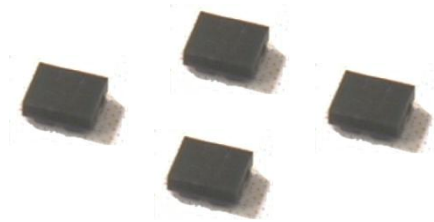
Data Sheet of SAW Components

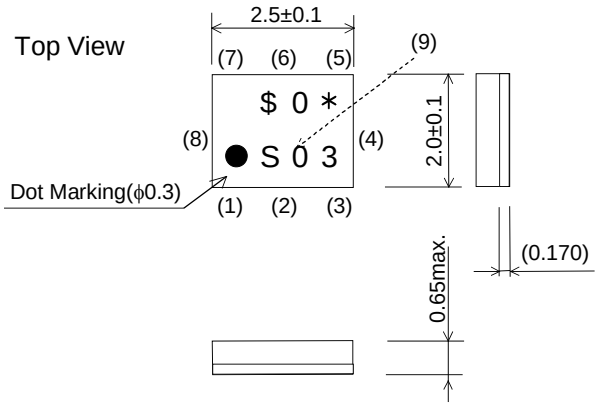


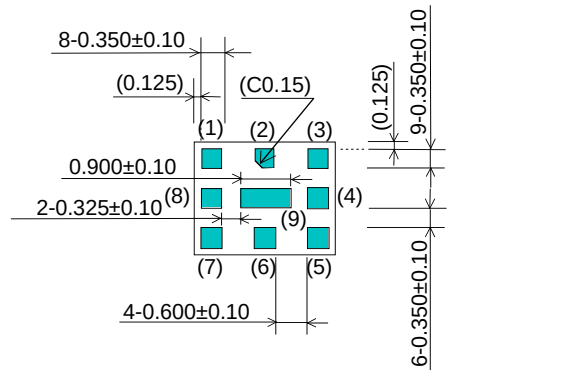
Note : Murata SAW Component is applicable for Cellular /Cordless phone (Terminal) relevant market only.
Please also read caution at the end of this document.

SAW DPX FOR UMTS BAND8

Murata part number :SAYRJ897MCA0B0A [Tx→ANT]

■ Package Dimensions





Marking: Laser Printing
∗ : EIAJ Code
(Refer to the table 1)
$: Date Code
(Refer to the table 2)
(3) : Tx
(1)(8) : Rx
(6) : Ant
Others : Ground

Unit : mm

■ Specification

Item	Specification		
	-20 to 85°C	25±2°C	typ.
Nominal Center Frequency(fc)	897.5MHz		
Insertion Loss (882.4 to 912.6MHz)*	2.4 dBINT max.	2.0 dBINT max.	1.6 dBINT
Absolute Attenuation			
1) 0.1 to 716 MHz	30 dB min.	30 dB min.	33 dB
2) 716 to 728 MHz	35 dB min.	35 dB min.	43 dB
3) 728 to 821 MHz	30 dB min.	30 dB min.	38 dB
4) 927.4 to 957.6 MHz*	44 dBINT min.	44 dBINT min.	51 dBINT
5) 1565 to 1607 MHz	40 dB min.	40 dB min.	45 dB
6) 1760 to 1830 MHz	25 dB min.	25 dB min.	40 dB
7) 1830 to 1880 MHz	12 dB min.	12 dB min.	40 dB
8) 2110 to 2170 MHz	11 dB min.	11 dB min.	36 dB
9) 2400 to 2500 MHz	30 dB min.	30 dB min.	36 dB
10) 2620 to 2640 MHz	12 dB min.	12 dB min.	33 dB
11) 2640 to 2745 MHz	25 dB min.	25 dB min.	33 dB
12) 3520 to 3660 MHz	11 dB min.	11 dB min.	15 dB
13) 4400 to 4575 MHz	11 dB min.	11 dB min.	15 dB
14) 5000 to 6000 MHz	9 dB min.	9 dB min.	13 dB
15) 6000 to 12750 MHz	4 dB min.	4 dB min.	8 dB
Ripple Deviation any 5.0MHz (882.4 to 912.6MHz)*	2.0 dBINT max.	1.3 dBINT max.	0.8 dBINT
VSWR			
882.4 to 912.6MHz(Tx)	2.1 max.	2.0 max.	1.5
882.4 to 912.6MHz(ANT)	2.1 max.	2.0 max.	1.5
ANT Port Matching Impedance(nominal)	50Ω//8.7nH		
Tx Port Matching Impedance(nominal)	50Ω		
Rx Port Matching Impedance(nominal)	100Ω		
Input Signal Level	0.8W,10000hours(55°C)at WCDMA modulation		

