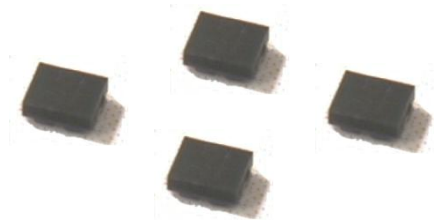
Data Sheet of SAW Components

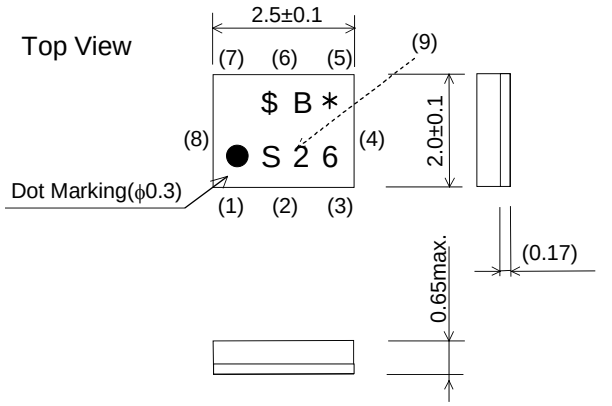


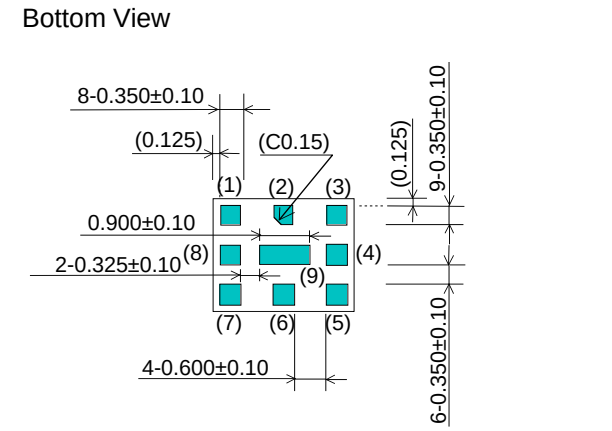
Note : Murata SAW Component is applicable for Cellular /Cordless phone (Terminal) relevant market only.
Please also read caution at the end of this document.

SAW DPX FOR UMTS BAND5

Murata part number :SAYRJ836MCA0F0A [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		
	-30 to 85°C	25±2°C	typ.
Nominal Center Frequency(fc)	836.5 MHz		
Insertion Loss			
1) 826.4 to 846.6MHz*	2.0 dB_{INT} max.	2.0 dB_{INT} max.	1.4 dB_{INT}
2) 824 to 849MHz	2.5 dB max.	2.5 dB max.	1.9 dB
3) 826.4 to 846.6MHz (-20 to 85℃)*	1.9 dB_{INT} max.	1.9 dB_{INT} max.	1.4 dB_{INT}
Absolute Attenuation			
1) 10 to 420 MHz	30 dB min.	30 dB min.	42 dB
2) 420 to 494 MHz	30 dB min.	30 dB min.	39 dB
3) 494 to 701 MHz	30 dB min.	30 dB min.	36 dB
4) 701 to 728 MHz	30 dB min.	30 dB min.	36 dB
5) 728 to 764 MHz	30 dB min.	30 dB min.	37 dB
6) 764 to 804 MHz	30 dB min.	30 dB min.	40 dB
7) 860 to 869 MHz	8 dB min.	8 dB min.	11 dB
8) 869 to 894 MHz	44 dB min.	44 dB min.	50 dB
9) 1565.42 to 1585.42 MHz	40 dB min.	40 dB min.	48 dB
10) 1597.55 to 1605.89 MHz	40 dB min.	40 dB min.	47 dB
11) 1638 to 1708 MHz	25 dB min.	25 dB min.	44 dB
12) 1844.9 to 1879.9 MHz	30 dB min.	30 dB min.	41 dB
13) 1884.5 to 1919.6 MHz	30 dB min.	30 dB min.	40 dB
14) 1930 to 1990 MHz	30 dB min.	30 dB min.	40 dB
15) 2110 to 2170 MHz	30 dB min.	30 dB min.	38 dB
16) 2400 to 2557 MHz	30 dB min.	30 dB min.	37 dB
17) 3286 to 3406 MHz	20 dB min.	20 dB min.	33 dB
18) 4110 to 4255 MHz	5 dB min.	5 dB min.	12 dB
19) 4934 to 5350 MHz	5 dB min.	5 dB min.	17 dB
20) 5725 to 5953 MHz	5 dB min.	5 dB min.	15 dB
21) 6582 to 6802 MHz	5 dB min.	5 dB min.	14 dB
22) 7406 to 12745 MHz	3 dB min.	3 dB min.	6 dB
Ripple Deviation any 5MHz (824 to 849 MHz)	1.4 dB max.	1.4 dB max.	0.8 dB
VSWR			
1) 824 to 849 MHz (Tx)	2.1 dB max.	1.9 dB max.	1.5
2) 824 to 849 MHz (Ant)	2.1 dB max.	1.9 dB max.	1.6
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℃) at W-CDMA /N-CDMA modulation		

