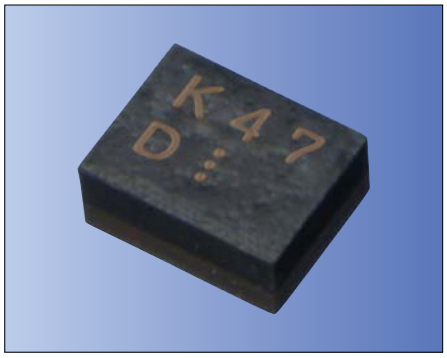
CDMA RF SAW Filters
SF14 Series

KYOCERA



RoHS Compliant

Features

- Small size
- Low insertion loss
- High selectivity
- Hermetic seal

Applications

- CDMA

How to Order

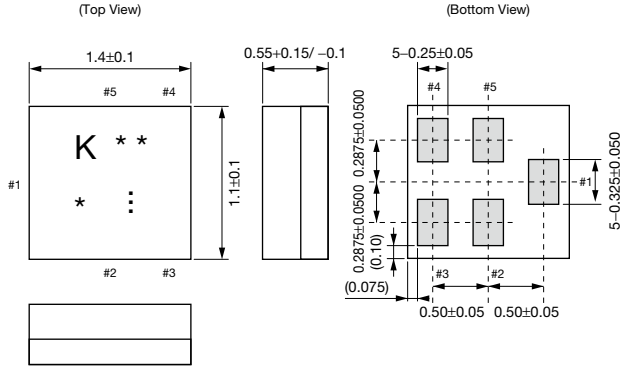
SF 14 - 0881 M 5 UB B1
① ② ③ ④ ⑤ ⑥ ⑦

① Type of Product (SAW Filter)
② Package Size
③ Nominal Center Frequency
④ Spec.
⑤ Number of Terminals
⑥ Input/ Output
⑦ Custom Specification

Specifications

Part No.	Output	Application	Pass Band Frequency	Insertion Loss (dB)	Pass Band Variation (dB)	VSWR	Absolute Rejection (dB)						Operating Temperature	Storage Temperature
SF14-0881M5UBB1	Balanced	CELL Rx	869MHz - 894MHz	2.2 max.	1.5 max.	2.5 max.	10MHz - 824MHz	824MHz - 849MHz	915MHz - 960MHz	960MHz - 3000MHz	—	—	−30 to +85°C	−40 to +85°C
							40 min.	45 min.	23 min.	40 min.	—	—		
SF14-0881M5UUA1	Unbalance	CELL Rx	869MHz - 894MHz	2.5 max.	1.5 max.	2.5 max.	10MHz - 824MHz	824MHz - 849MHz	915MHz - 960MHz	960MHz - 3000MHz	—	—		
							20 min.	46 min.	20 min.	20 min.	—	—		
SF14-0836M5UUA2	Unbalance	CELL Tx	824MHz - 849MHz	2.5 max.	1.5 max.	2.1 max.	10MHz - 800MHz	869MHz - 894MHz	894MHz - 1050MHz	1050MHz - 1210MHz	1210MHz - 1580MHz	1580MHz - 2000MHz		
							30 min.	40 min.	35 min.	32 min.	30 min.	27 min.		
SF14-1960M5UBC1	Balanced	PCS Rx	1930MHz - 1990MHz	3.3 max.	2.5 max.	2.5 max.	10MHz - 1850MHz	1850MHz - 1910MHz	2040MHz - 2200MHz	2200MHz - 3400MHz	3400MHz - 6000MHz	—		
							40 min.	24 min.	30 min.	40 min.	40 min.	—		
SF14-1960M5UUA1	Unbalance	PCS Rx	1930MHz - 1990MHz	3.0 max.	2.0 max.	2.5 max.	10MHz - 1850MHz	1850MHz - 1910MHz	2040MHz - 2200MHz	2200MHz - 3400MHz	3400MHz - 6000MHz	—		
							20 min.	20 min.	20 min.	20 min.	20 min.	—		
SF14-0833M5UUA1	Unbalance	BC10+ Cell (BC0) Tx	817MHz - 849MHz	2.0 max.	1.5 max.	2.5 max.	862MHz - 894MHz	1570MHz - 1580MHz	—	—	—	—		
							13 min.	30 min.	—	—	—	—		
SF14-0878M5UBA1	Balanced	BC10+ Cell (BC0) Rx	862MHz - 894MHz	2.5 max.	1.5 max.	2.0 max.	10MHz - 817MHz	817MHz - 849MHz	1724MHz - 1788MHz	1850MHz - 1910MHz	1920MHz - 6000MHz	—		
							40 min.	46 min.	40 min.	46 min.	40 min.	—		