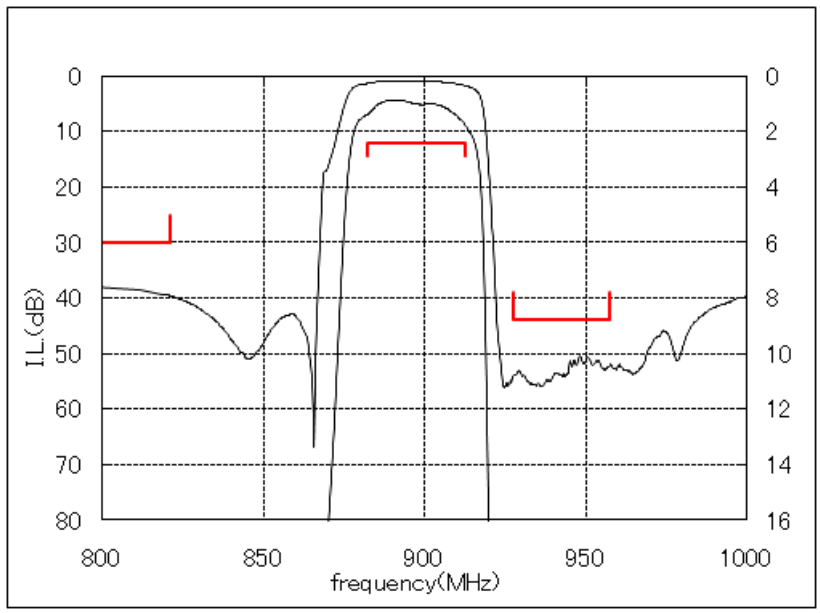
* Integration calculation (dB_{INT}):

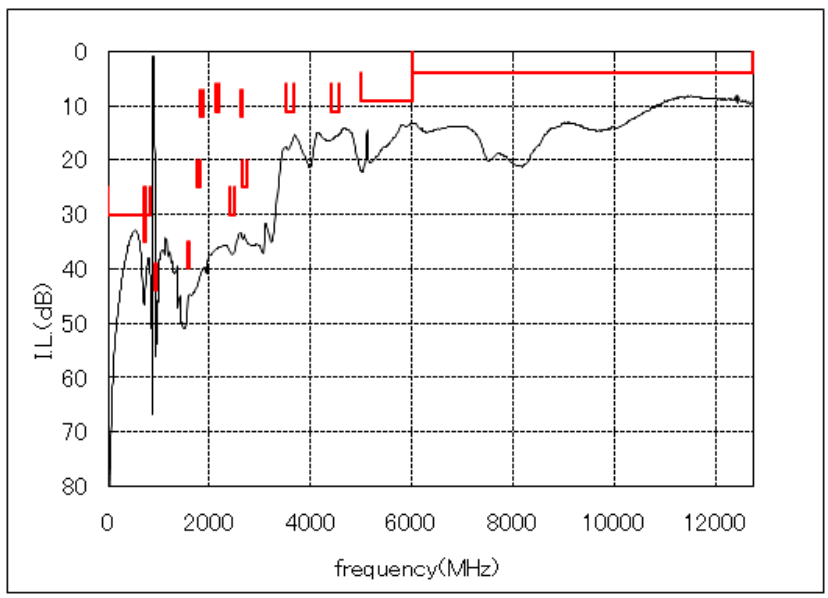
$$dB_{INT} = 10\log\left[\frac{\sum_{n=2}^{N}\left[\frac{\left(10^{loss(f_{n-1})/10)}+10^{loss(f_n)/10)}\right)}{2}\times(F_n - F_{n-1})\right]}{F_N \quad F_1}\right]$$

