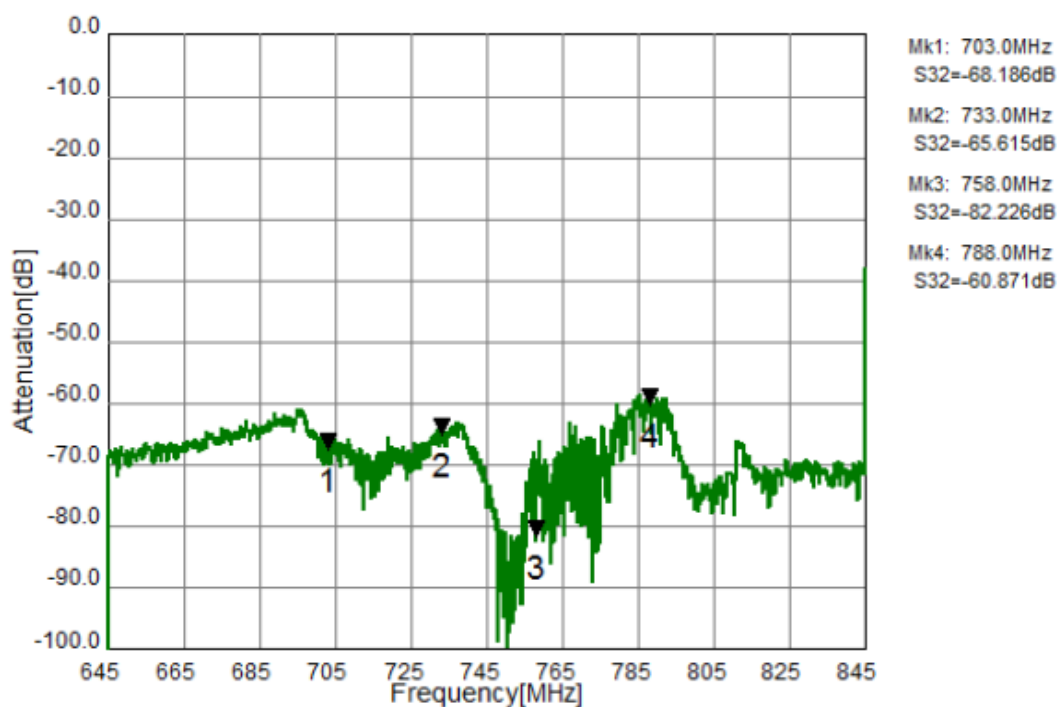


Figure 4-2. Electrical Characteristics

These data excludes loss that comes from the test board

TAIYO YUDEN



* Pb Free Part



MSL1

Customer Name	Standard	TAIYO YUDEN Mobile Technology Co., Ltd.	
System	Band 28 Block A Duplexer	Date	Mar. 06, 2018
Part Number	D5FC773M0K3NC	Version 4.1daC	Final