Dimensions



Unit: mm
K: Kyocera logo
**: Identification no.
* : Monthly Code
⋮: Index mark of ten days
(⋮1st-10th, ⁚11th-20th, ･ 21st-31st)

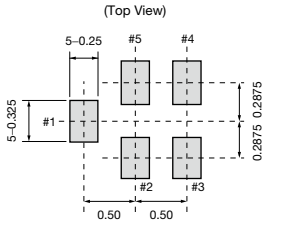
Balance Output

PIN No.	Function
#1	INPUT
#2	GND
#3	OUTPUT
#4	OUTPUT
#5	GND

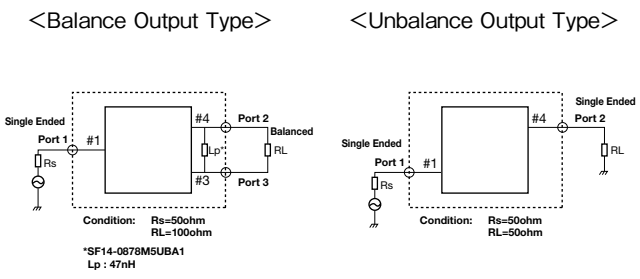
Unbalance Output

PIN No.	Function
#1	INPUT
#2	GND
#3	GND
#4	OUTPUT
#5	GND

Recommended Land Pattern

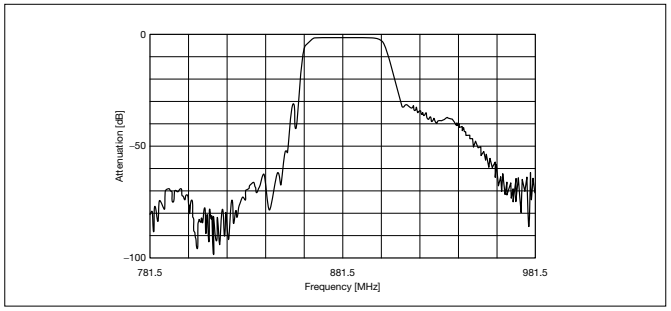


Test Circuit



Characteristics

<CELL Rx> Part No.: SF14-0881M5UBB1



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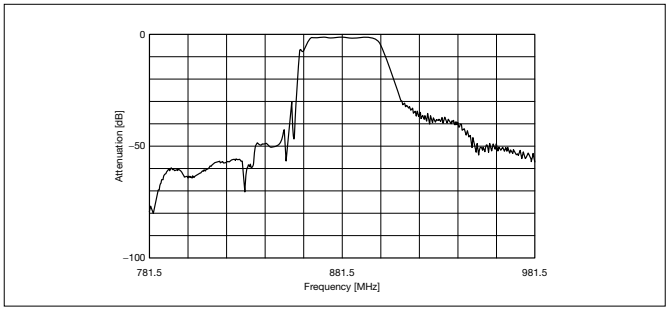
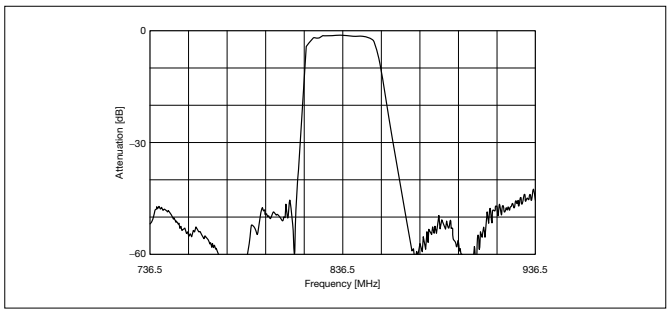
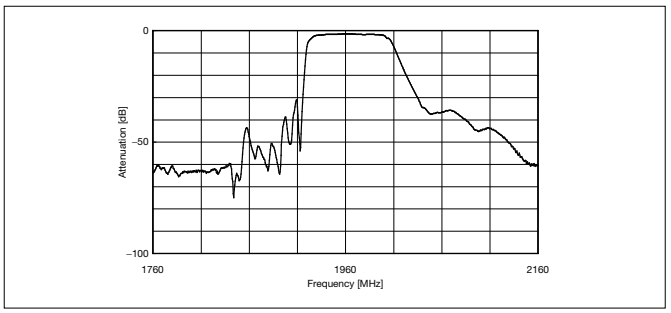


