



Data Sheet of SAW Components



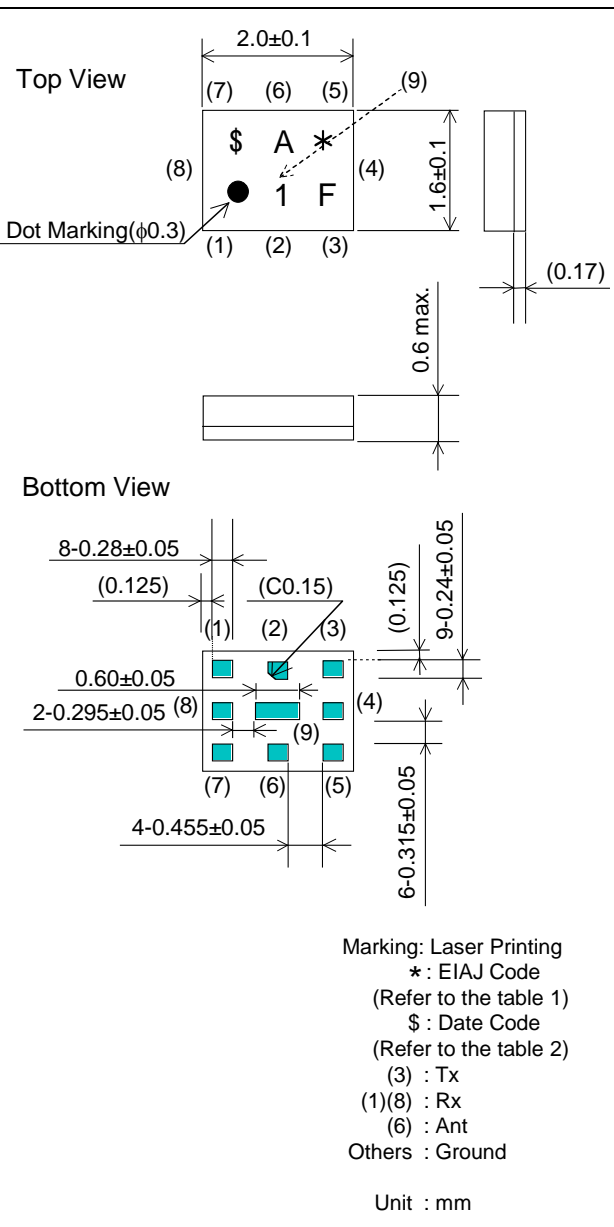
Note : Murata SAW Component is applicable for Cellular /Cordless phone (Terminal) relevant market only.
Please also read caution at the end of this document.

SAW DPX FOR UMTS BAND4

Murata part number :SAYRF1G73CA0F0A

[Tx→ANT]

Package Dimensions



Specification

Item	Specification		
	-30 to 85°C	25±2°C	typ.
Nominal Center Frequency(fc)	1732.5MHz		
Insertion Loss (1712.4 to 1752.6MHz)*	1.9 dB _{INT} max.	1.9 dB _{INT} max.	1.3 dB _{INT}
(1710 to 1755 MHz)	2.0 dB max.	2.0 dB max.	1.3 dB
Absolute Attenuation			
1) 10 to 728 MHz	30 dB min.	30 dB min.	46 dB
2) 728 to 764 MHz	39 dB min.	39 dB min.	45 dB
3) 855 to 877.5 MHz	30 dB min.	30 dB min.	43 dB
4) 869 to 894 MHz	30 dB min.	30 dB min.	42 dB
5) 851 to 894 MHz	35 dB min.	35 dB min.	42 dB
6) 1310 to 1355 MHz	24 dB min.	24 dB min.	38 dB
7) 1565.42 to 1573.374 MHz	40 dB min.	40 dB min.	49 dB
8) 1573.374 to 1577.466 MHz	40 dB min.	40 dB min.	49 dB
9) 1577.466 to 1585.42 MHz	40 dB min.	40 dB min.	47 dB
10) 1570 to 1580 MHz	36 dB min.	36 dB min.	48 dB
11) 1597.552 to 1605.886 MHz	35 dB min.	35 dB min.	42 dB
12) 1805 to 1880 MHz	20 dB min.	20 dB min.	45 dB
13) 1930 to 1990 MHz	39 dB min.	39 dB min.	45 dB
14) 2110 to 2170 MHz	38 dB min.	38 dB min.	44 dB
15) 2400 to 2500 MHz	30 dB min.	30 dB min.	34 dB
16) 2565 to 2677.5 MHz	5 dB min.	5 dB min.	34 dB
17) 3420 to 3510 MHz	20 dB min.	20 dB min.	29 dB
18) 5130 to 5265 MHz	18 dB min.	18 dB min.	23 dB
19) 5725 to 5850 MHz	15 dB min.	15 dB min.	22 dB
20) 6840 to 7020 MHz	12 dB min.	12 dB min.	21 dB
21) 5000 to 6000 MHz	10 dB min.	10 dB min.	22 dB
Ripple Deviation any 5.0MHz (1710 to 1755MHz)	1.0 dB max.	1.0 dB max.	0.2 dB
VSWR			
1) 1710 to 1755MHz(Tx)	2.0 max.	2.0 max.	1.7
2) 1710 to 1755MHz(ANT)	2.0 max.	2.0 max.	1.7
ANT Port Matching Impedance(nominal)	50Ω//2.7nH (Ideal)		
Tx Port Matching Impedance(nominal)	50Ω		
Rx Port Matching Impedance(nominal)	100Ω//15nH (Ideal)		
Input Signal Level	0.8W,10000hours(55°C)at WCDMA modulation		