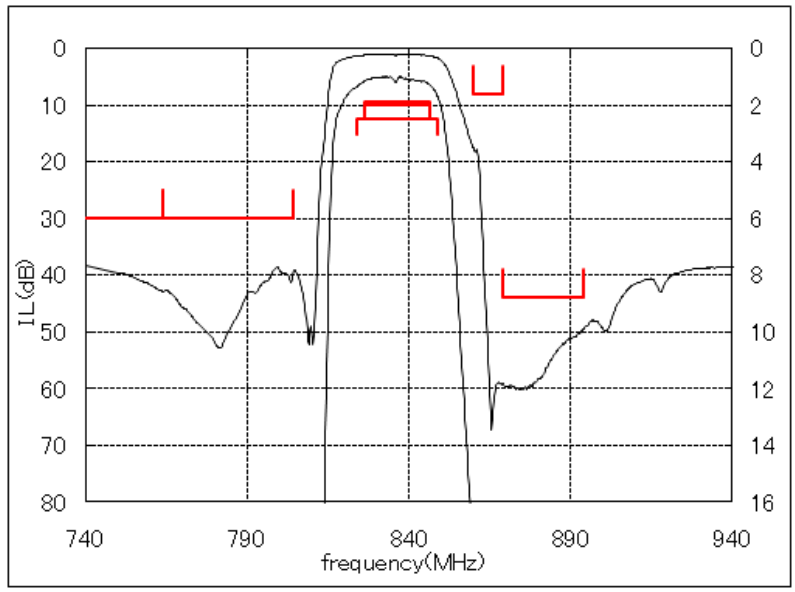
＊ Integration calculation (dB_{INT}):

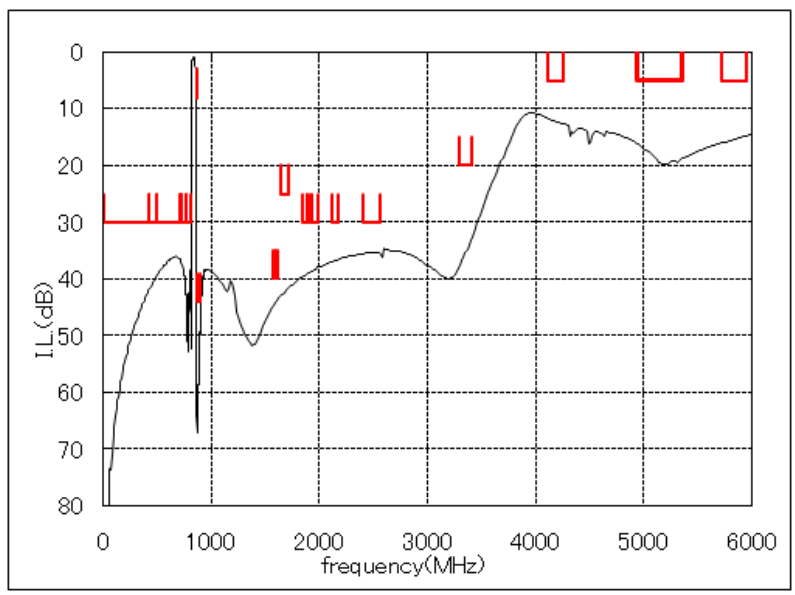
$$dB_{INT} = 10\log\left[\frac{\sum_{n=2}^{N}\left[\frac{\left(10^{(Loss(f_{n-1})/10)}+10^{(Loss(f_n)/10)}\right)}{2}\times(F_n-F_{n-1})\right]}{F_N-F_1}\right]$$