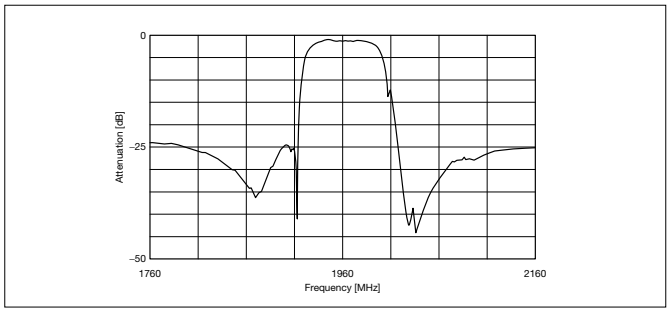
<CELL Tx> Part No.: SF14-0836M5UUA2



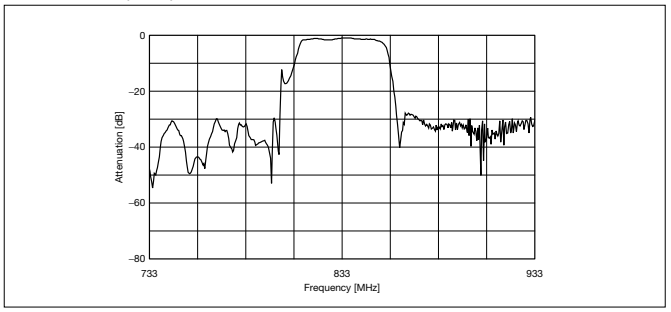
<PCS Rx> Part No.: SF14-1960M5UBC1



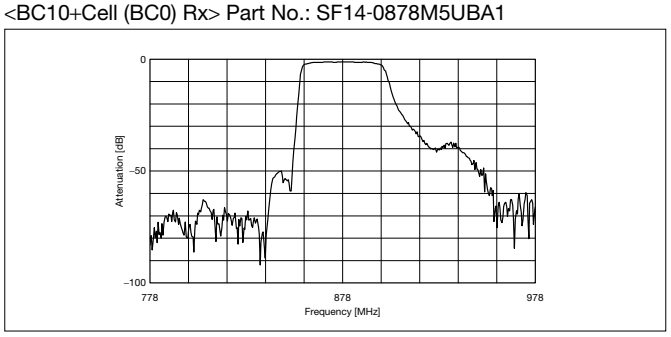
<PCS Rx> Part No.: SF14-1960M5UUA1



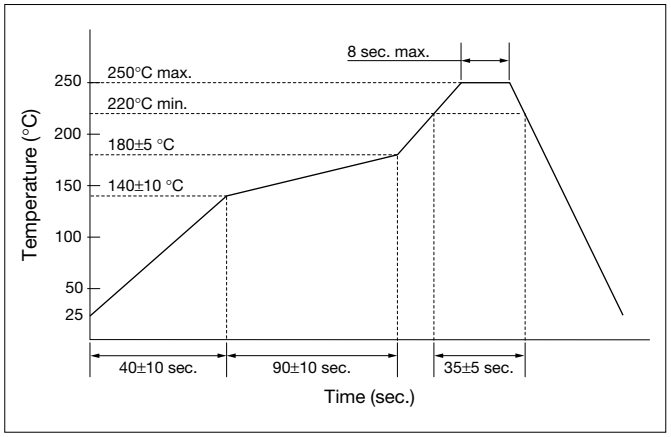
<BC10+Cell (BC0) Tx> Part No.: SF14-0833M5UUA1