SAW DPX FOR UMTS BAND8

Murata part number :SAYRJ897MCA0B0A [Tx →ANT]

Frequency Performance

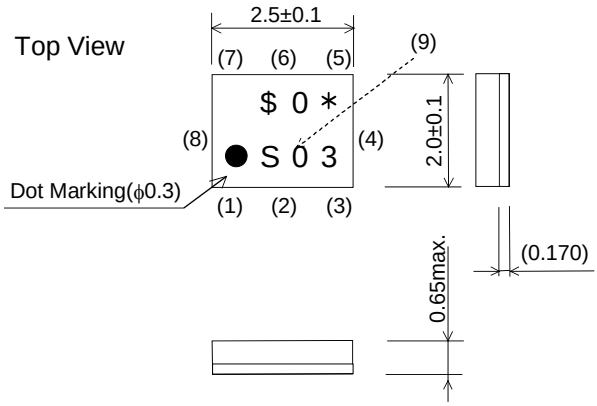


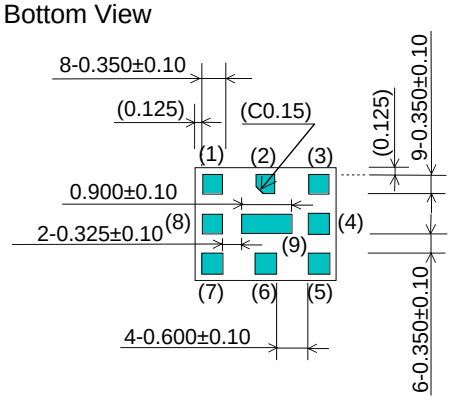


SAW DPX FOR UMTS BAND8

Murata part number :SAYRJ897MCA0B0A [ANT→Rx]

■ Package Dimensions





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(Refer to the table 1)
$: Date Code
(Refer to the table 2)
(3) : Tx
(1)(8) : Rx
(6) : Ant
Others : Ground

Unit : mm

■ Specification

Item	Specification		
	-20 to 85°C	25±2°C	typ.
Nominal Center Frequency(fc)	942.5MHz		
Insertion Loss (927.4 to 957.6MHz)* (925 to 960MHz)	 3.0 dBINT max. 3.3 dB max.	 2.8 dBINT max. 2.9 dB max.	 1.8 dBINT 2.2 dB
Absolute Attenuation			
1) 0.1 to 880 MHz	35 dB min.	35 dB min.	59 dB
2) 882.4 to 912.6 MHz*	48 dBINT min.	51 dBINT min.	57 dBINT
3) 1045 to 1710 MHz	25 dB min.	25 dB min.	58 dB
4) 1710 to 1805 MHz	30 dB min.	30 dB min.	65 dB
5) 1805 to 1875 MHz	55 dB min.	55 dB min.	66 dB
6) 1875 to 2400 MHz	35 dB min.	35 dB min.	63 dB
7) 2400 to 2500 MHz	40 dB min.	40 dB min.	63 dB
8) 2500 to 2790 MHz	43 dB min.	43 dB min.	58 dB
9) 2790 to 3700 MHz	35 dB min.	35 dB min.	50 dB
10) 3700 to 6720 MHz	14 dB min.	14 dB min.	21 dB
11) 6720 to 12750 MHz	10 dB min.	10 dB min.	15 dB
Ripple Deviation in any 5.0MHz (925 to 960MHz)	2.0 dB max.	1.3 dB max.	0.6 dB
Amplitude Balance (925 to 960MHz)	±1.0dB max.	±1.0dB max.	+0.4 dB
Phase Balance (925 to 960MHz)	180±10deg. max.	180±10deg. max.	180+4deg.
VSWR 925 to 960MHz(ANT) 925 to 960MHz(Rx)	 2.1 dB max. 2.1 dB max.	 2.0 dB max. 2.0 dB max.	 1.5 1.5
ANT Port Matching Impedance(nominal)	50Ω//8.7nH		
Tx Port Matching Impedance(nominal)	50Ω		
Rx Port Matching Impedance(nominal)	100Ω		