SAW DPX FOR UMTS BAND5

Murata part number :SAYRJ836MCA0F0A

Frequency Performance

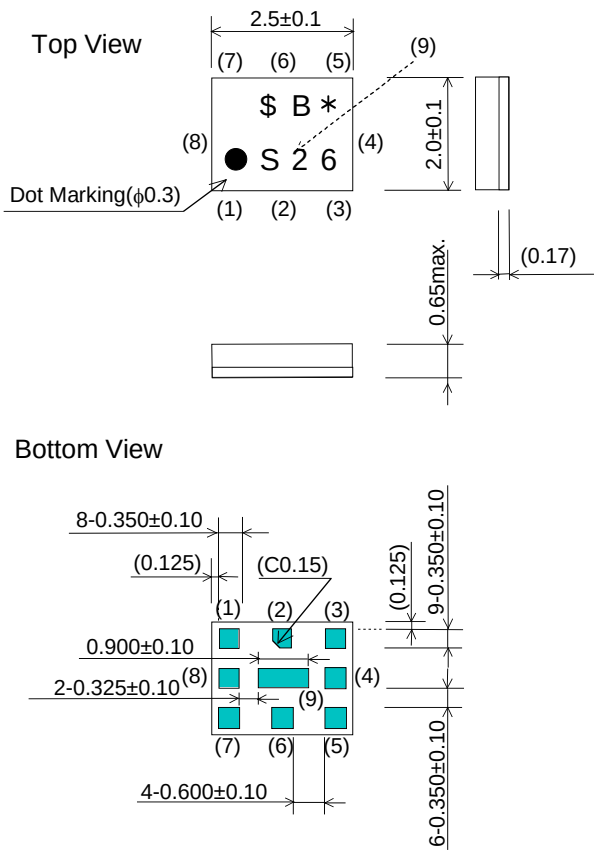




SAW DPX FOR UMTS BAND5

Murata part number :SAYRJ836MCA0F0A [ANT→Rx]

■ 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		
	-30 to 85°C	25±2 °C	typ.
Nominal Center Frequency(fc)	881.5 MHz		
Insertion Loss			
1) 871.4 to 891.6 MHz (-20 to 85℃)*	2.0 dB_{INT} max.	2.0 dB_{INT} max.	1.6 dB_{INT}
2) 869 to 894 MHz	2.2 dB max.	2.2 dB max.	2.0 dB
Absolute Attenuation			
1) 0.2 to 447 MHz	45 dB min.	45 dB min.	72 dB
2) 447 to 824 MHz	30 dB min.	30 dB min.	67 dB
3) 824 to 849 MHz	45 dB min.	45 dB min.	65 dB
4) 849 to 854 MHz	10 dB min.	10 dB min.	38 dB
5) 909 to 1000 MHz	12 dB min.	12 dB min.	15 dB
6) 1000 to 1850 MHz	28 dB min.	28 dB min.	60 dB
7) 1850 to 1920 MHz	40 dB min.	40 dB min.	71 dB
8) 1920 to 1980 MHz	35 dB min.	35 dB min.	71 dB
9) 1980 to 6000 MHz	25 dB min.	25 dB min.	35 dB
10) 6000 to 12750 MHz	10 dB min.	10 dB min.	20 dB
Amplitude Balance (869 to 894 MHz)	±0.8 dB max.	±0.8 dB max.	+0.4 dB
Phase Balance (869 to 894 MHz)	180±8deg.max.	180±8deg.max.	180+3 deg.
Ripple Deviation any 5MHz (869 to 894 MHz)	1.2 dB max.	1.2 dB max.	0.6 dB
VSWR			
1) 869 to 894 MHz (ANT)	2.0 dB max.	1.9 dB max.	1.6
2) 869 to 894 MHz (Rx)	2.0 dB max.	1.9 dB max.	1.8
ANT Port Matching Impedance (nominal)	50Ω//8.7nH		
Tx Port Matching Impedance (nominal)	50Ω		
Rx Port Matching Impedance (nominal)	100Ω		