<BC10+Cell (BC0) Rx> Part No.: SF14-0878M5UBA1

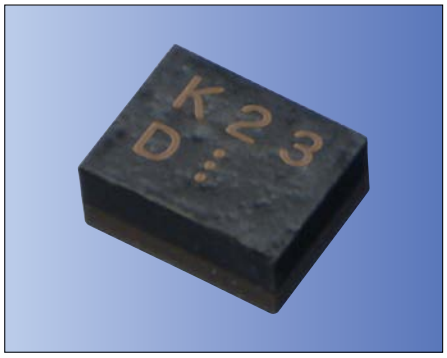


Recommended Reflow Profile



UMTS RF SAW Filters
SF14 Series

KYOCERA



RoHS Compliant

Features

- Small size
- Low insertion loss
- High selectivity
- Hermetic seal

Applications

- UMTS

How to Order

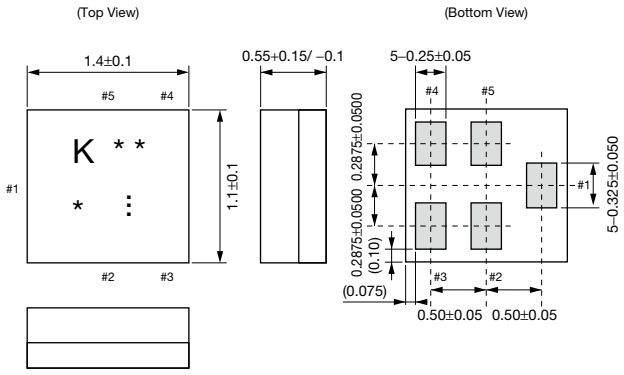
SF 14 - 2140 M 5 UB A1
① ② ③ ④ ⑤ ⑥ ⑦

① Type of Product (SAW Filter)
② Package Size
③ Nominal Center Frequency
④ Spec.
⑤ Number of Terminals
⑥ Input/ Output
⑦ Custom Specification

Specifications

Part No.	Output	Application	Pass Band Frequency	Insertion Loss (dB)	Pass Band Variation (dB)	VSWR	Absolute Rejection (dB)						Operating Temperature	Storage Temperature
SF14-2140M5UBA1	Balanced	Band1 Rx	2110MHz - 2170MHz	2.5 max.	2.0 max.	2.5 max.	10MHz - 1920MHz	1920MHz - 1980MHz	1980MHz - 2025MHz	2025MHz - 2050MHz	2230MHz - 2255MHz	2255MHz - 6000MHz	−30 to +85°C	−40 to +85°C
							30 min.	35 min.	25 min.	20 min.	20 min.	20 min.		
SF14-1950M5UUA1	Unbalance	Band1 Tx	1920MHz - 1980MHz	3.0 max.	2.0 max.	2.3 max.	10MHz - 1570MHz	1570MHz - 1880MHz	2110MHz - 2170MHz	2300MHz - 2500MHz	2500MHz - 3000MHz	3830MHz - 3970MHz		
							28 min.	30 min.	35 min.	32 min.	32 min.	28 min.		

Dimensions



Unit: mm
K: Kyocera logo
**: Identification no.
* : Monthly Code
⋮: Index mark of ten days
(⁝1st-10th, ⁚11th-20th, ⋰ 21st-31st)

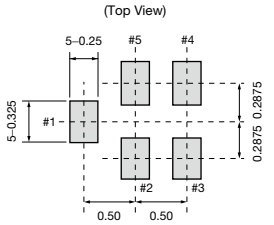
Balance Output

PIN No.	Function
#1	INPUT
#2	GND
#3	OUTPUT
#4	OUTPUT
#5	GND

Unbalance Output

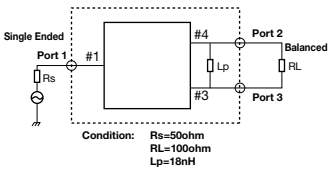
PIN No.	Function
#1	INPUT
#2	GND
#3	GND
#4	OUTPUT
#5	GND