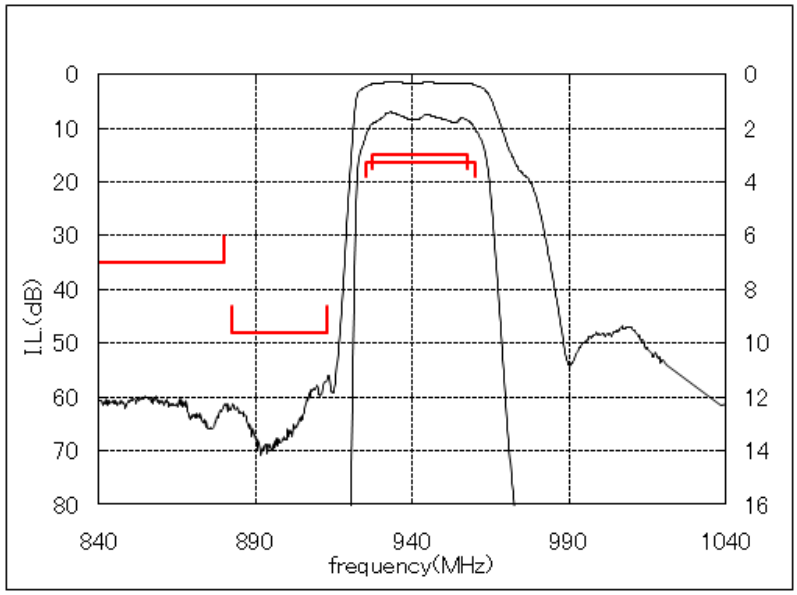
* Integration calculation (dB_{INT}):

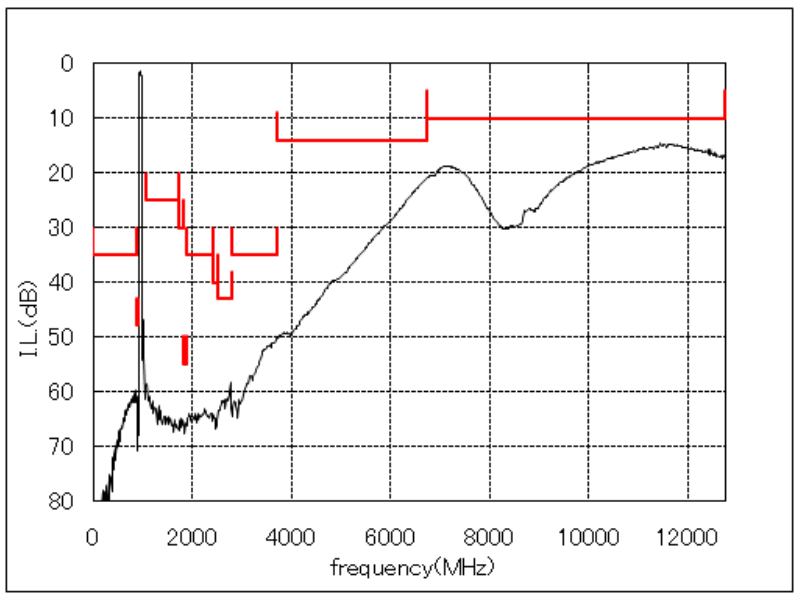
$$dB_{INT} = 10\log\left[\frac{\sum_{n=2}^{N}\left[\frac{\left(10^{loss(f_{n-1})/10}+10^{loss(f_n)/10}\right)}{2}\times(F_n-F_{n-1})\right]}{F_N \quad F_1}\right]$$