* Integration calculation (dB_{INT}):

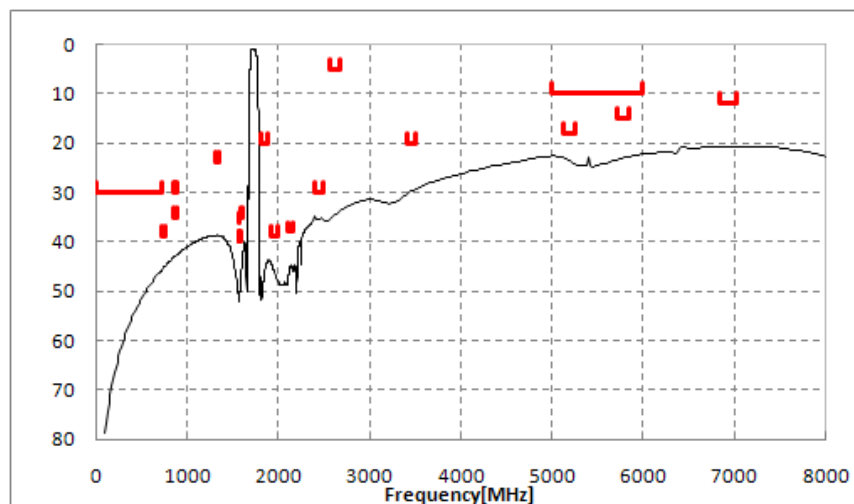
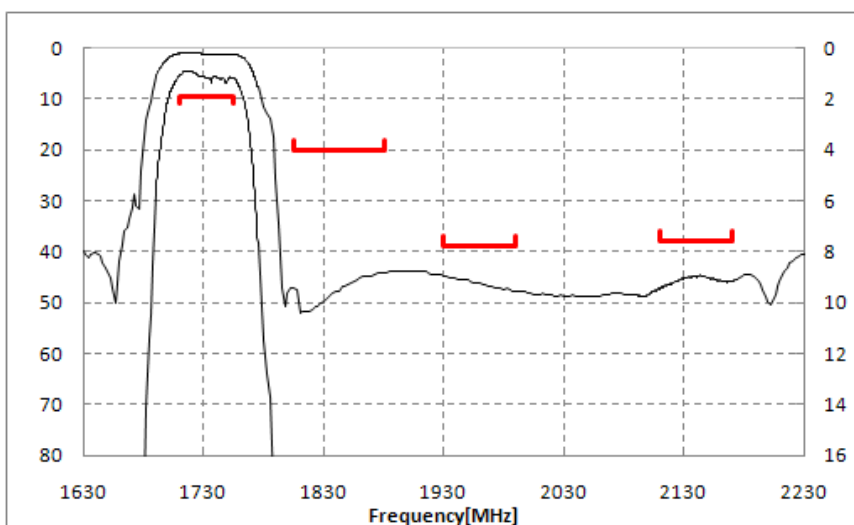
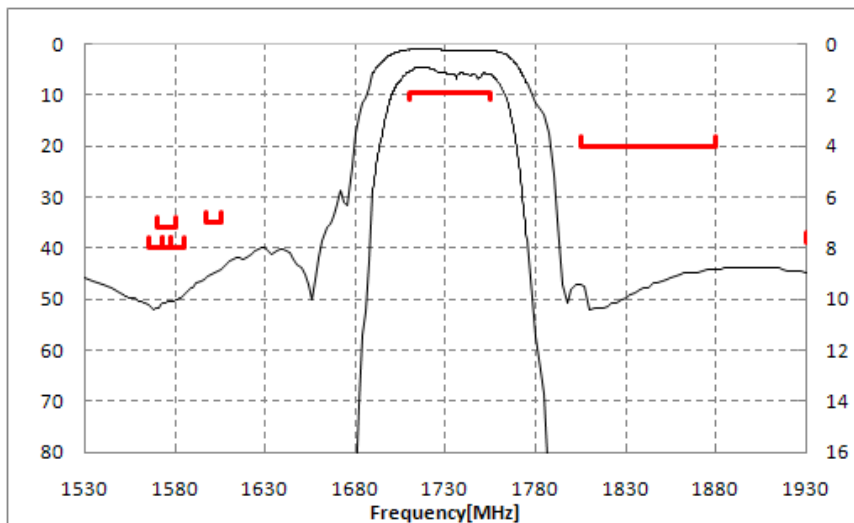
$$dB_{INT} = 10 \log \left[\frac{\sum_{n=2}^N \left[\frac{(10^{(f_{n-1}/f_n)^{100}} + 10^{(f_{n-1}/f_n)^{100}})}{2} \right] \times (F_n - F_{n-1})}{F_N - F_1} \right]$$