Tx Port

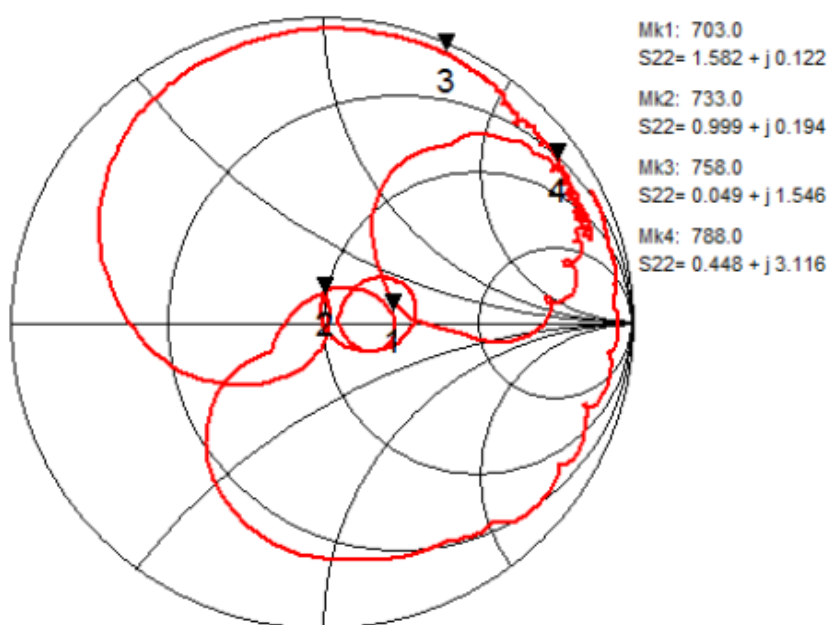
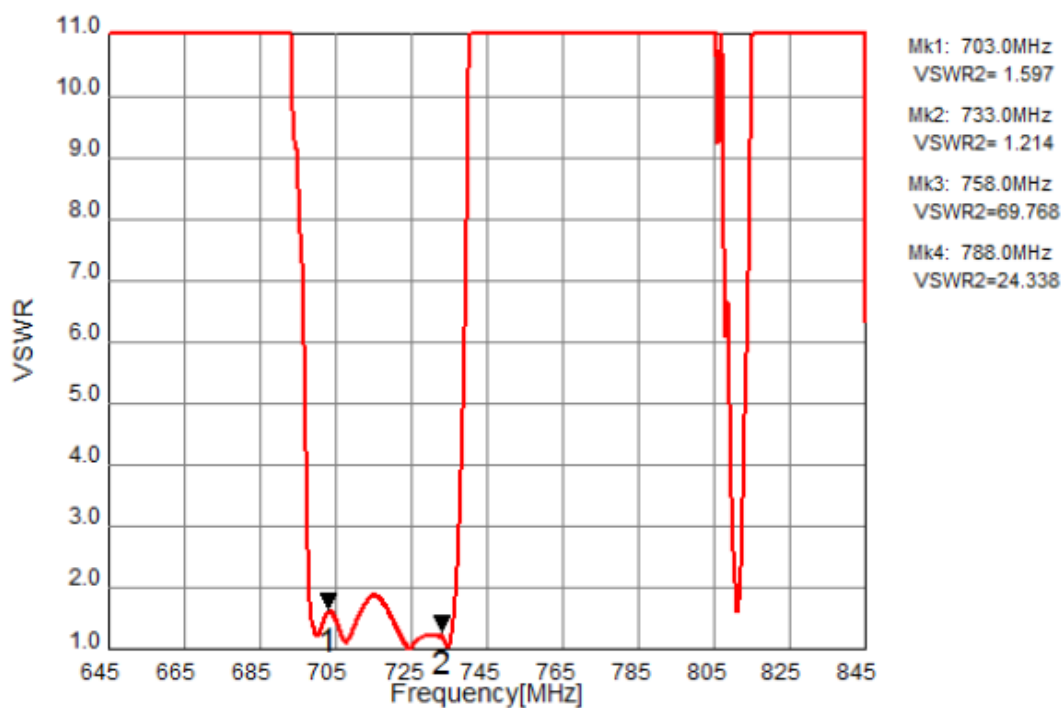


Figure 4-3. Electrical Characteristics

These data excludes loss that comes from the test board

TAIYO YUDEN



* Pb Free Part



MSL1

Customer Name	Standard	TAIYO YUDEN Mobile Technology Co., Ltd.	
System	Band 28 Block A Duplexer	Date	Mar. 06, 2018
Part Number	D5FC773M0K3NC	Version 4.1daC	Final