Recommended Land Pattern

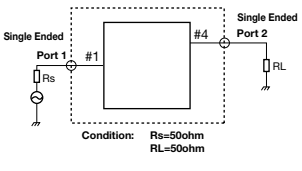


Test Circuit

<Balance Output Type>

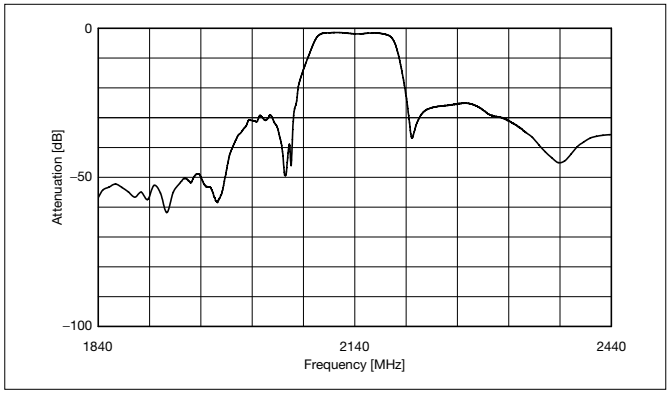


<Unbalance Output Type>

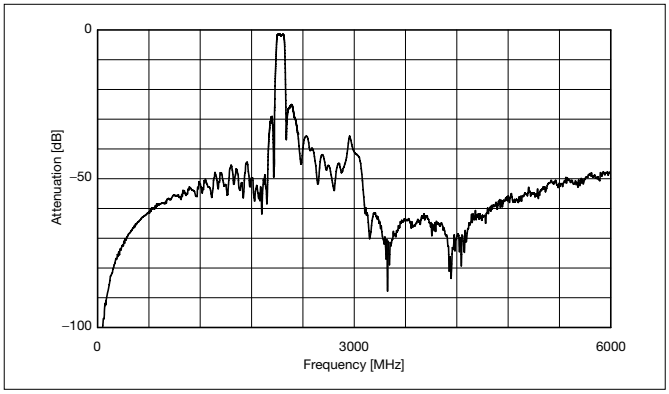


Characteristics

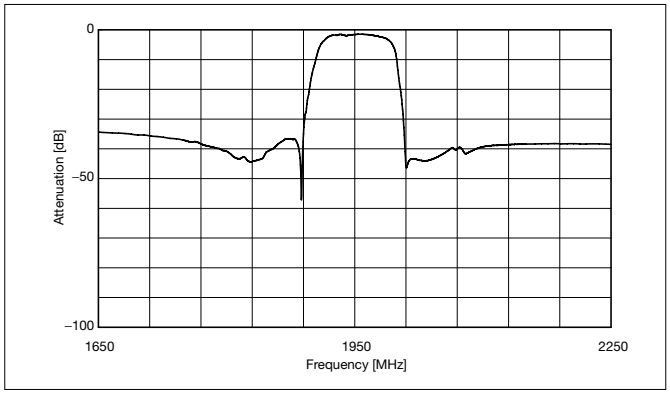
<Band1 Rx> Part No.: SF14-2140M5UBA1



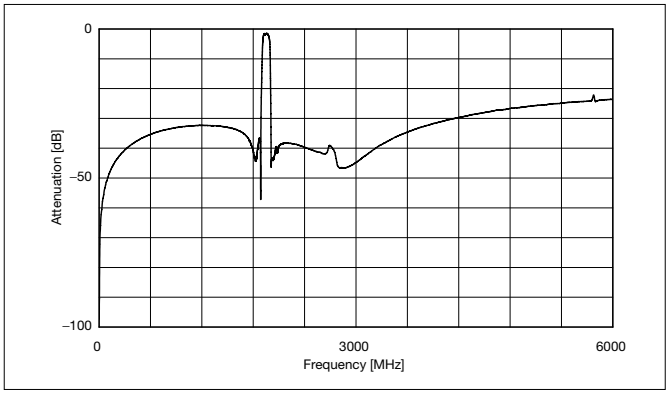
<Band1 Rx> Part No.: SF14-2140M5UBA1



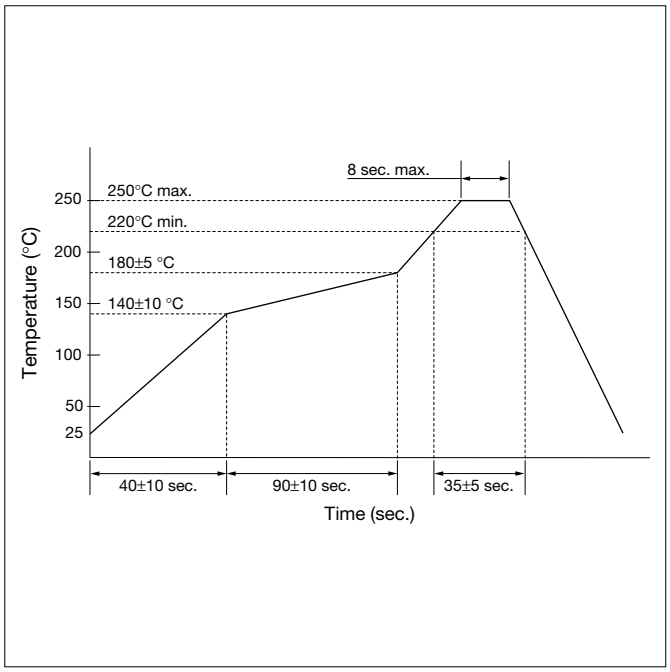
<Band1 Tx> Part No.: SF14-1950M5UUA1



<Band1 Tx> Part No.: SF14-1950M5UUA1



Recommended Reflow Profile



SAW Filters
RF SAW Filters for UMTS/LTE SF15 Series (Diplex Type Dual Filter)