SAW DPX FOR UMTS BAND4

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[Tx → ANT]

Frequency Performance

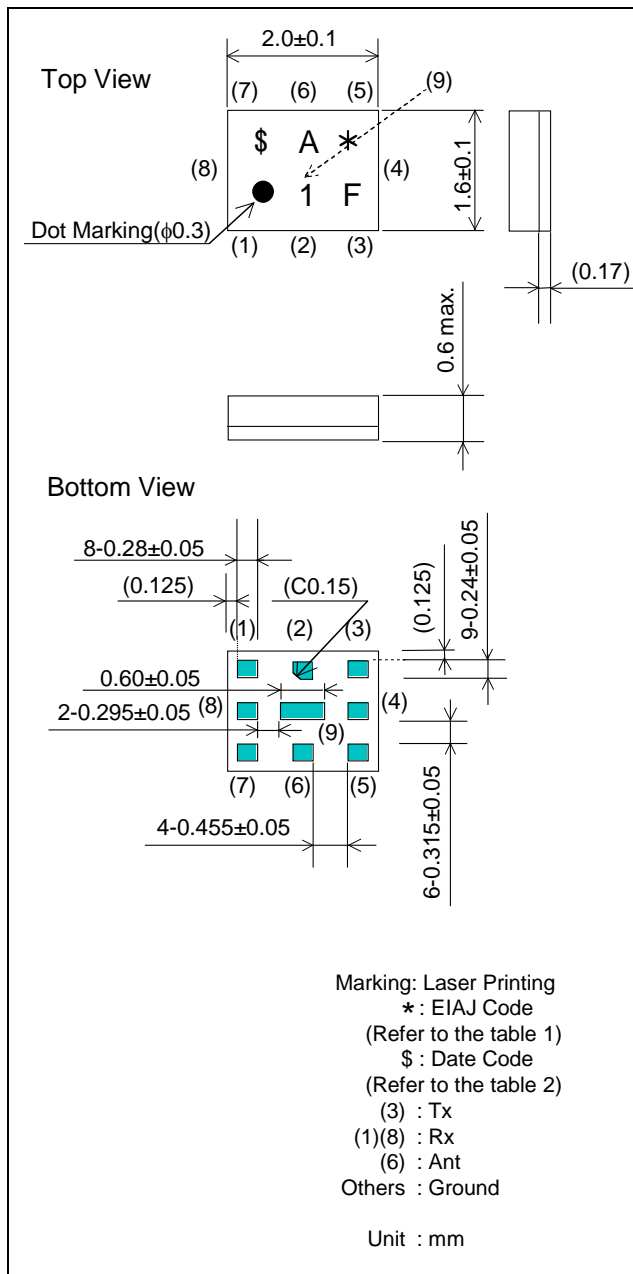


SAW DPX FOR UMTS BAND4

Murata part number :SAYRF1G73CA0F0A

[ANT → Rx]

Package Dimensions



Specification

Item	Specification		
	-30 to 85°C	25±2°C	typ.
Nominal Center Frequency(fc)	2132.5MHz		
Insertion Loss (2112.4 to 2152.6MHz)*	2.2 dB _{INT} max.	2.2 dB _{INT} max.	1.6 dB _{INT}
(2110 to 2155MHz)	2.3 dB max.	2.3 dB max.	1.6 dB
Absolute Attenuation			
1) 1 to 400 MHz	57 dB min.	57 dB min.	82 dB
2) 1 to 1610 MHz	35 dB min.	35 dB min.	52 dB
3) 1610 to 1710 MHz	25 dB min.	25 dB min.	34 dB
4) 703 to 718.3 MHz	40 dB min.	40 dB min.	66 dB
5) 1055 to 1077.5 MHz	40 dB min.	40 dB min.	58 dB
6) 1310 to 1355 MHz	43 dB min.	43 dB min.	58 dB
7) 1710 to 1755 MHz	45 dB min.	45 dB min.	54 dB
8) 1755 to 2025 MHz	15 dB min.	15 dB min.	37 dB
9) 1910 to 1955 MHz	30 dB min.	30 dB min.	37 dB
10) 2240 to 2400 MHz	15 dB min.	15 dB min.	31 dB
11) 2400 to 2500 MHz	30 dB min.	30 dB min.	41 dB
12) 2484 to 6475 MHz	30 dB min.	30 dB min.	41 dB
13) 3820 to 3910 MHz	35 dB min.	35 dB min.	47 dB
14) 4220 to 4310 MHz	30 dB min.	30 dB min.	45 dB
15) 5530 to 5665 MHz	30 dB min.	30 dB min.	44 dB
16) 6330 to 6465 MHz	30 dB min.	30 dB min.	41 dB
17) 6465 to 8000 MHz	20 dB min.	20 dB min.	39 dB
Ripple Deviation any 5.0MHz (2110 to 2155MHz)	1.0 dB max.	1.0 dB max.	0.1 dB
VSWR			
1) 2110 to 2155MHz (ANT)	2.0 max.	2.0 max.	1.5
2) 2110 to 2155MHz (Rx)	2.0 max.	2.0 max.	1.6
Amplitude Balance (2110 to 2155MHz)	±1.5dB max.	±1.5dB max.	+0.8 dB
Phase Balance (2110 to 2155MHz)	180±15deg. max.	180±15deg. max.	180.0±7.1deg.
ANT Port Matching Impedance(nominal)	50Ω//2.7nH (Ideal)		
Tx Port Matching Impedance(nominal)	50Ω		
Rx Port Matching Impedance(nominal)	100Ω//15nH (Ideal)		