Rx Port

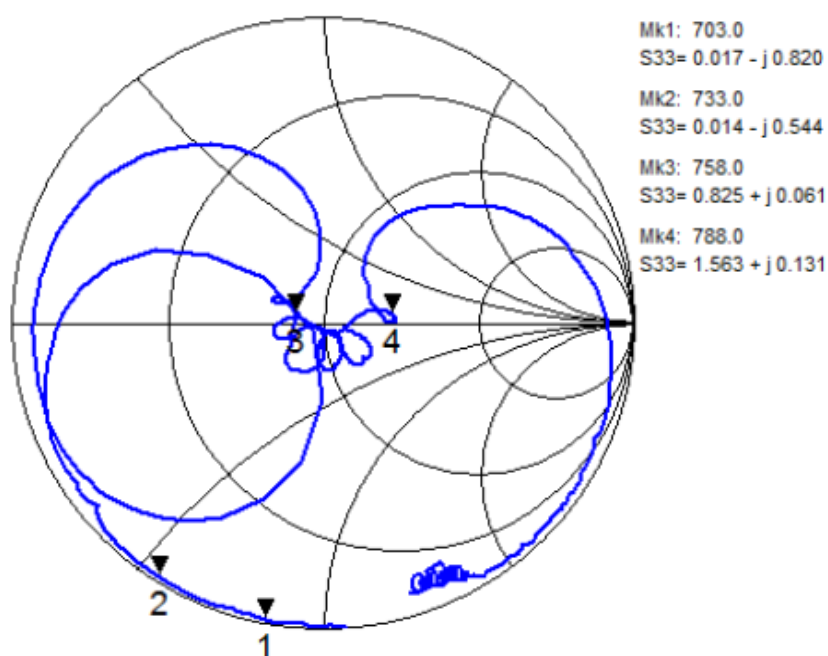
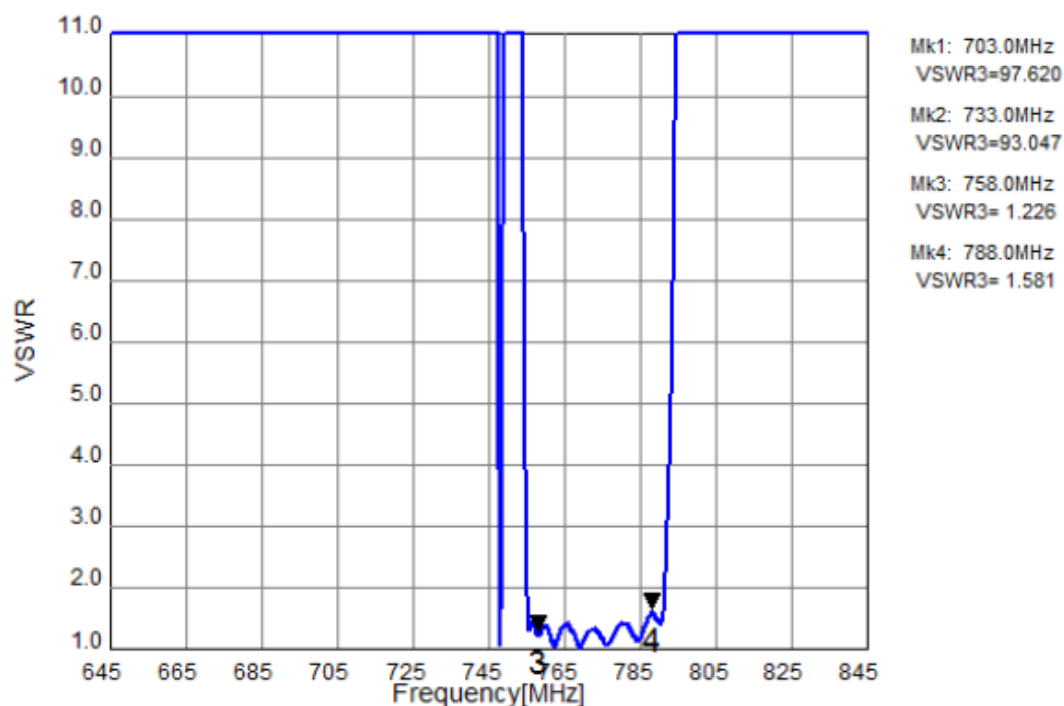


Figure 4-4. Electrical Characteristics

These data excludes loss that comes from the test board

TAIYO YUDEN



* Pb Free Part



MSL1

Customer Name	Standard	TAIYO YUDEN Mobile Technology Co., Ltd.	
System	Band 28 Block A Duplexer	Date	Mar. 06, 2018
Part Number	D5FC773M0K3NC	Version 4.1daC	Final