SAW DPX FOR UMTS BAND8

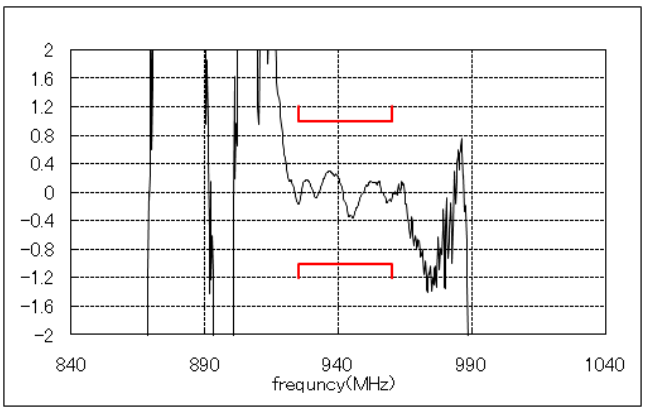
Murata part number :SAYRJ897MCA0B0A [ANT→Rx]

Frequency Performance

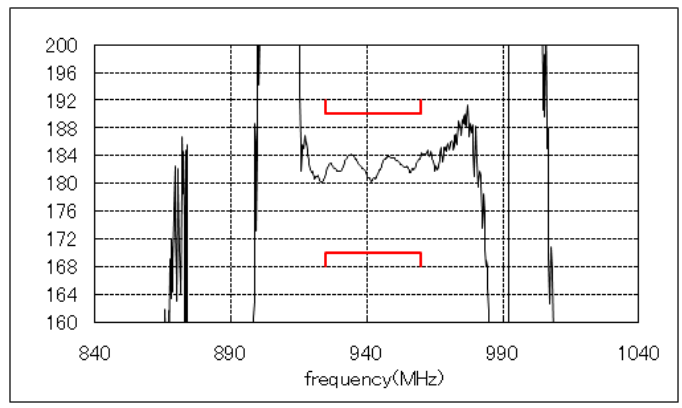




Amplitude balance



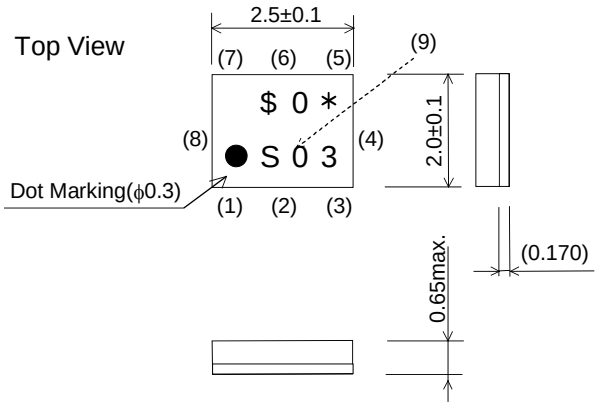
Phase balance

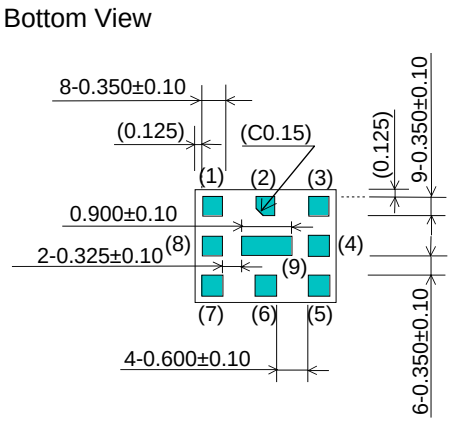


SAW DPX FOR UMTS BAND8

Murata part number :SAYRJ897MCA0B0A [Tx→Rx]

■ Package Dimensions





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(Refer to the table 1)
$: Date Code
(Refer to the table 2)
(3) : Tx
(1)(8) : Rx
(6) : Ant
Others : Ground