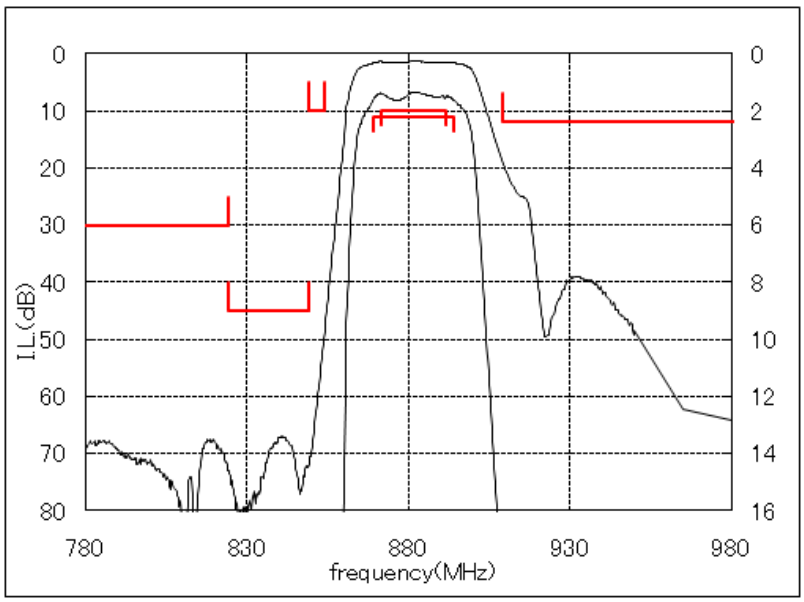
＊ Integration calculation (dB_{INT}):

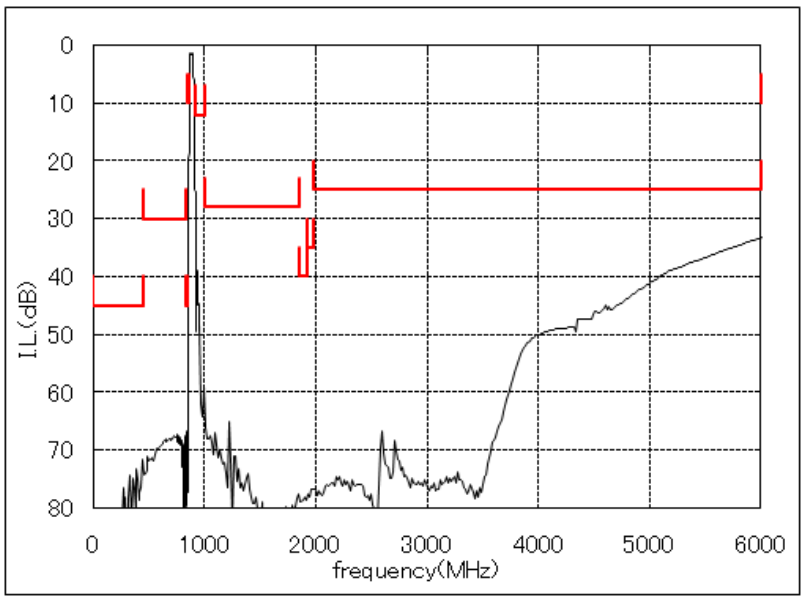
$$dB_{INT} = 10\log\left[\frac{\sum_{n=2}^{N}\left[\frac{\left(10^{(Loss(f_{n-1})/10)}+10^{(Loss(f_n)/10)}\right)}{2}\times(F_n-F_{n-1})\right]}{F_N-F_1}\right]$$