Ant Port

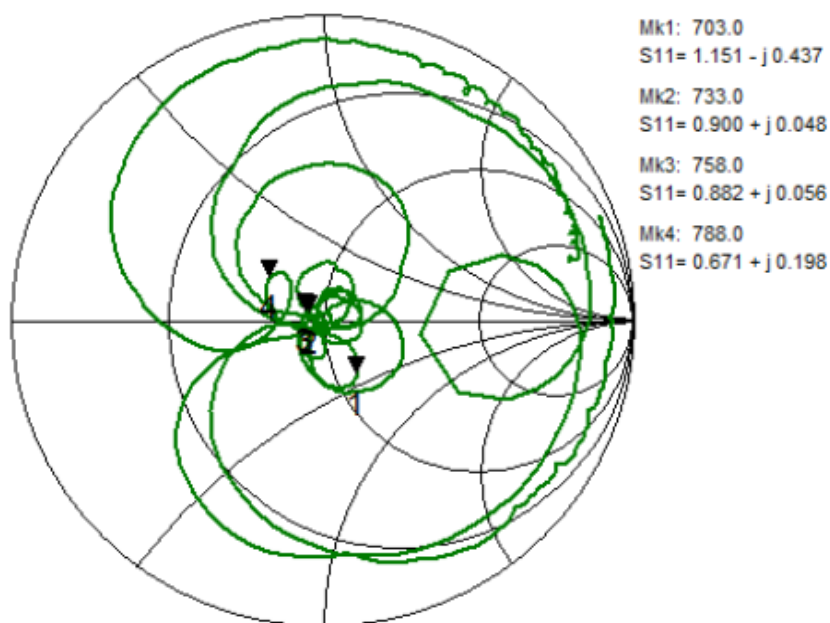
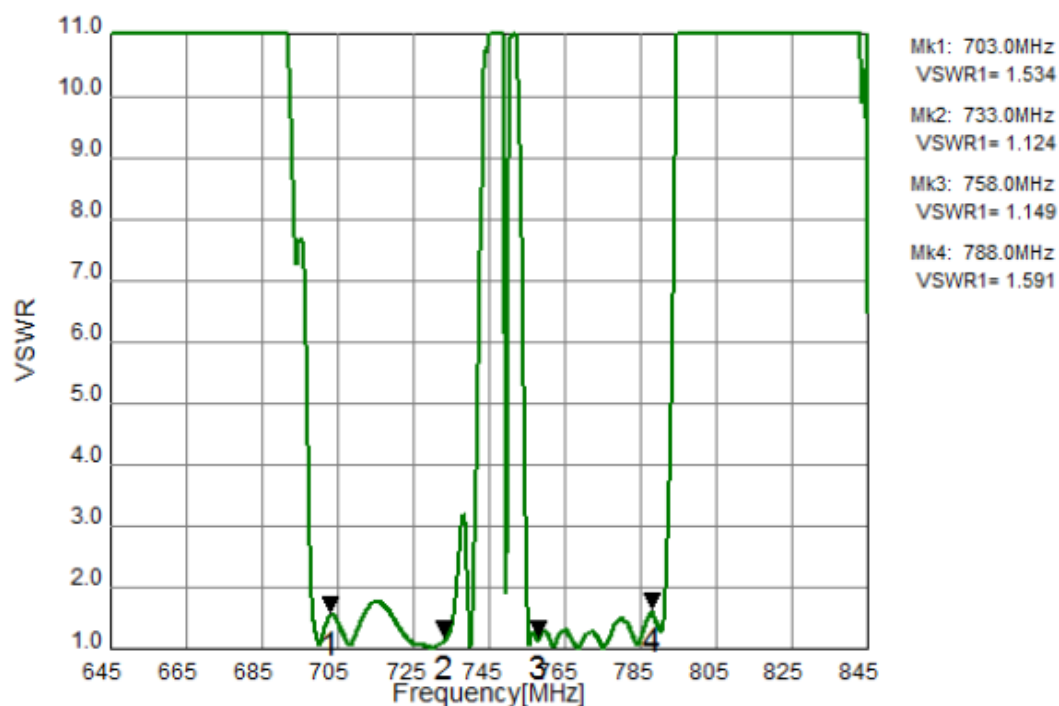