Unit : mm

■ Specification

Item	Specification		
	-20 to 85°C	25±2°C	typ.
Isolation			
1) 882.4 to 912.6 MHz*	57 dBINT min.	57 dBINT min.	66 dBINT
2) 927.4 to 957.6 MHz*	51 dBINT min.	51 dBINT min.	56 dBINT
3) 1760 to 1830 MHz	30 dB min.	30 dB min.	63 dB
Isolation(common mode)			
1) 882.4 to 912.6 MHz*	52 dBINT min.	52 dBINT min.	59 dBINT

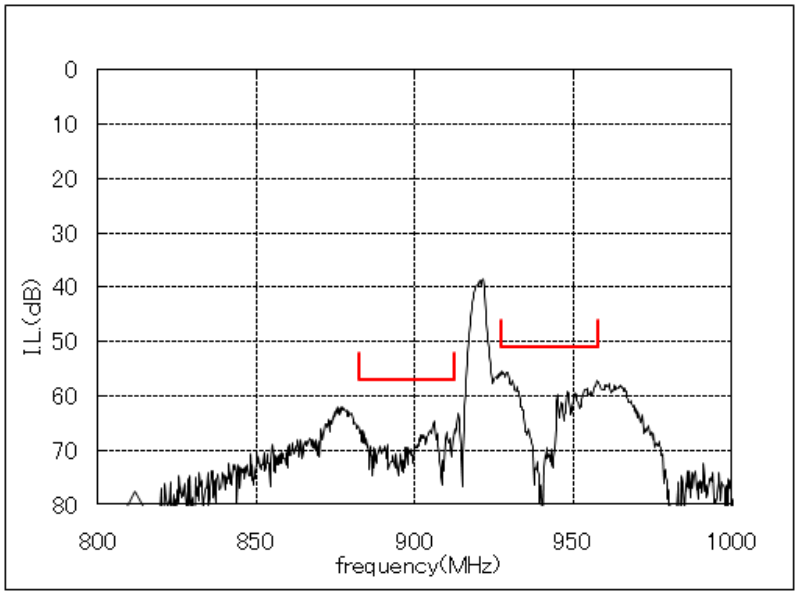
* Integration calculation (dB_{INT}):

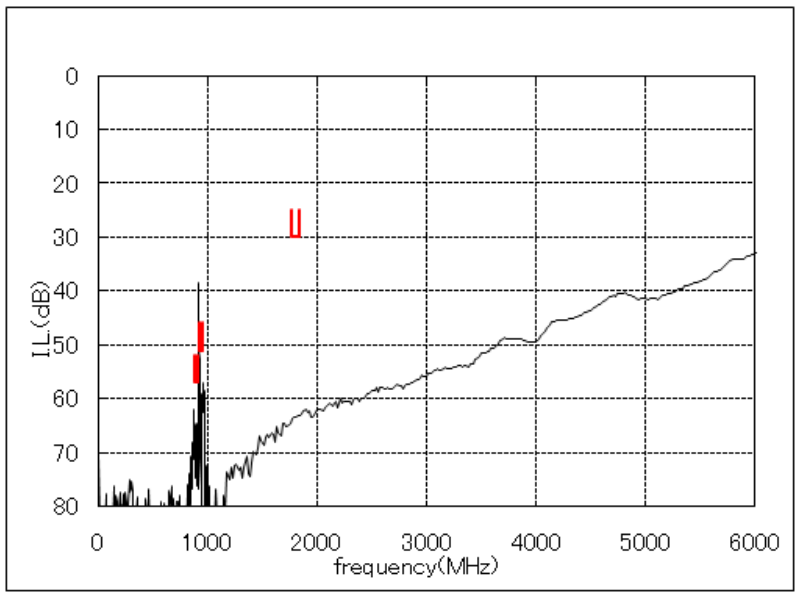
$$dB_{INT} = 10\log\left[\frac{\sum_{n=2}^{N}\left[\frac{\left(10^{(loss(f_{n-1}))/10)}+10^{(loss(f_n))/10)}\right)}{2}\times(F_n - F_{n-1})\right]}{F_N \quad F_1}$$