* Integration calculation (dB_{INT}):

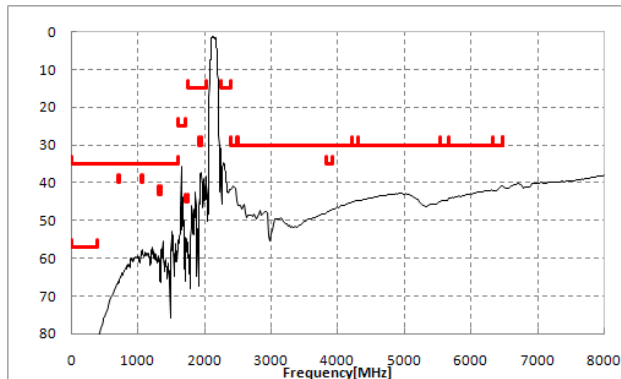
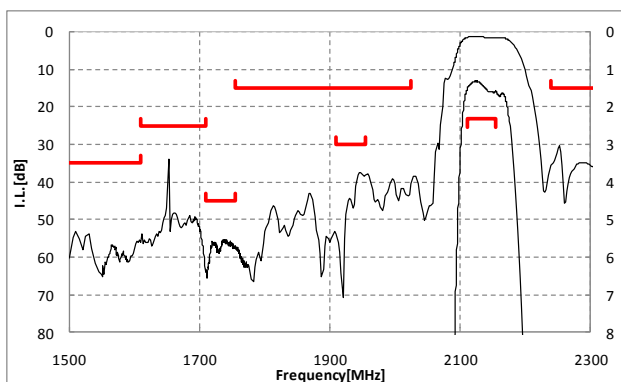
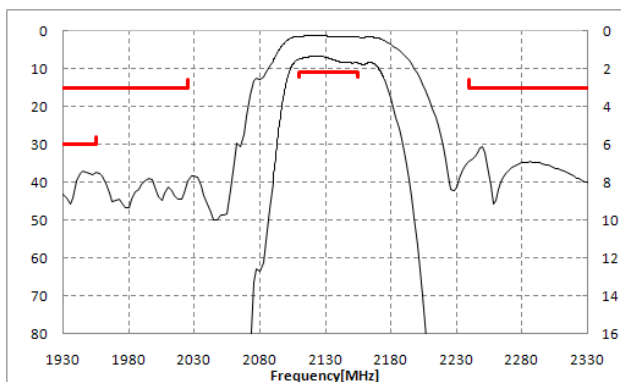
$$dB_{INT} = 10 \lg \left[\frac{\sum_{n=2}^M \left[\frac{(10^{-(f_{max} - f_{n-1})/10}) + 10^{-(f_{max} - f_n)/10})}{2} \times (F_n - F_{n-1}) \right]}{F_N - F_1} \right]$$

SAW DPX FOR UMTS BAND4

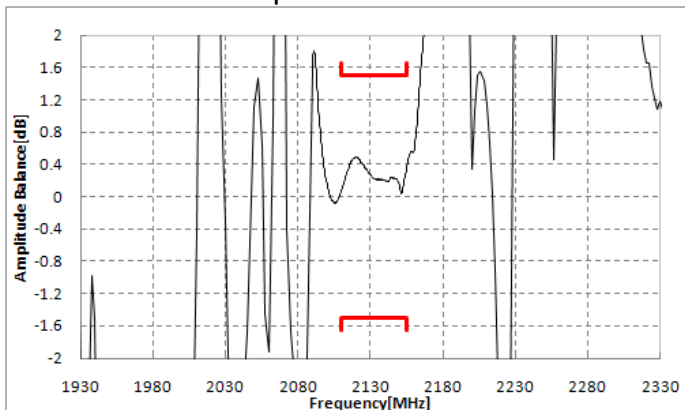
Murata part number :SAYRF1G73CA0F0A

[ANT → Rx]