Figure 4-5. Electrical Characteristics

These data excludes loss that comes from the test board

TAIYO YUDEN



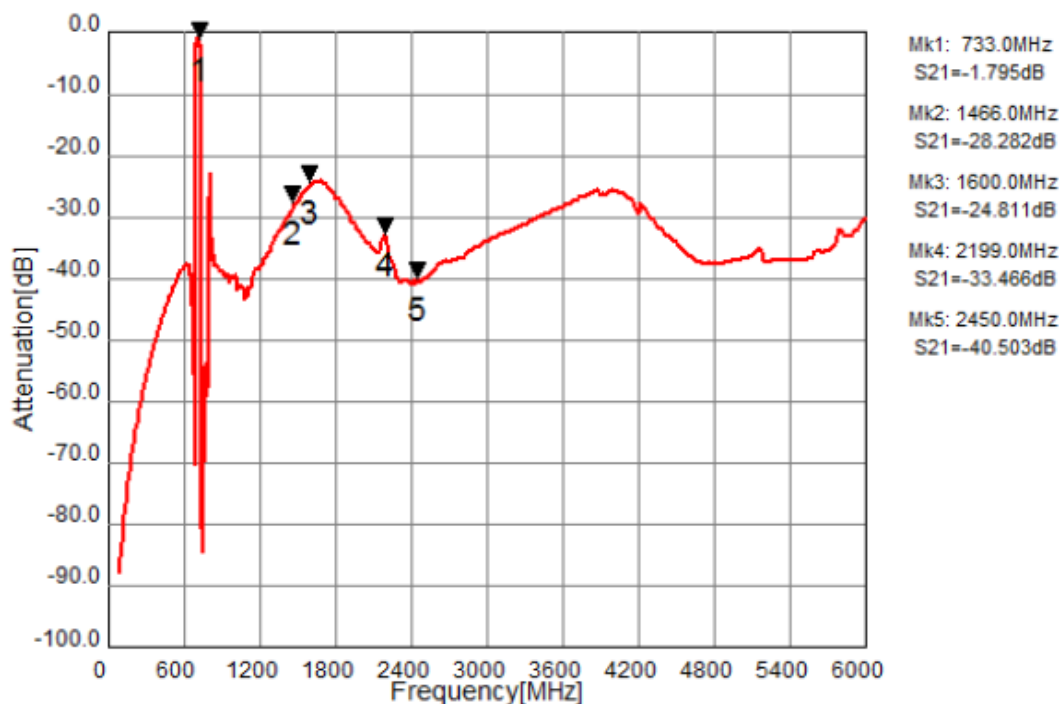
* Pb Free Part



MSL1

Customer Name	Standard	TAIYO YUDEN Mobile Technology Co., Ltd.	
System	Band 28 Block A Duplexer	Date	Mar. 06, 2018
Part Number	D5FC773M0K3NC	Version 4.1daC	Final

Tx to Ant(Wide span)



Ant to Rx(Wide span)

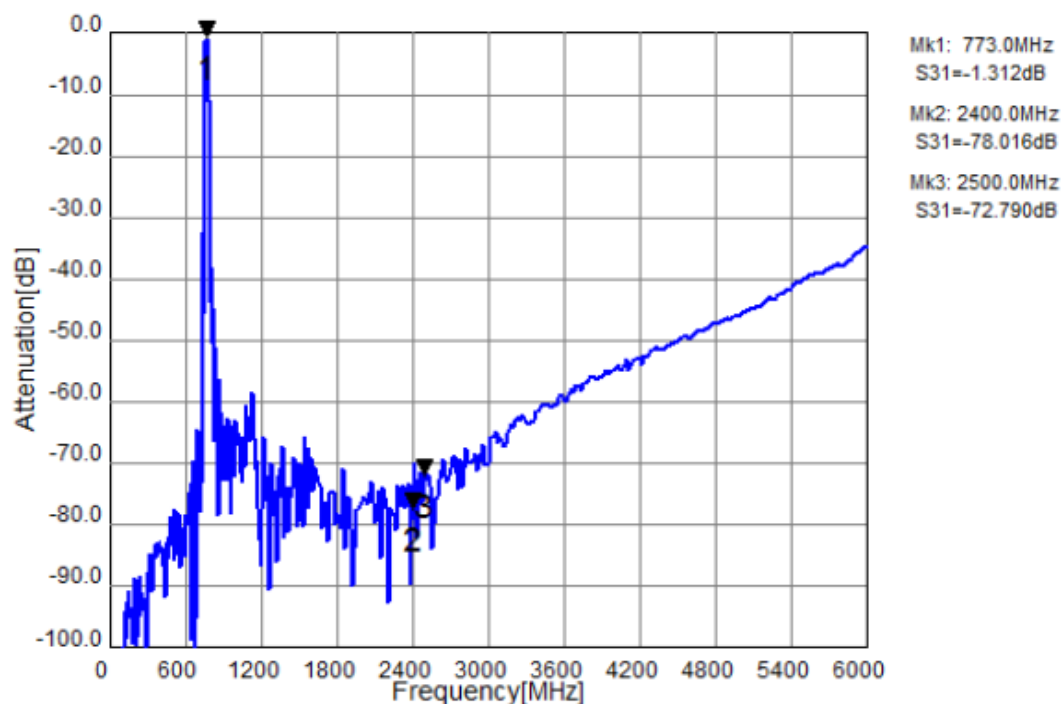


Figure 4-6. Electrical Characteristics

These data excludes loss that comes from the test board

TAIYO YUDEN



* Pb Free Part



MSL1

Customer Name	Standard	TAIYO YUDEN Mobile Technology Co., Ltd.	
System	Band 28 Block A Duplexer	Date	Mar. 06, 2018
Part Number	D5FC773M0K3NC	Version 4.1daC	Final

