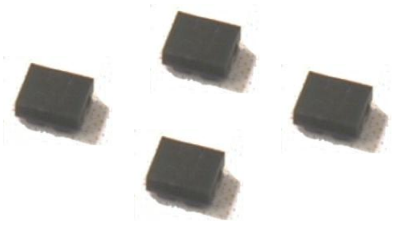
Datasheet of SAW Device

SAW Duplexer

for Band8 / Unbalanced / LR /2016

Murata PN: SAYFH897MGC0F0A

Preliminary



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

Preliminary

SAYFH897MGC0F0A （Band8 / Unbalanced / LR / 2016）

Revision No.	Date	Discription
SAYFH897MGC0F0A_rev. A	Oct-12-2012	■ Initial Release

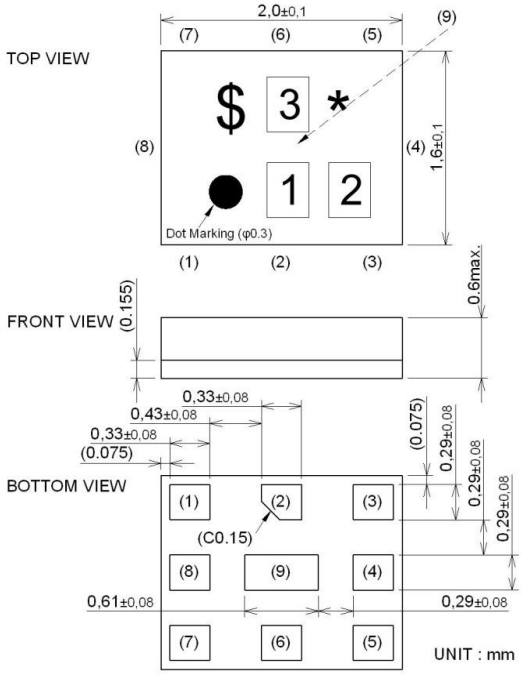
- Operating temperature : -30 to +85 deg.C
- Storage temperature : -40 to +85 deg.C
- Input Power : +29 dBm 35000 h 55 deg.C
- D.C. Volatage between the terminals : 3V(25±2deg.C)
- Minimum Resistance betweem the terminals : 10Mohm
- RoHS compliance : Yes

SAYFH897MGC0F0A （Band8 / Unbalanced / LR / 2016）

Package Dimensions & Recommended Land Pattern

unit: mm

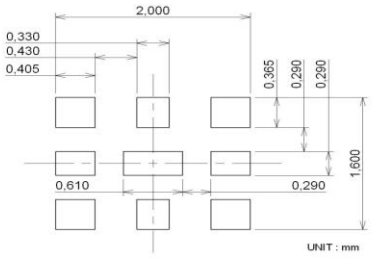
Dimensions



Marking : Laser Printing
* : Month code(Refer to the table A)
$: Date code(Refer to the table B)
1 : 2
2 : X
3 : A

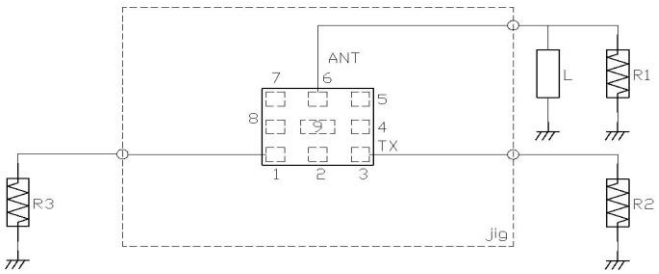
Terminal Number
(6) : ANT.
(3) : TX
(1) : RX
Others :GND.