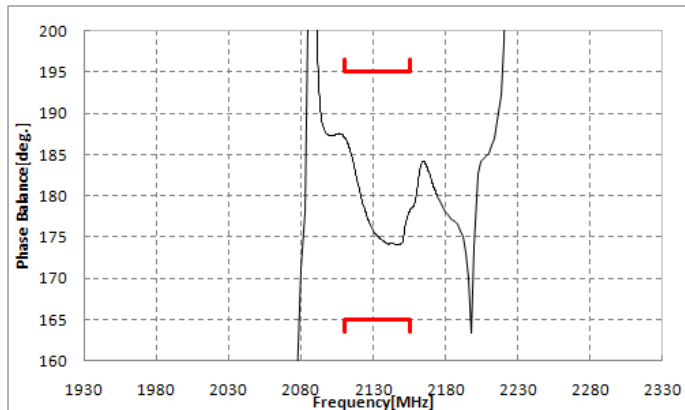
Frequency Performance



Amplitude balance



Phase balance

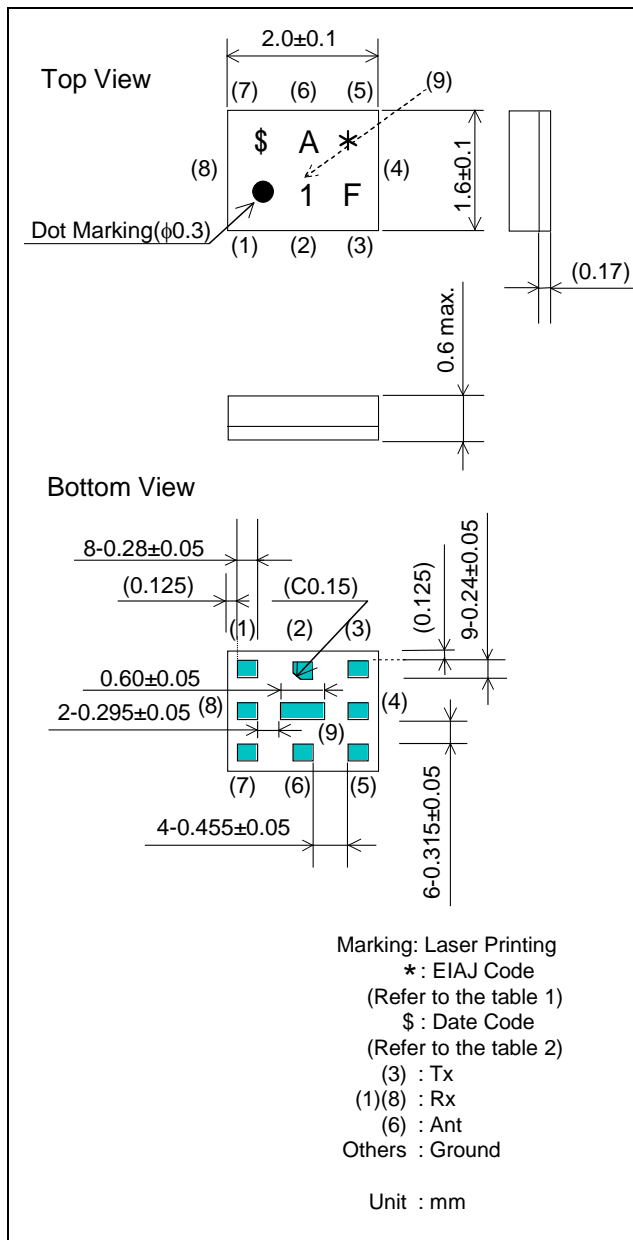


SAW DPX FOR UMTS BAND4

Murata part number :SAYRF1G73CA0F0A

[Tx → Rx]

Package Dimensions



Specification

Item	Specification		
	-30 to 85°C	25±2°C	typ.
Isolation(DMI)			
1) 1712.4 to 1752.6 MHz*	54 dB _{INT} min.	54 dB _{INT} min.	60 dB _{INT}
2) 2112.4 to 2152.6 MHz*	45 dB _{INT} min.	45 dB _{INT} min.	52 dB _{INT}
3) 1574 to 1577 MHz	40 dB min.	40 dB min.	71 dB
4) 3410 to 3520 MHz	20 dB min.	20 dB min.	61 dB
5) 5120 to 5275 MHz	20 dB min.	20 dB min.	56 dB
Isolation(CMI)			
1) 1712.4 to 1752.6 MHz*	47 dB _{INT} min.	47 dB _{INT} min.	52 dB _{INT}

* Integration calculation (dB_{INT}):