OPTION

External circuit addition (Second and Third Harmonics trap circuit)

Adding an inductor ($L=10.5\text{nH}$) and a capacitor ($C=5.6\text{pF}$) at ANT port

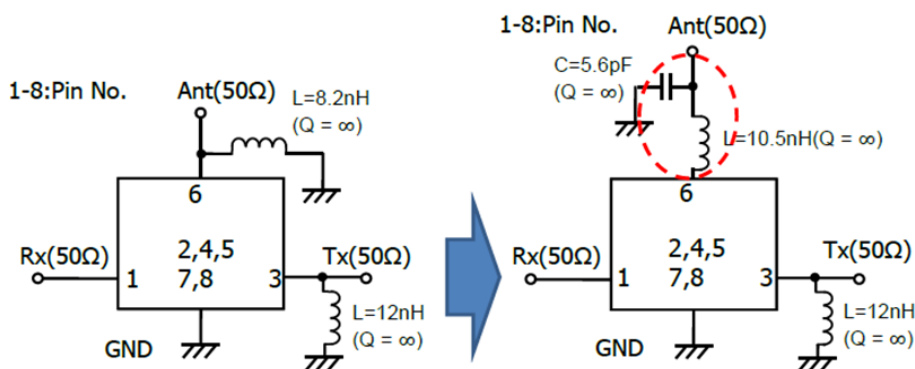
Simulation result

There are some trade-offs of the characteristic

Improvement point : Tx-Second Harmonic Attenuation(11dB Improved)

Tx-Third Harmonic Attenuation(20dB Improved)

Deterioration point : Tx / Rx Insertion loss(0.2dB / 0.3dB deteriorated)