SAW DPX FOR UMTS BAND5

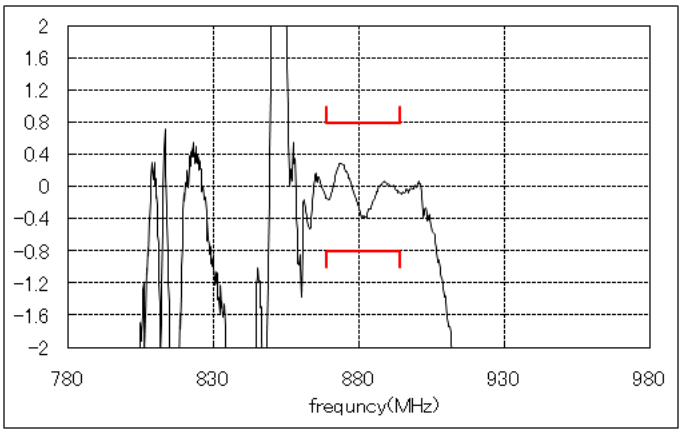
Murata part number :SAYRJ836MCA0F0A

■ Frequency Performance

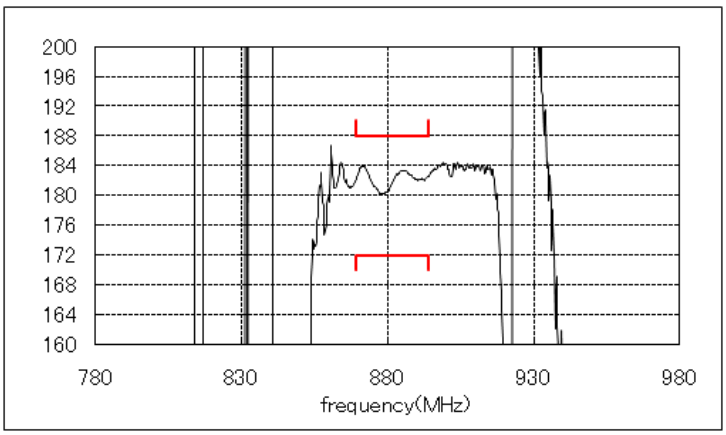




Amplitude balance



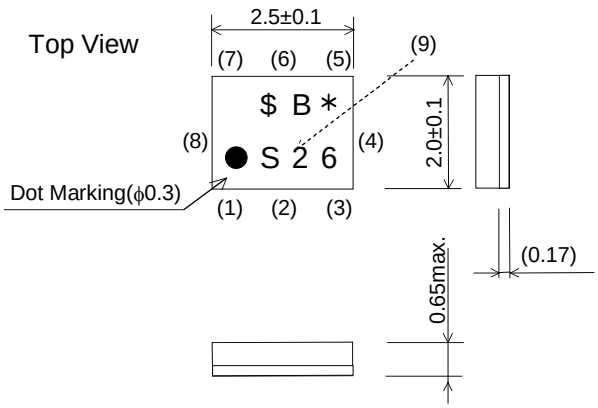
Phase balance



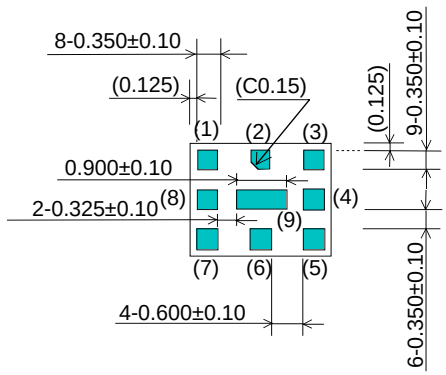
SAW DPX FOR UMTS BAND5

Murata part number :SAYRJ836MCA0F0A [Tx→Rx]