RoHS Compliant

Features
- Small size
- Low insertion loss
- High selectivity

Applications
- UMTS(W-CDMA)
- LTE

How to Order

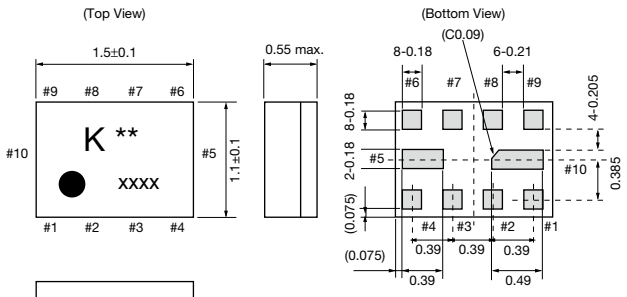
SF 15 - 0876 E A SU A1
① ② ③ ④ ⑤ ⑥ ⑦

① Type of Product (SAW Filters)
② Package Size
③ Nominal Center Frequency
④ Spec.
⑤ Number of Terminals
⑥ Input/ Output
⑦ Custom Specification

Specifications

Part No.	Output	Application	Pass Band Frequency	Insertion Loss (dB)	Pass Band Variation (dB)	VSWR	Absolute Rejection (dB)					Operating Temperature	Storage Temperature
							DC - 814MHz	814MHz - 849MHz	914MHz - 960MHz	960MHz - 2000MHz	2000MHz - 6000MHz		
SF15-0876EASUA1	Unbalance	(Filter1) BAND26	859MHz - 894MHz	3.0 max.	2.0 max.	2.2 max.	42 min.	40 min.	20 min.	35 min.	25 min.	−30～+85°C	−40～+85°C
							DCMHz - 880MHz	880.16MHz - 914.86MHz	980MHz - 1025MHz	1025MHz - 2880MHz	2880MHz - 6000MHz		
		(Filter2) BAND8	925MHz - 960MHz	3.0 max.	2.0 max.	2.2 max.	38 min.	40 min.	20 min.	30 min.	25 min.		

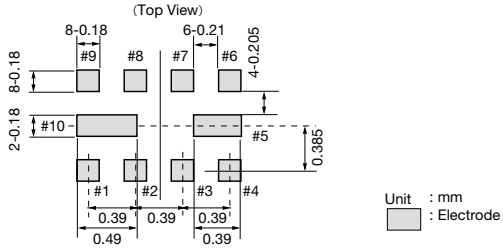
Dimensions



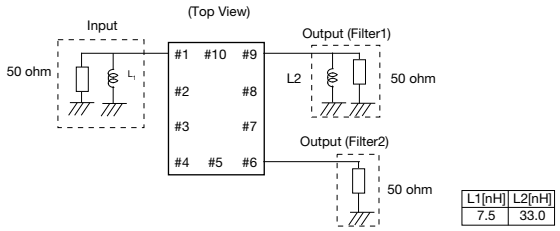
PIN No.	Function	PIN No.	Function
#1	Ant	#6	Tx/Rx (Filter2)
#2	GND	#7	GND
#3	GND	#8	GND
#4	GND	#9	Tx/Rx (Filter1)
#5	GND	#10	GND

Unit: mm
K: Kyocera logo
**: Identification no.
● : Index mark of pin 1
xxxx : Production code