Land Pattern



Measurement Circuit (Top View)

R1 : 50 ohm
R2 : 50 ohm
R3 : 50 ohm
L : 7.5 nH(Ideal inductor)



SAYFH897MGC0F0A （Band8 / Unbalanced / LR / 2016）

Electrical Characteristic < TX→ANT. >

Matching Impedance (nominal)

- :ANT. Port : 50 ohm // 7.5 nH(Ideal inductor)
- :TX Port : 50 ohm
- :RX Port : 50 ohm

TX → ANT.				Characteristics (-30 to +85 deg.C)			Unit	Note
				min.	typ.	max.		
Center Frequency					897.5		MHz	
Insertion Loss	882.4	…	912.6 MHz		1.5	2.5	dB_{INT}	Any 3.84MHz
	882.4	…	912.6 MHz		1.5	2.0	dB_{INT}	+23 to +27deg.C, Any 3.84MHz
	880.	…	915. MHz		1.9	3.3	dB	
	880.	…	915. MHz		1.9	2.5	dB	+23 to +27deg.C
Ripple deviation	880.	…	915. MHz		1.4	2.5	dB	
	880.	…	915. MHz		1.4	1.8	dB	+23 to +27deg.C
	880.	…	915. MHz		0.7	2.1	dB	Any 3.84MHz
	880.	…	915. MHz		0.7	1.5	dB	+23 to +27deg.C, Any 3.84MHz
VSWR	880.	…	915. MHz		1.5	2.0		ANT.
	880.	…	915. MHz		1.5	1.9		+23 to +27deg.C, ANT.
	880.	…	915. MHz		1.7	2.2		TX
	880.	…	915. MHz		1.7	2.0		+23 to +27deg.C, TX
Absolute Attenuation	10.	…	716. MHz	30	38		dB	
	716.	…	728. MHz	35	38		dB	
	728.	…	793. MHz	30	38		dB	
	927.4	…	957.6 MHz	44	54		dB_{INT}	Any 3.84MHz
	1559.	…	1563. MHz	45	50		dB	
	1565.42	…	1573.37 MHz	45	49		dB	
	1573.37	…	1577.47 MHz	45	49		dB	
	1577.47	…	1585.42 MHz	45	49		dB	
	1597.55	…	1605.89 MHz	45	50		dB	
	1760.	…	1830. MHz	38	47		dB	
	1830.	…	1880. MHz	27	47		dB	
	2110.	…	2170. MHz	27	44		dB	
	2400.	…	2500. MHz	35	44		dB	
	2620.	…	2745. MHz	30	38		dB	
	3520.	…	3660. MHz	5	11		dB	
	4400.	…	4575. MHz	4	8		dB	
	5150.	…	5490. MHz	5	8		dB	
	5725.	…	5850. MHz	12	17		dB	
	6160.	…	6405. MHz	15	26		dB	
	7040.	…	7320. MHz	12	26		dB	
	7920.	…	8235. MHz	12	18		dB	
	8800.	…	9150. MHz	8	14		dB	
	9680.	…	10065. MHz	7	12		dB	
	10560.	…	10980. MHz	2	8		dB	
	11440.	…	11895. MHz	2	7		dB	
	12320.	…	12750. MHz	2	7		dB	

* Typical value at 25±2deg.C

SAYFH897MGC0F0A （Band8 / Unbalanced / LR / 2016）

Electrical Characteristic　< ANT.→RX. >

Matching Impedance (nominal)

- :ANT. Port　: 50 ohm // 7.5 nH(Ideal inductor)
- :TX Port　: 50 ohm
- :RX Port　: 50 ohm