Optional Circuit

Tx to Ant, Ant to Rx

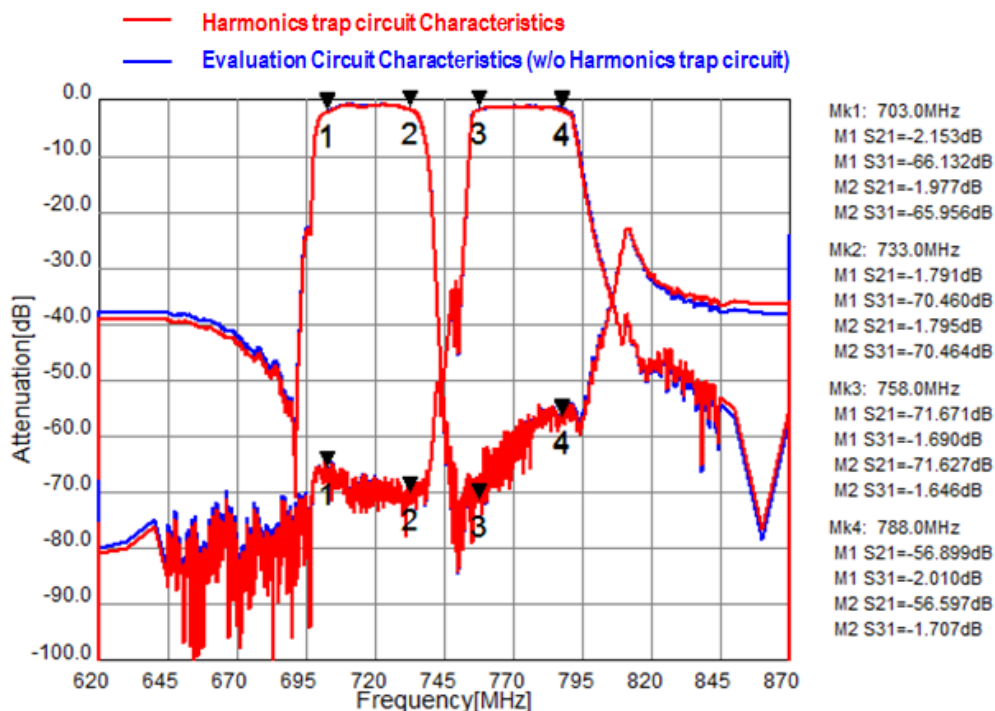


Figure 4-7. Electrical Characteristics

These data excludes loss that comes from the test board

TAIYO YUDEN

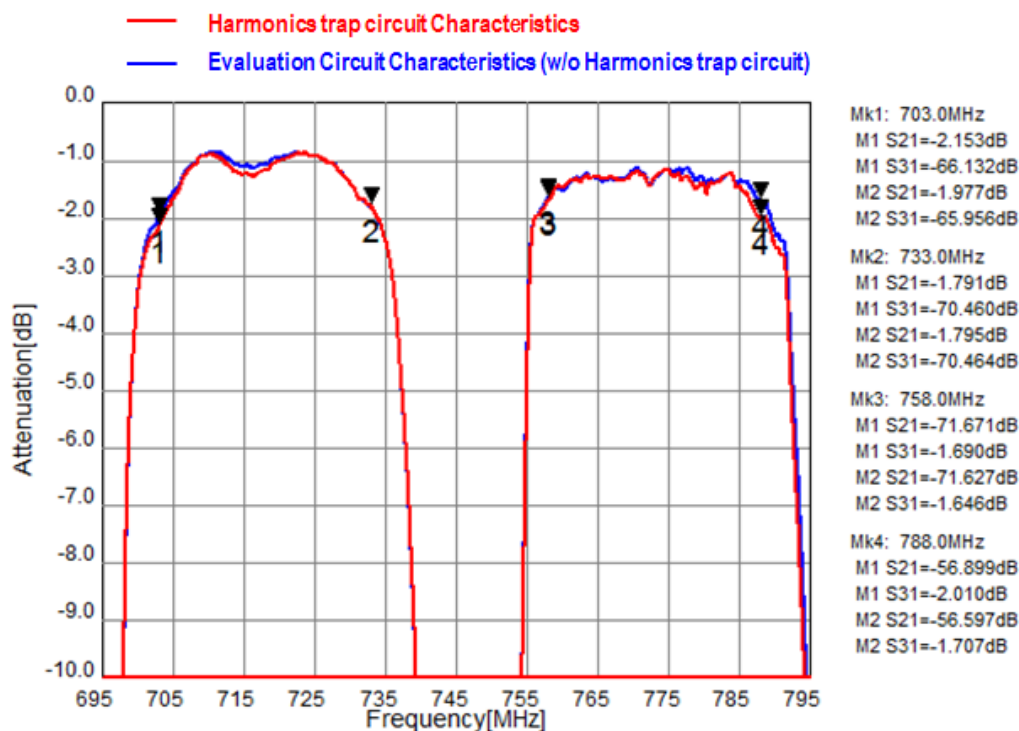


MSL1

* Pb Free Part

Customer Name	Standard	TAIYO YUDEN Mobile Technology Co., Ltd.	
System	Band 28 Block A Duplexer	Date	Mar. 06, 2018
Part Number	D5FC773M0K3NC	Version 4.1daC	Final

Tx to Ant, Ant to Rx(Narrow span)



Tx to Ant(Wide span)