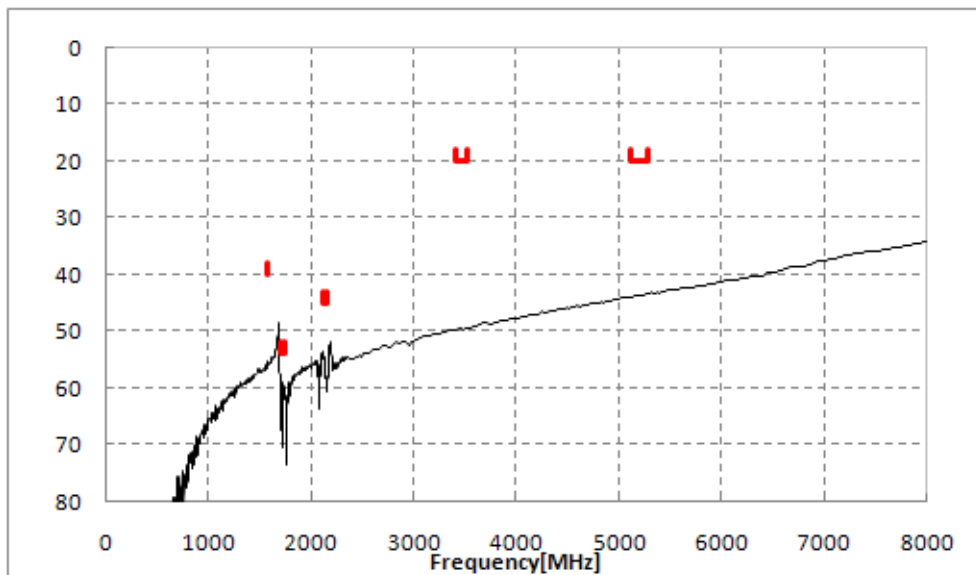
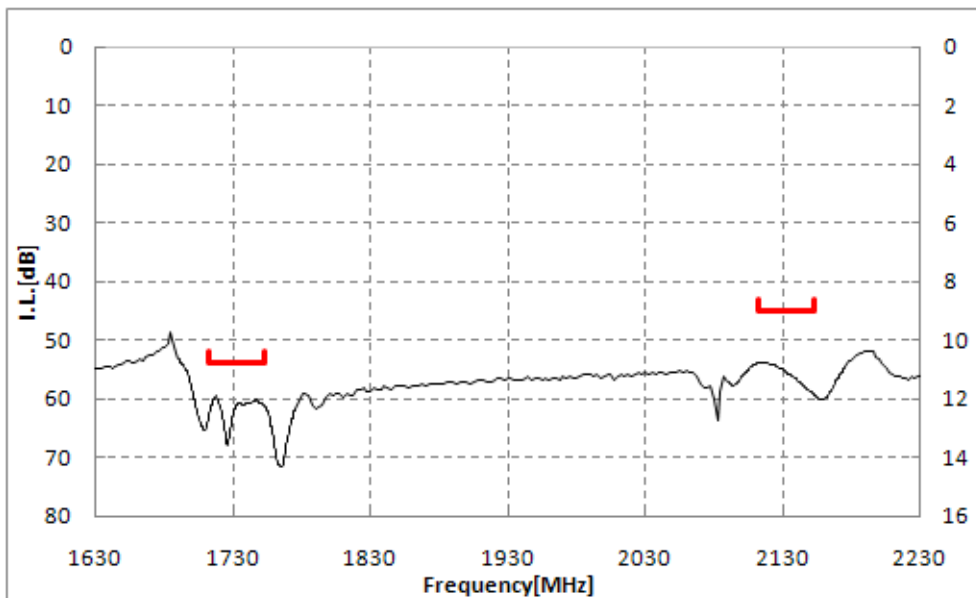
$$dB_{INT} = 10 \lg \left[\sum_{n=2}^N \frac{\left(10^{(f_{n-1} - f_n)/10} + 10^{(f_n - f_{n-1})/10} \right)}{2} \times (F_n - F_{n-1}) \right]$$

SAW DPX FOR UMTS BAND4

Murata part number :SAYRF1G73CA0F0A

[Tx → Rx]