ANT. → RX			Characteristics (-30 to +85 deg.C)			Unit	Note
			min.	typ.	max.		
Center Frequency				942.5		MHz	
Insertion Loss	927.4 … 957.6	MHz		1.8	3.0	dB_{INT}	Any 3.84MHz
	927.4 … 957.6	MHz		1.8	2.5	dB_{INT}	+23 to +27deg.C, Any 3.84MHz
	925. … 960.	MHz		2.6	3.2	dB	
	925. … 960.	MHz		2.6	2.9	dB	+23 to +27deg.C
Ripple deviation	925. … 960.	MHz		0.6	2.2	dB	
	925. … 960.	MHz		0.6	1.8	dB	+23 to +27deg.C
	925. … 960.	MHz		1.1	2.7	dB	Any 3.84MHz
	925. … 960.	MHz		1.1	2.0	dB	+23 to +27deg.C, Any 3.84MHz
VSWR	925. … 960.	MHz		1.7	2.0		ANT.
	925. … 960.	MHz		1.7	1.9		+23 to +27deg.C, ANT.
	925. … 960.	MHz		1.8	2.2		RX
	925. … 960.	MHz		1.8	2.0		+23 to +27deg.C, RX
Absolute Attenuation	0.2 … 880.0	MHz	45	61		dB	
	45. … 45.	MHz	40	99		dB	
	835. … 870.	MHz	40	63		dB	
	882.4 … 912.6	MHz	45	63		dB_{INT}	Any 3.84MHz
	902.5 … 937.5	MHz	1.0	1.3		dB	
	980. … 1045.	MHz	25	32		dB	
	1045. … 2775.	MHz	35	55		dB	
	1805. … 1875.	MHz	40	60		dB	
	1850. … 1920.	MHz	40	59		dB	
	2400. … 2500.	MHz	40	55		dB	
	2685. … 2790.	MHz	40	56		dB	
	2775. … 2880.	MHz	40	55		dB	
	3700. … 3840.	MHz	35	53		dB	
	4625. … 4800.	MHz	35	51		dB	
	5550. … 5760.	MHz	30	46		dB	
	5725. … 5825.	MHz	40	46		dB	
	6475. … 6720.	MHz	20	48		dB	
	7400. … 7680.	MHz	15	49		dB	
	8325. … 8640.	MHz	15	45		dB	
	9250. … 9600.	MHz	15	38		dB	
	10175. … 10560.	MHz	15	26		dB	
	11100. … 11520.	MHz	12	19		dB	
	12025. … 12480.	MHz	12	18		dB	

* Typical value at 25±2deg.C

SAYFH897MGC0F0A （Band8 / Unbalanced / LR / 2016）

Electrical Characteristic　< TX→RX. >

Matching Impedance (nominal)

- :ANT. Port　: 50 ohm // 7.5 nH(Ideal inductor)
- :TX Port　: 50 ohm
- :RX Port　: 50 ohm

TX → RX		Characteristics (-30 to +85 deg.C)			Unit	Note
		min.	typ.	max.		
Center Frequency			897.5		MHz	
Isolation	882.4 … 912.6 MHz	55	61		dB_{INT}	Any 3.84MHz
	927.4 … 957.6 MHz	50	55		dB_{INT}	Any 3.84MHz