Recommended Land Pattern



Test Circuit

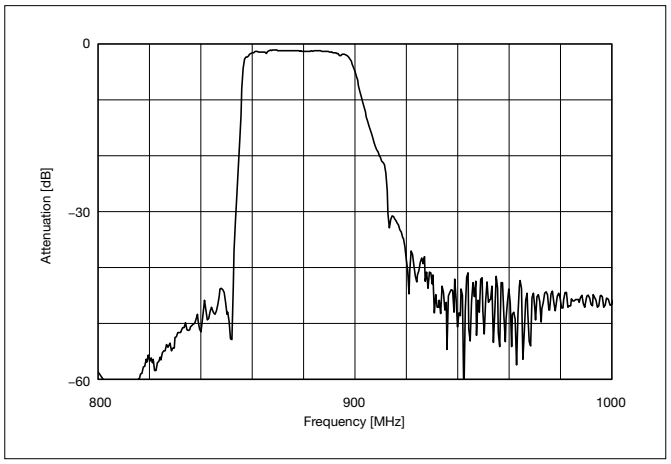


L1[nH]	L2[nH]
7.5	33.0

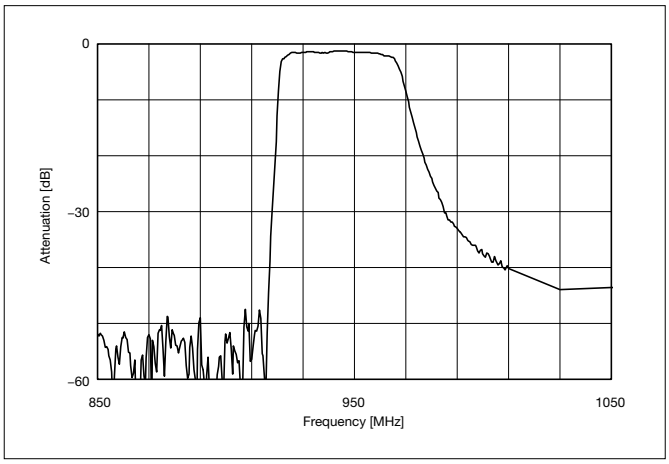
Characteristics

Part No.: SF15-0876EASUA1

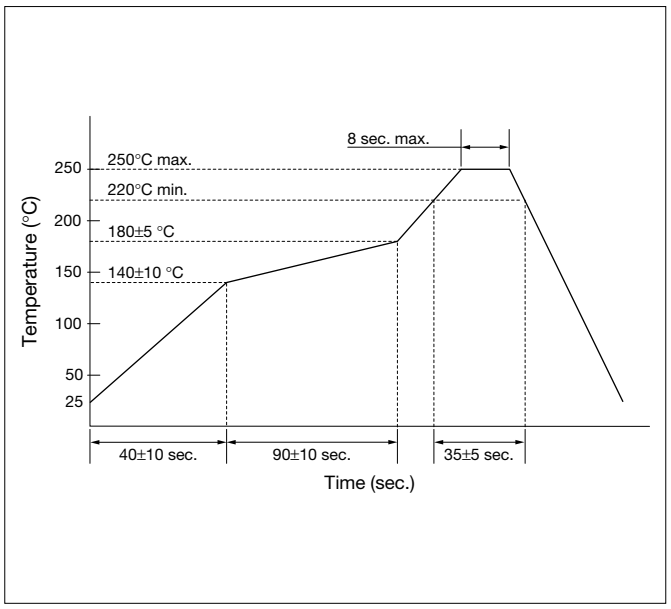
<BAND26>



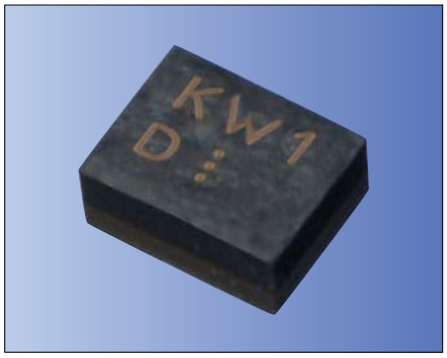
<BAND8>



Recommended Reflow Profile



SAW Filters
RF SAW Filters for TD-LTE SF14 Series



RoHS Compliant

Features

- Small size
- Wide bandwiths

Applications

- TD-LTE

How to Order

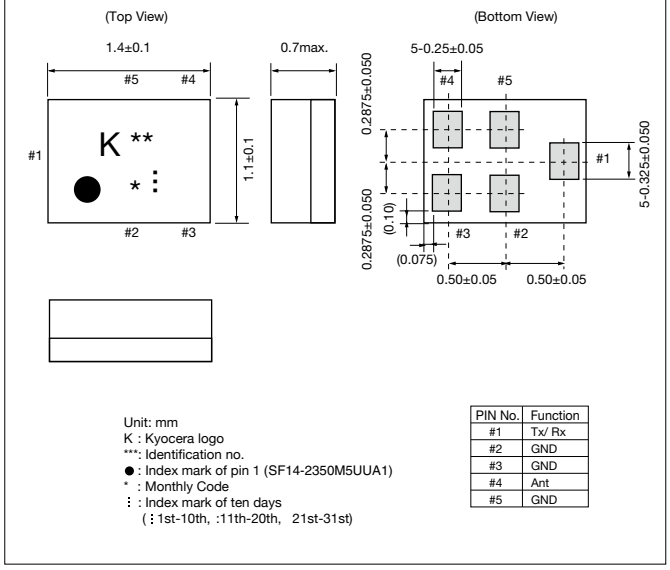
SF 14 - 2605 M 5 UU A1
① ② ③ ④ ⑤ ⑥ ⑦

① Type of Product (SAW Filter)
② Package Size
③ Nominal Center Frequency
④ Spec.
⑤ Number of Terminals
⑥ Input/ Output
⑦ Custom Specification