■ Package Dimensions



Bottom View



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		
	-30 to 85°C	25±2 °C	typ.
Isolation			
1) 824 to 849 MHz	55 dB min.	55 dB min	66 dB
2) 826.4 to 846.6 MHz (-20 to 85℃)*	55 dB_{INT} min.	55 dB_{INT} min.	69 dB_{INT}
3) 869 to 894 MHz	50 dB min.	50 dB min.	52 dB
4) 871.4 to 891.6 MHz (-20 to 85℃)*	50 dB_{INT} min.	50 dB_{INT} min.	53 dB_{INT}
5) 1574 to 1577 MHz	40 dB min.	40 dB min.	63 dB
6) 1638 to 1708 MHz	20 dB min.	20 dB min.	62 dB
7) 2462 to 2557 MHz	20 dB min.	20 dB min.	55 dB
Isolation (CMI)			
1) 824 to 849 MHz	55 dB min.	55 dB min.	58 dB
2) 826.4 to 846.6 MHz (-20 to 85℃)*	55 dB_{INT} min.	55 dB_{INT} min.	58 dB_{INT}

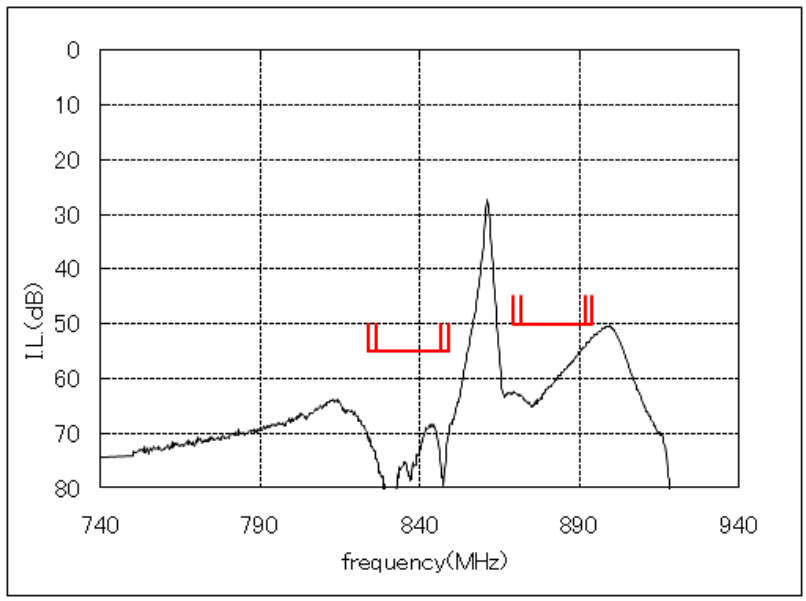
＊ Integration calculation (dB_{INT}):

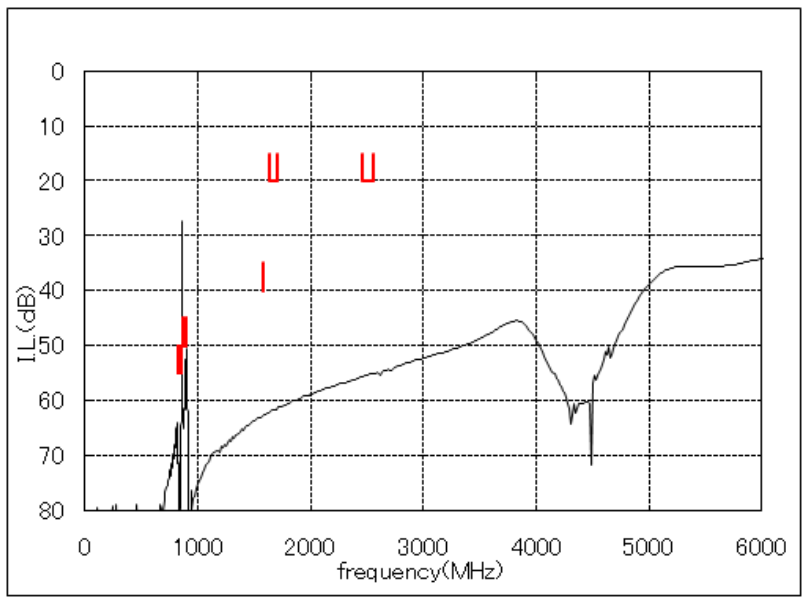
$$dB_{INT} = 10\log\left[\frac{\sum_{n=2}^{N}\left[\frac{\left(10^{(Loss(f_{n-1})/10)}+10^{(Loss(f_n)/10)}\right)}{2}\times\left(F_n-F_{n-1}\right)\right]}{F_N-F_1}\right]$$