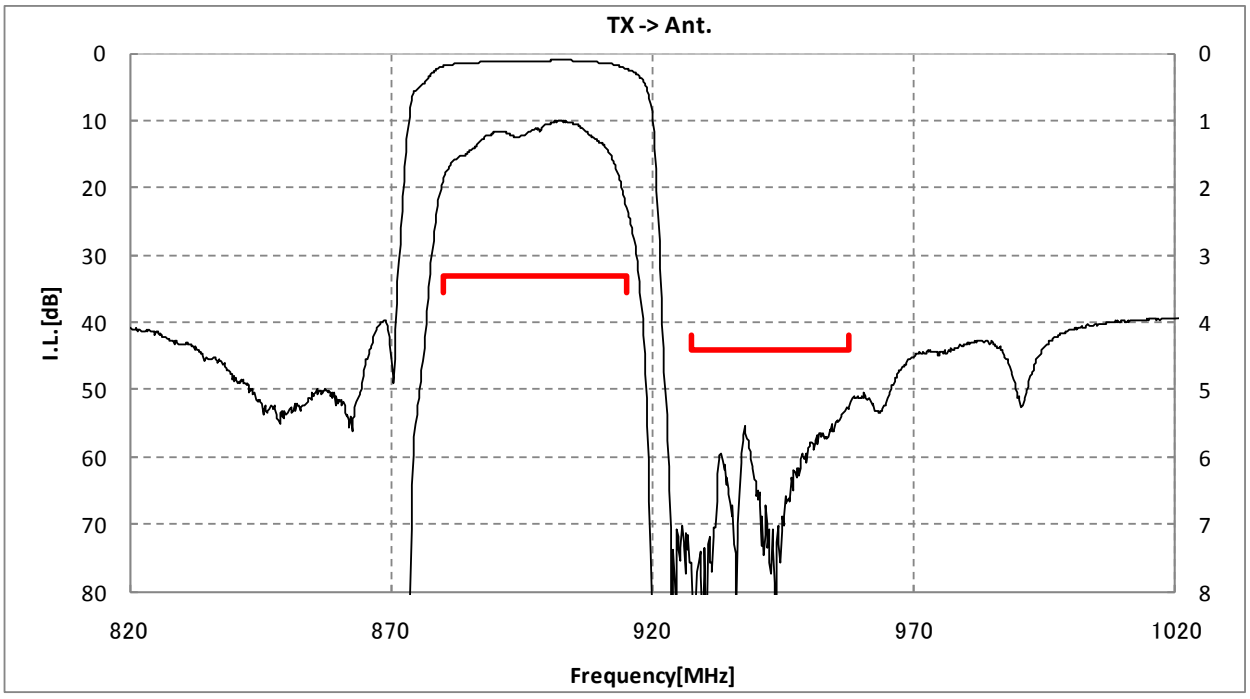
* Typical value at 25±2deg.C

SAYFH897MGC0F0A （Band8 / Unbalanced / LR / 2016）

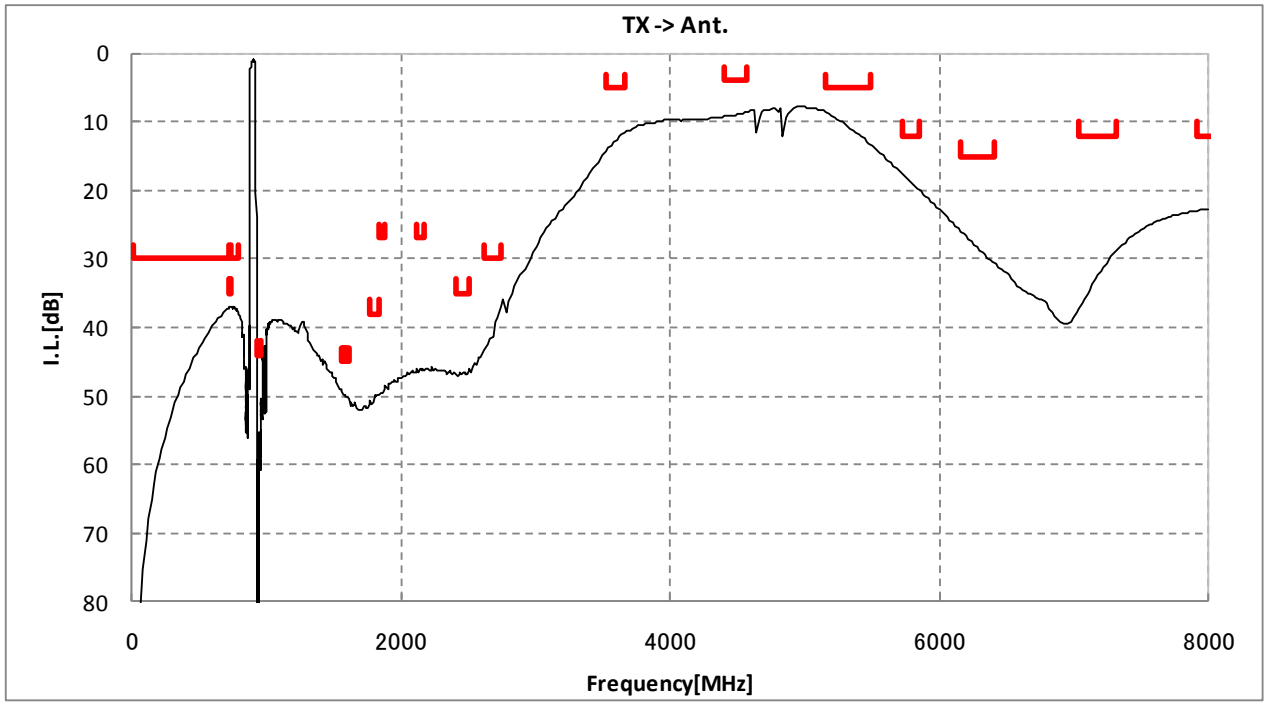
Electrical Characteristic

< TX→ANT. >

Narrow-Segment



Wide-Segment

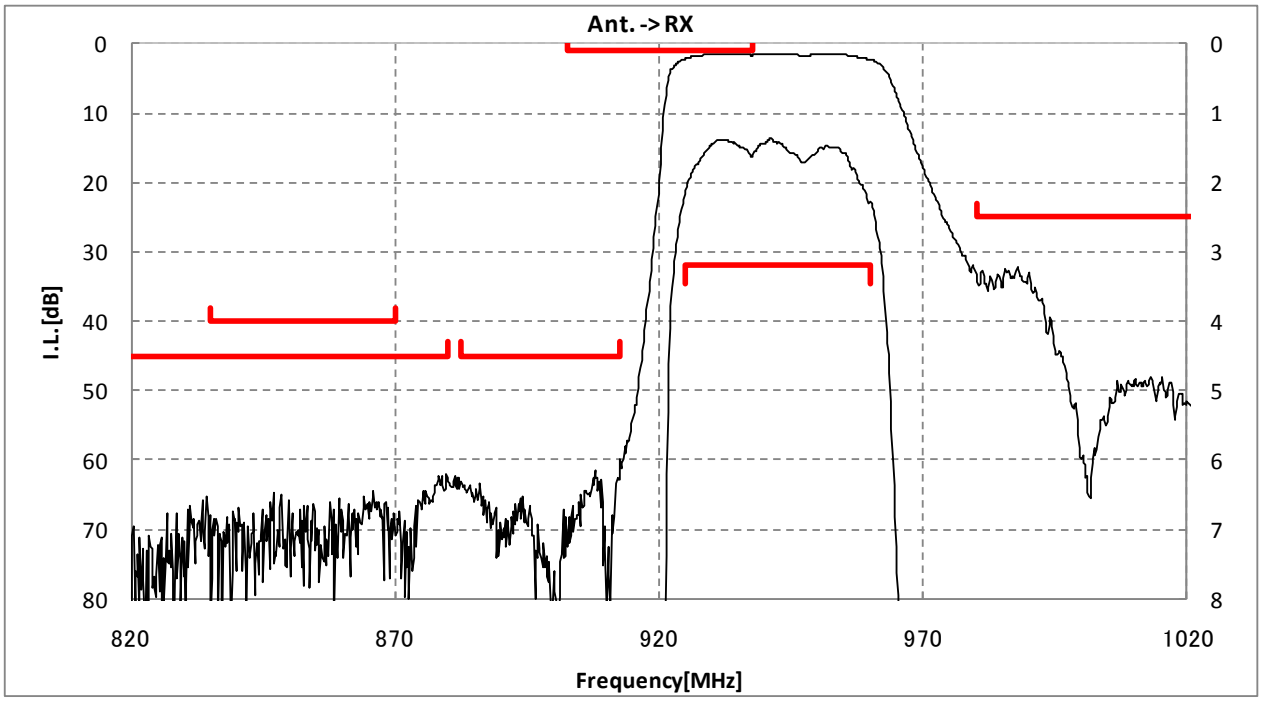


SAYFH897MGC0F0A （Band8 / Unbalanced / LR / 2016）

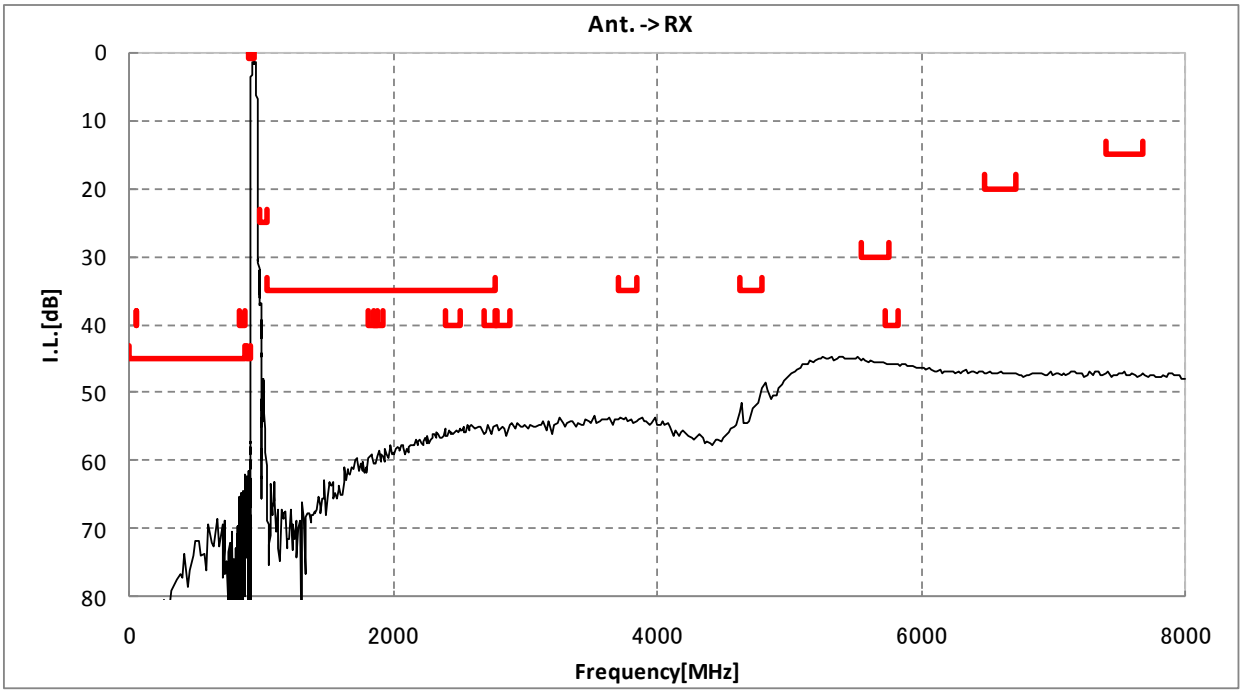