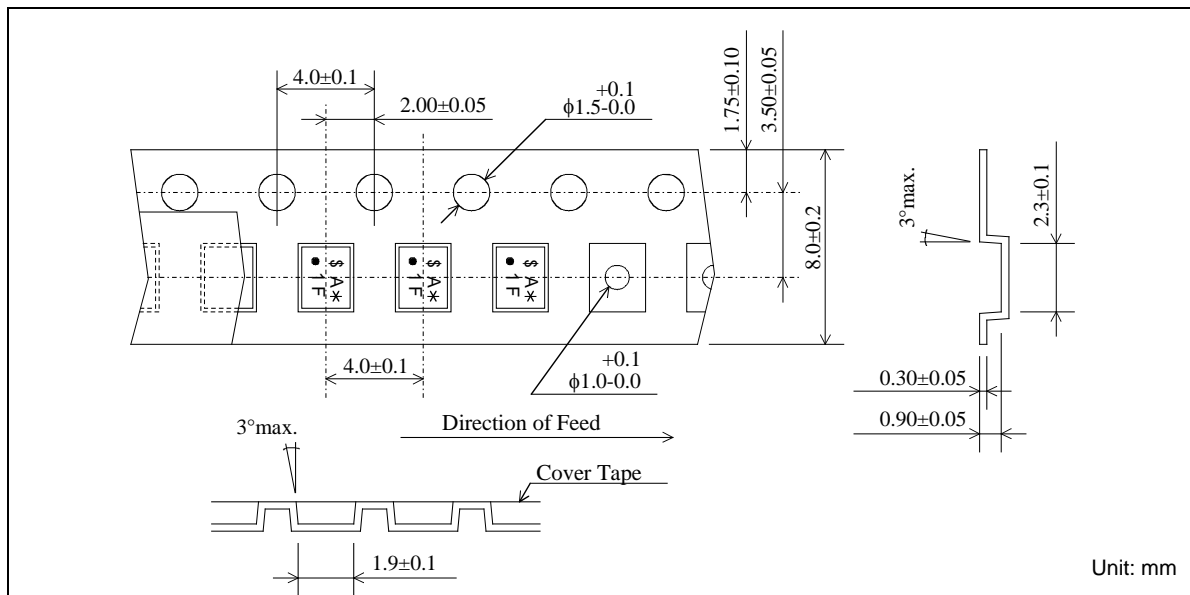
■ Frequency Performance



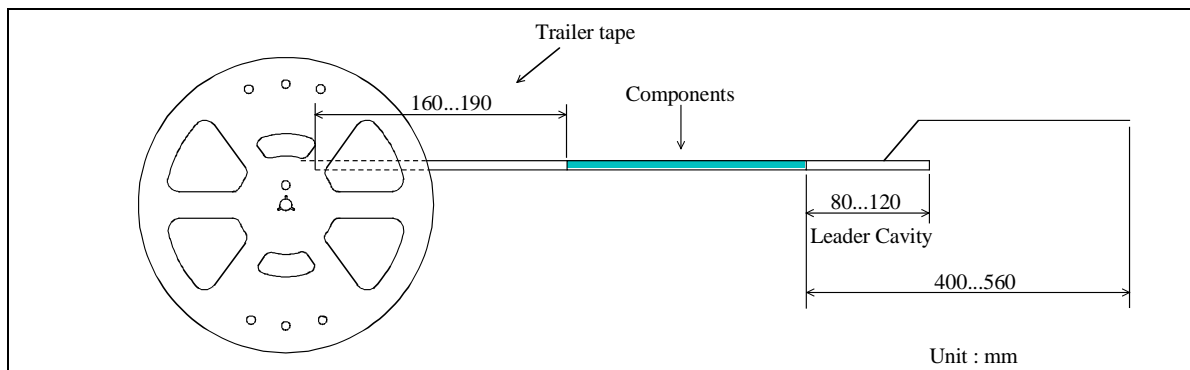
SAW DPX FOR UMTS BAND4

Murata part number :SAYRF1G73CA0F0A

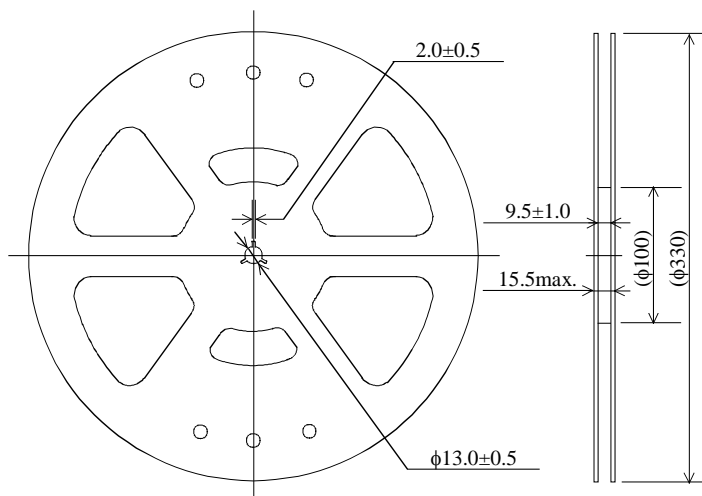
Dimensions of Carrier Tape



Dimensions of Tape



Dimensions of Reel



SAYRF1G73CA0F0AR00 ... 10000pcs/reel
SAYRF1G73CA0F0AR05 ... 5000pcs/reel

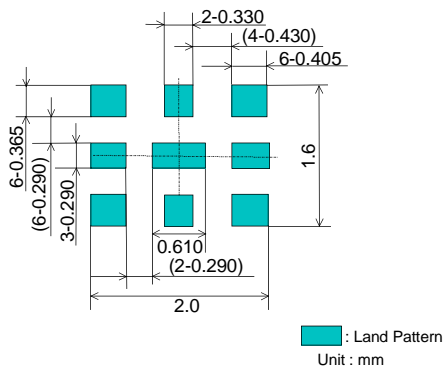
Unit: mm

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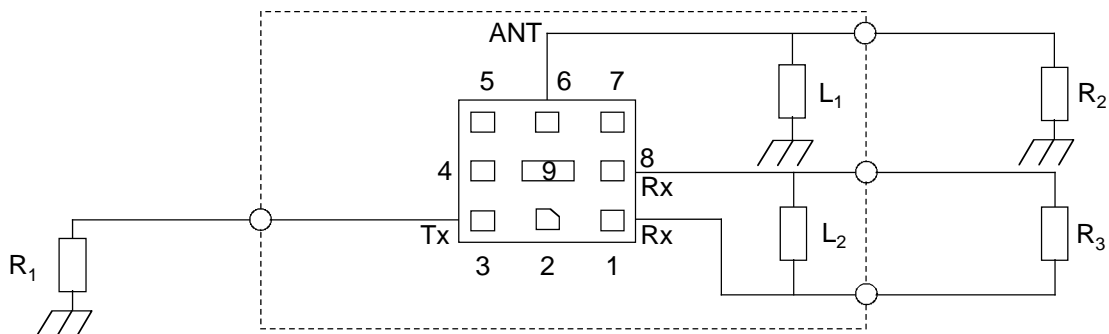
Recommended Land Pattern

Top View



Test Circuit

Bottom View



- R₁ : 50Ω
- R₂ : 50Ω
- R₃ : 100Ω
- L₁ : 2.7nH (ideal)
- L₂ : 15nH (ideal)

SAW DPX FOR UMTS BAND4

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■ RoHS Compliance

This component is compliant with RoHS directive.

This component was always RoHS compliant from the first date of manufacture.

• Caution - Limitation of Applications
 This product is intended for the following applications only; however, please do not use this product in these applications where defects might directly cause damage to a third party's life, body or property.

a. Mobile Telephone
 b. Cordless phone (except for Automotive use)
 c. PC (Including Notebook PC, Netbook PC, Tablet)
 d. Game
 e. Camera (except for Business/security use)
 f. Set Top Box
 g. Electronic dictionary
 h. Digital audio equipment

• This catalog is for reference only and not an official product specification document, therefore, please review and approve our official product specification before ordering this product.

■ Marking code

Table 1 * : EIAJ Code

This rule of code is applied repeatedly every four year.

2009	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
2013	A	B	C	D	E	F	G	H	J	K	L	M
2017												
2010	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
2014	N	P	Q	R	S	T	U	V	W	X	Y	Z
2018												
2011	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
2015	a	b	c̄	d	e	f	g	h	j	k	l	m
2019												
2012	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
2016	n	p	q	r	s	t	u	v	w	x	y	z
2020												

Table 2 \$: Date Code

date	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th		
code	A	B	C	D	E	F	G	H	J	K		
date	11th	12th	13th	14th	15th	16th	17th	18th	19th	20th		
code	L	M	N	P	Q	R	S	T	U	V		
date	21st	22nd	23rd	24th	25th	26th	27th	28th	29th	30th	31st	
code	W	X	Y	Z	a	b	c̄	d	e	f	g	

SAW DPX FOR UMTS BAND4

Murata part number :SAYRF1G73CA0F0A

■Important notice

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Please make sure that your product has been evaluated and confirmed from the aspect of the fitness for the specifications of our product when our product is mounted to your product.