SAW DPX FOR UMTS BAND8

Murata part number :SAYRJ897MCA0B0A [Tx→Rx]

Frequency Performance

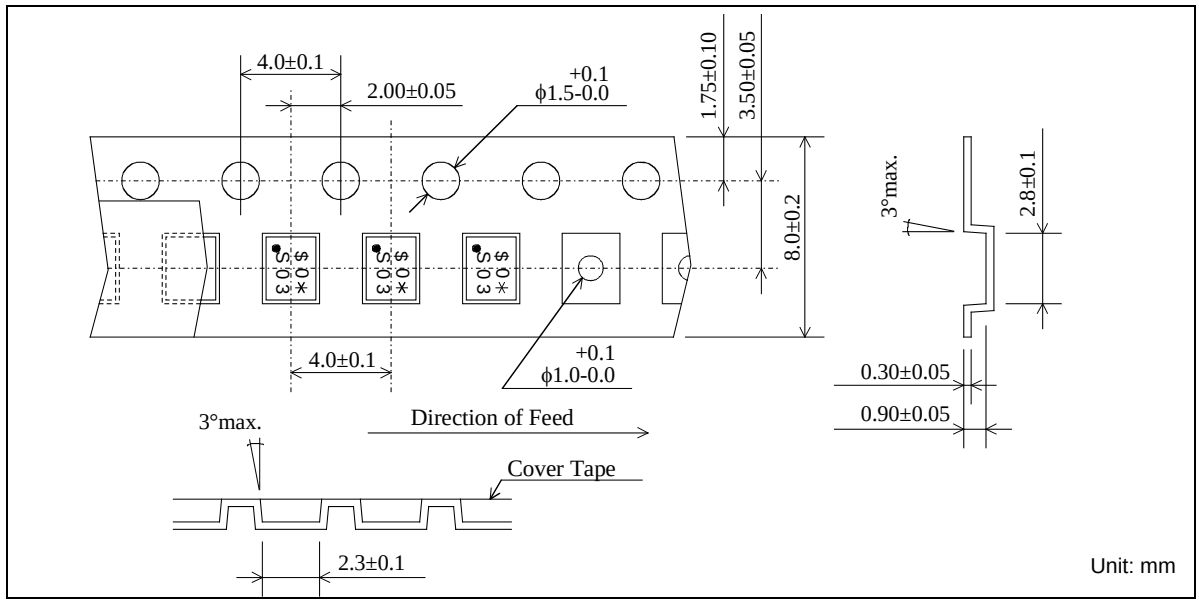




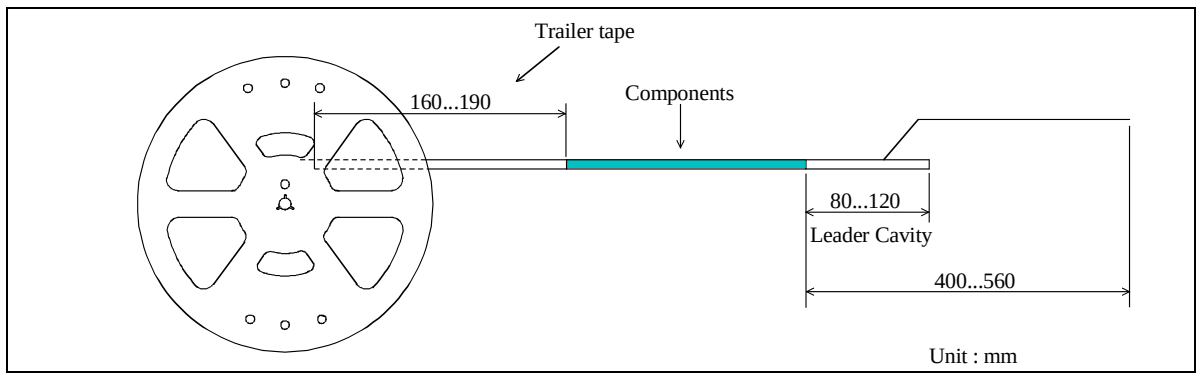
SAW DPX FOR UMTS BAND8

Murata part number :SAYRJ897MCA0B0A

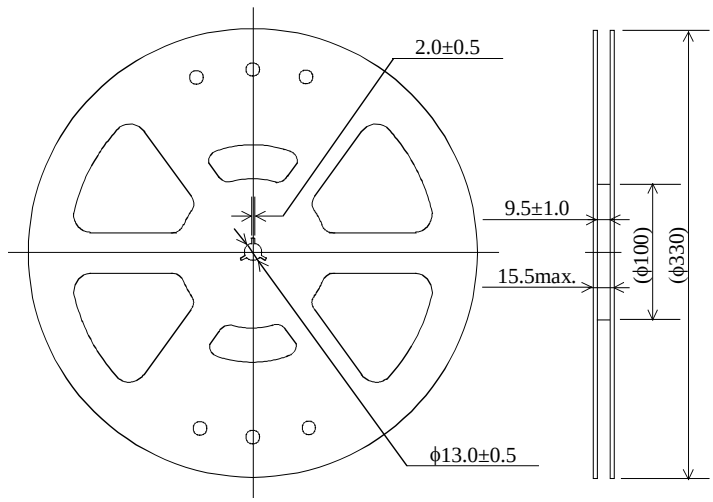
■ Dimensions of Carrier Tape



■ Dimensions of Tape



■ Dimensions of Reel



Unit: mm

SAYRJ897MCA0B0AR00 … 10000pcs/reel