Electrical Characteristic

< ANT.→RX. >

Narrow-Segment



Wide-Segment

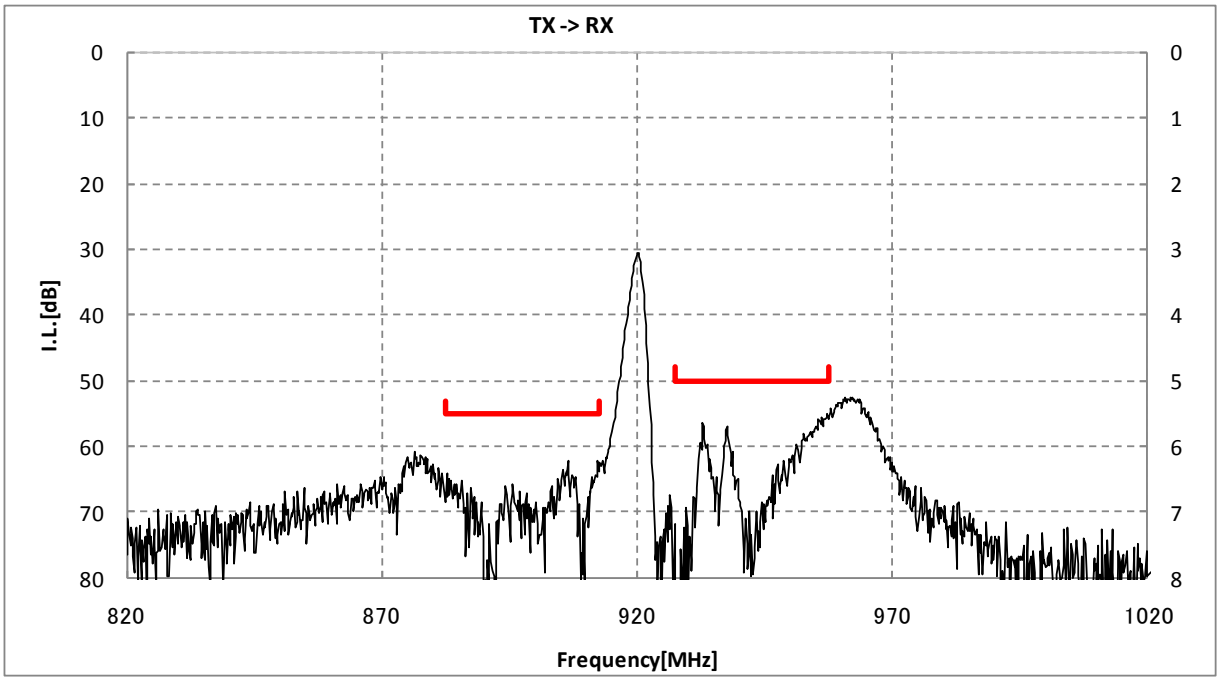


SAYFH897MGC0F0A （Band8 / Unbalanced / LR / 2016）

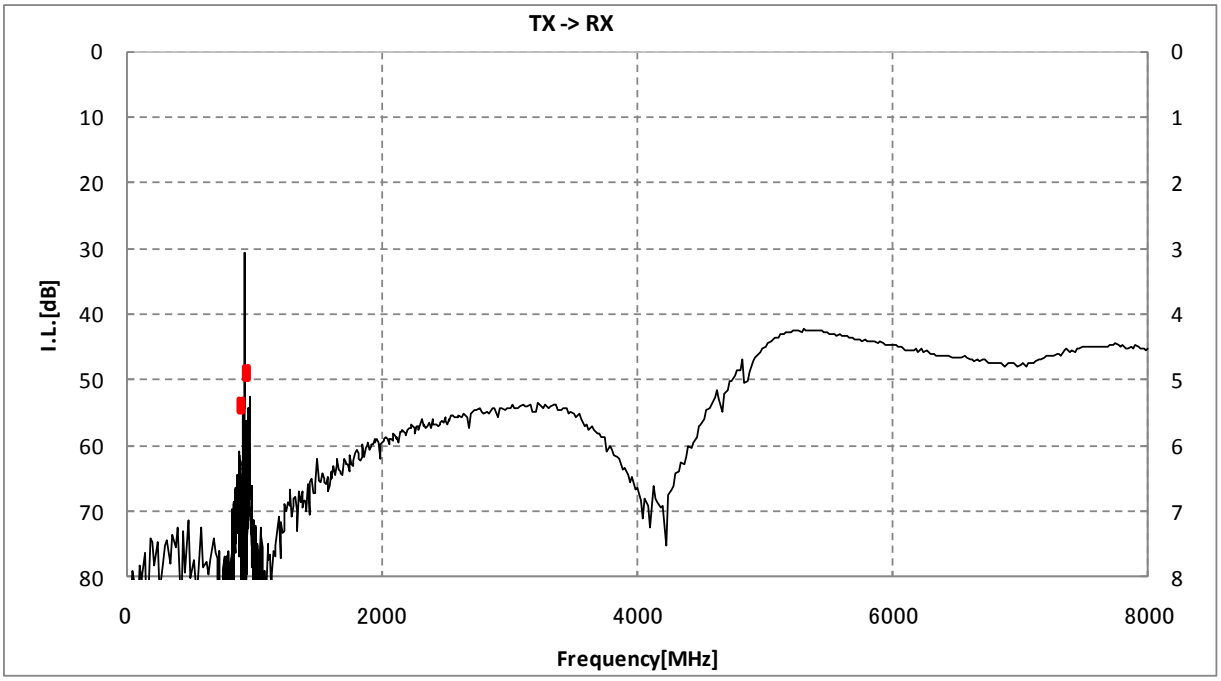
Electrical Characteristic

< TX→RX. >

Narrow-Segment



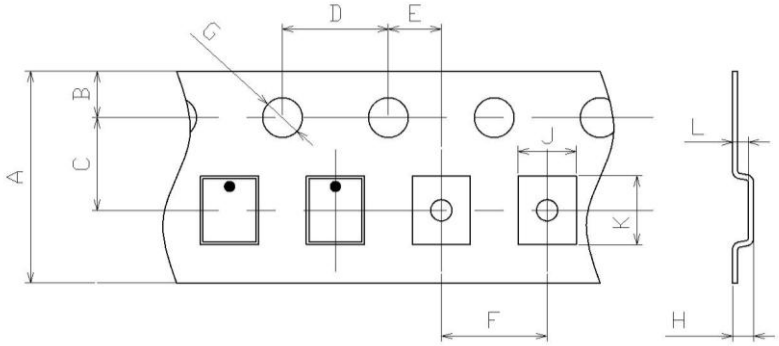
Wide-Segment



SAYFH897MGC0F0A （Band8 / Unbalanced / LR / 2016）