SAW DPX FOR UMTS BAND5

Murata part number :SAYRJ836MCA0F0A

Frequency Performance

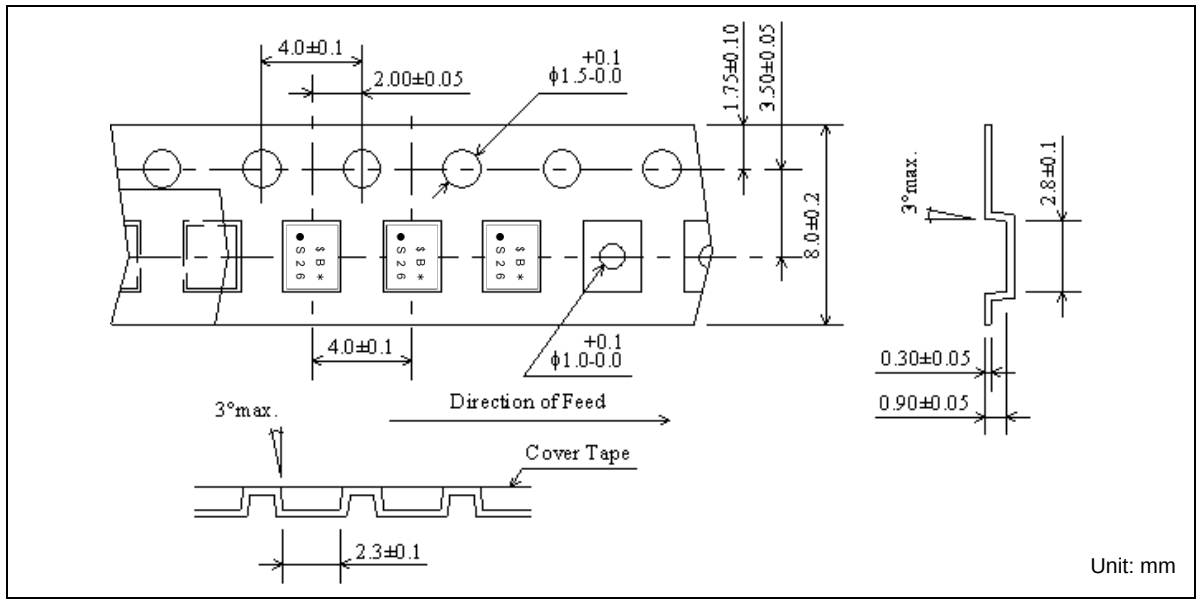




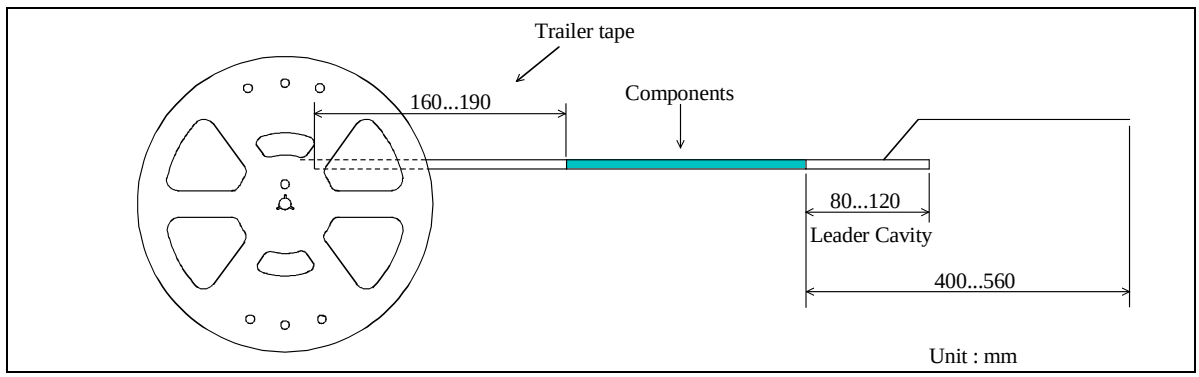
SAW DPX FOR UMTS BAND5

Murata part number :SAYRJ836MCA0F0A

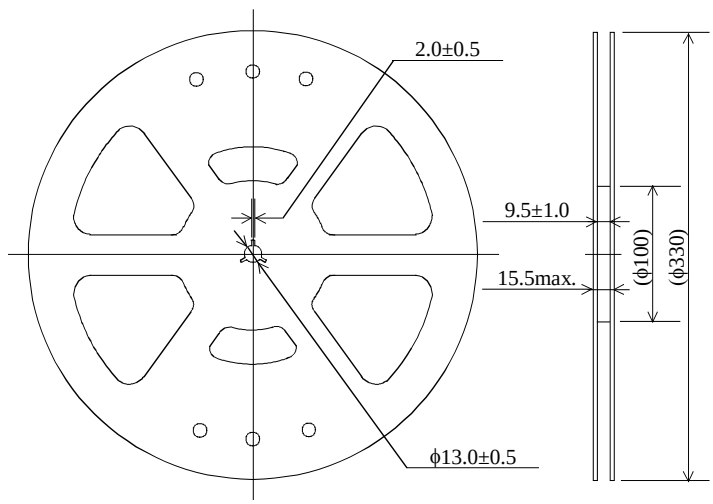
■ Dimensions of Carrier Tape



■ Dimensions of Tape



■ Dimensions of Reel



Unit: mm

SAYRJ836MCA0F0AR00 … 10000pcs/reel