All the items and parameters in this product specification/datasheet/catalog have been prescribed on the premise that our product is used for the purpose, under the condition and in the environment specified in this specification. You are requested not to use our product deviating from the condition and the environment specified in this specification. Please note that the only warranty that we provide regarding the products is its conformance to the specifications provided herein. Accordingly, we shall not be responsible for any defects in products or equipment incorporating such products, which are caused under the conditions other than those specified in this specification.

WE HEREBY DISCLAIMS ALL OTHER WARRANTIES REGARDING THE PRODUCTS, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, THAT THEY ARE DEFECT-FREE, OR AGAINST INFRINGEMENT OF INTELLECTUAL PROPERTY RIGHTS.

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- Aircraft equipment.
- Aerospace equipment
- Undersea equipment.
- Power plant control equipment - Medical equipment.
- Transportation equipment (vehicles, trains, ships, elevator, etc.).
- Traffic signal equipment.
- Disaster prevention / crime prevention equipment.
- Burning / explosion control equipment
- Application of similar complexity and/ or reliability requirements to the applications listed in the above.

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Please do not use our products, our technical information and other data provided by us for the purpose of developing of mass-destruction weapons and the purpose of military use.

Moreover, you must comply with "foreign exchange and foreign trade law", the "U.S. export administration regulations", etc.

Please note that we may discontinue the manufacture of our products, due to reasons such as end of supply of materials and/or components from our suppliers.

SAW DPX FOR UMTS BAND4

Murata part number :SAYRF1G73CA0F0A

Customer acknowledges that Murata will, if requested by you, conduct a failure analysis for defect or alleged defect of Products only at the level required for consumer grade Products, and thus such analysis may not always be available or be in accordance with your request (for example, in cases where the defect was caused by components in Products supplied to Murata from a third party).

The product shall not be used in any other application/model than that of claimed to Murata.

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We reject any liability or product warranty for engineering samples.

In particular we disclaim liability for damages caused by

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- deviation or lapse in function of engineering sample,
- improper use of engineering samples.

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