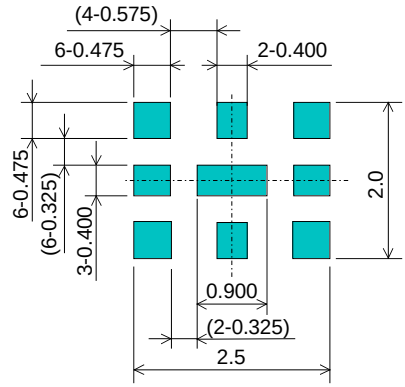
SAYRJ897MCA0B0AR05 … 5000pcs/reel

SAW DPX FOR UMTS BAND8

Murata part number :SAYRJ897MCA0B0A

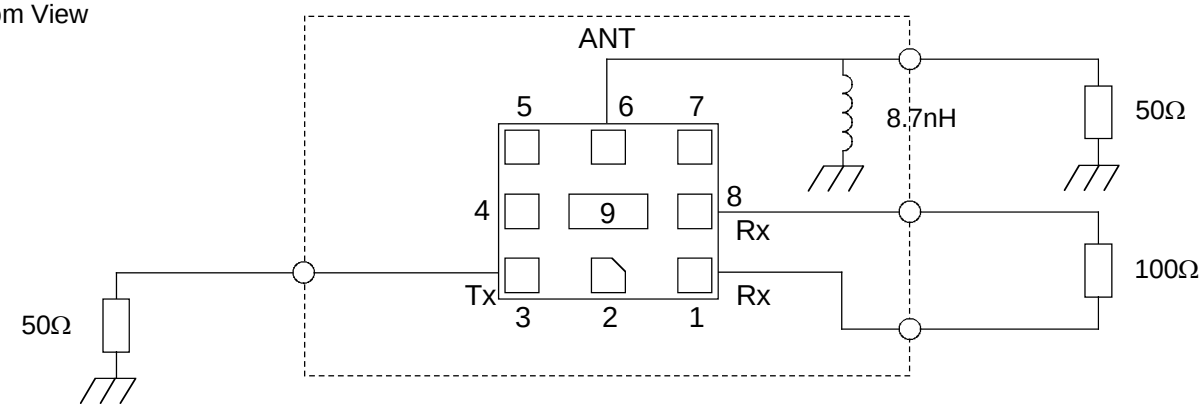
■ Recommended Land Pattern

Top View



■ Test Circuit

Bottom View



SAW DPX FOR UMTS BAND8

Murata part number :SAYRJ897MCA0B0A

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

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

Dec. 10, 2010