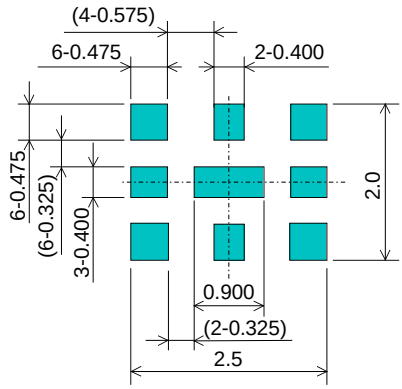
SAYRJ836MCA0F0AR05 … 5000pcs/reel

SAW DPX FOR UMTS BAND5

Murata part number :SAYRJ836MCA0F0A

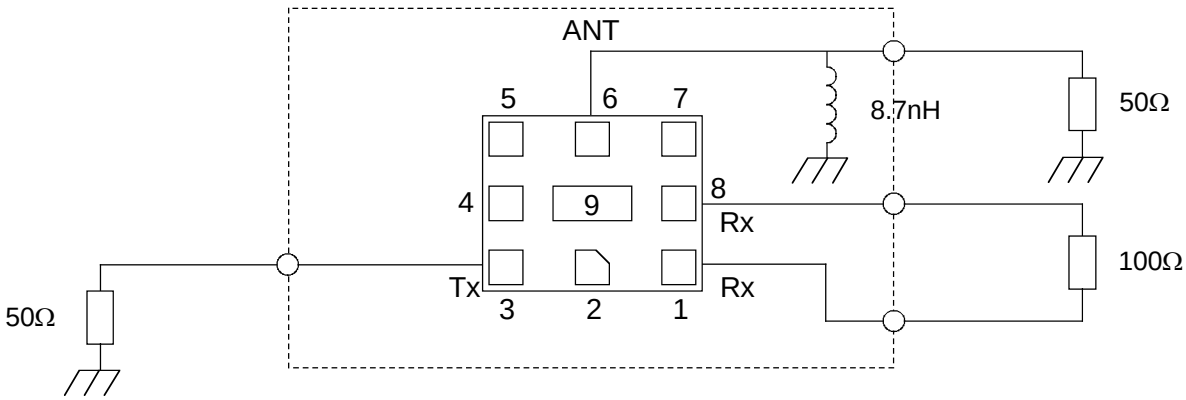
■ Recommended Land Pattern

Top View



■ Test Circuit

Bottom View



SAW DPX FOR UMTS BAND5

Murata part number :SAYRJ836MCA0F0A

■ 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