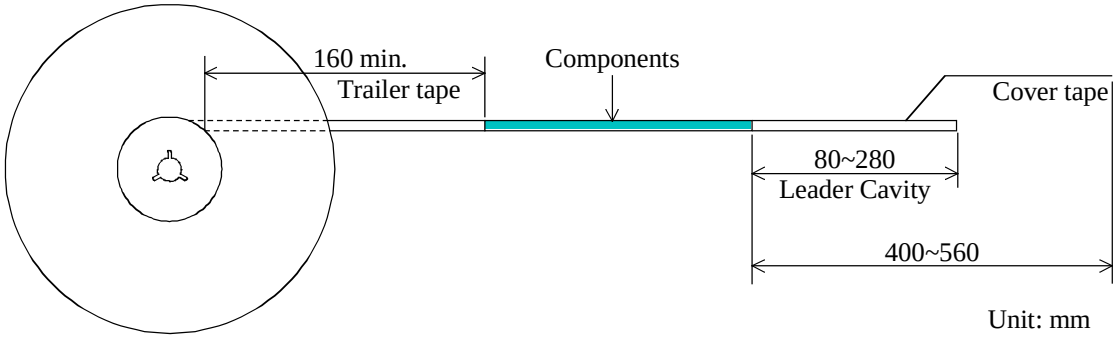
Dimensions of Tape & Reel unit: mm

Carrier Tape



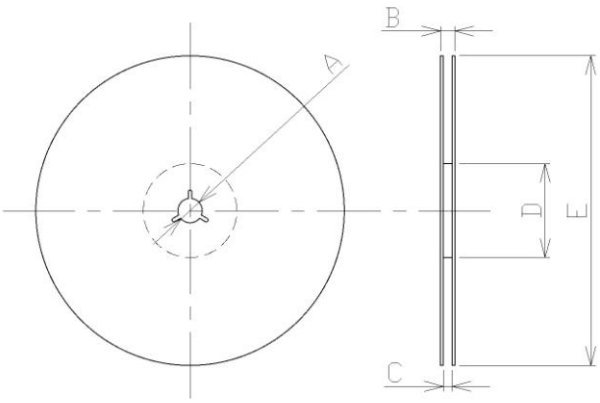
A:	8.0	J:	1.9
B:	1.75	K:	2.3
C:	3.50	L:	0.90
D:	4.0		
E:	2.00		
F:	4.0		
G:	φ1.5		
H:	1.20		

Tape



Unit: mm

Reel



φ178Reel		φ330Reel	
A:	φ13.0	A:	φ13.0
B:	13.5max	B:	15.5max
C:	9.0	C:	9.5
D:	Φ60	D:	φ100
E:	Φ178	E:	φ330

SAYFH897MGC0F0AR00… 10000pcs (φ330)
SAYFH897MGC0F0AR05… 5000pcs (φ330)
SAYFH897MGC0F0AR1S… sample Order (φ180)

SAYFH897MGC0F0A （Band8 / Unbalanced / LR / 2016）

Marking Code

Table A: Month Code

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 B: 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

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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.
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- 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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・deviation or lapse in function of engineering sample,

・improper use of engineering samples.

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