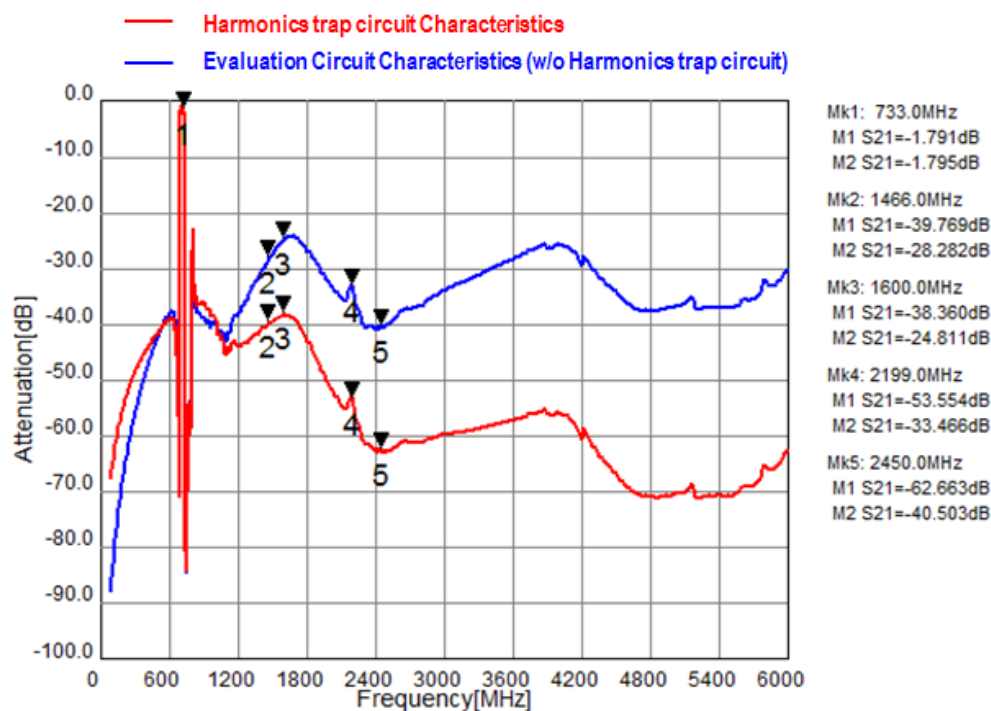


Figure 4-8. Electrical Characteristics

These data excludes loss that comes from the test board

TAIYO YUDEN



* Pb Free Part



Customer Name	Standard	TAIYO YUDEN Mobile Technology Co., Ltd.	
System	Band 28 Block A Duplexer	Date	Mar. 06, 2018
Part Number	D5FC773M0K3NC	Version 4.1daC	Final

Ordering Code

Ordering Code	Packing	Reel size	Status
D5FC773M0K3NC-Z	Tape & Reel	3,000 pcs.	MP
D5FC773M0K3NC-ZA	Tape & Reel	less than 3,000 pcs.	MP
D5FC773M0K3NC-Y	Tape & Reel	15,000 pcs.	MP
D5FC773M0K3NC-YA	Tape & Reel	less than 15,000 pcs.	MP
D5FC773M0K3NC-Q	Bulk	few pcs.	MP

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

*MP : Mass Production

Notice

- Please conduct validation and verification of our products in actual condition of mounting and operating environment before using our products.
- The products listed in this specification are intended for use in general electronic equipment (e.g., AV equipment, OA equipment, home electric appliances, office equipment, information and communication equipment including, without limitation, mobile phone, and PC). Please be sure to contact TAIYO YUDEN for further information before using the products for any equipment which may directly cause loss of human life or bodily injury (e.g., transportation equipment including, without limitation, automotive powertrain control system, train control system, and ship control system, traffic signal equipment, disaster prevention equipment, medical equipment classified as Class I, II or III by IMDRF, highly public information network equipment including, without limitation, telephone exchange, and base station).
Please do not incorporate our products into any equipment requiring high levels of safety and/or reliability (e.g., aerospace equipment, aviation equipment, medical equipment classified as Class IV by IMDRF, nuclear control equipment, undersea equipment, military equipment).
When our products are used even for high safety and/or reliability-required devices or circuits of general electronic equipment, it is strongly recommended to perform a thorough safety evaluation prior to use of our products and to install a protection circuit as necessary.
Please note that unless you obtain prior written consent of TAIYO YUDEN, TAIYO YUDEN shall not be in any way responsible for any damages incurred by you or third parties arising from use of the products listed in this specification for any equipment requiring inquiry to TAIYO YUDEN or prohibited for use by TAIYO YUDEN as described above.
- Information contained in this specification is intended to convey examples of typical performances and/or applications of our products and is not intended to make any warranty with respect to the intellectual property rights or any other related rights of TAIYO YUDEN or any third parties nor grant any license under such rights.
- Please note that the scope of warranty for our products is limited to the delivered our products themselves and TAIYO YUDEN shall not be in any way responsible for any damages resulting from a fault or defect in our products. Notwithstanding the foregoing, if there is a written agreement (e.g., supply and purchase agreement, quality assurance agreement) signed by TAIYO YUDEN and your company, TAIYO YUDEN will warrant our products in accordance with such agreement.
- The contents of this specification are applicable to our products which are purchased from our sales offices or authorized distributors (hereinafter "TAIYO YUDEN's official sales channel"). Please note that the contents of this specification are not applicable to our products purchased from any seller other than TAIYO YUDEN's official sales channel.
- Caution for Export
Some of our products listed in this specification may require specific procedures for export according to "U.S. Export Administration Regulations", "Foreign Exchange and Foreign Trade Control Law" of Japan, and other applicable regulations. Should you have any questions on this matter, please contact our sales staff.