Specifications

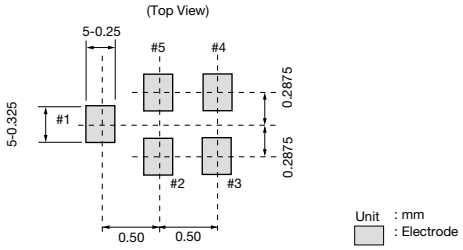
Part No.	Output	Application	Pass Band Frequency	Insertion Loss (dB)	Pass Band Variation (dB)	VSWR	Absolute Rejection (dB)						Operating Temperature	Storage Temperature
SF14-2350M5UUA1	Unbalance	BAND40	2300MHz - 2400MHz	3.2 max.	—	2.0 max.	880MHz - 915MHz	925MHz - 960MHz	1710MHz - 1785MHz	1805MHz - 1880MHz	2422MHz - 2442MHz	2442MHz - 2482MHz	−30 to +85°C	−40 to +85°C
							32 min.	27 min.	30 min.	25 min.	4 min.	35 min.		
SF14-2605M5UUA1	Unbalance	BAND41	2555MHz - 2655MHz	3.1 max.	—	2.0 max.	880MHz - 915MHz	925MHz - 960MHz	1710MHz - 1785MHz	1805MHz - 1880MHz	2401MHz - 2440MHz	2442MHz - 2482MHz	−20 to +85°C	−40 to +85°C
							32 min.	27 min.	30 min.	25 min.	40 min.	40 min.		

Dimensions

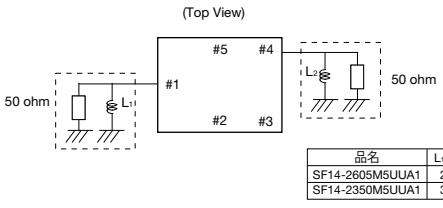


PIN No.	Function
#1	Tx/ Rx
#2	GND
#3	GND
#4	Ant
#5	GND

Recommended Land Pattern



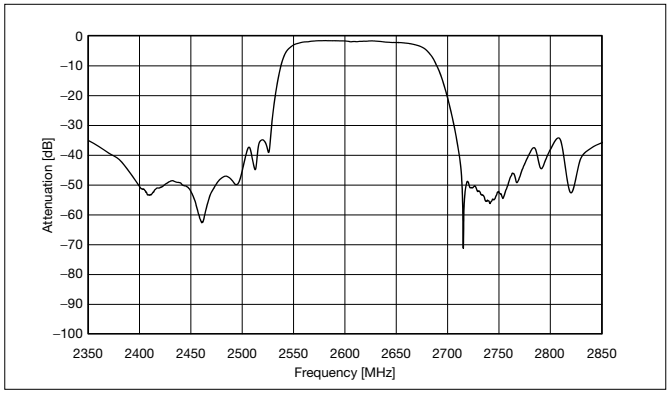
Test Circuit



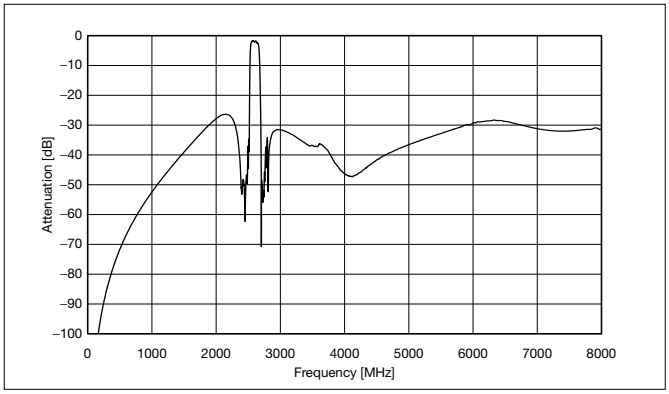
品名	L1[nH]	L2[nH]
SF14-2605M5UUA1	2.2	2.2
SF14-2350M5UUA1	3.9	3.9

Characteristics

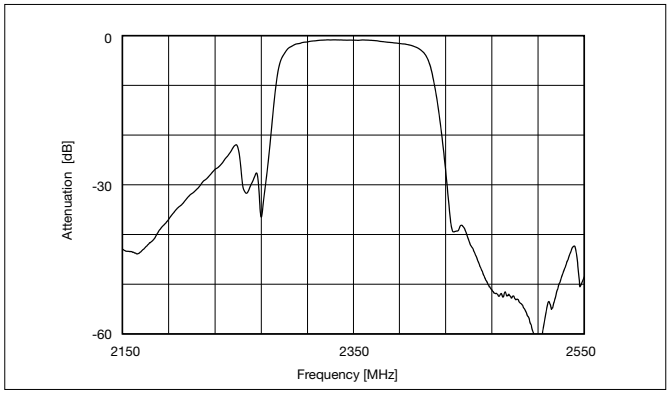
Part No.: SF14-2605M5UUA1



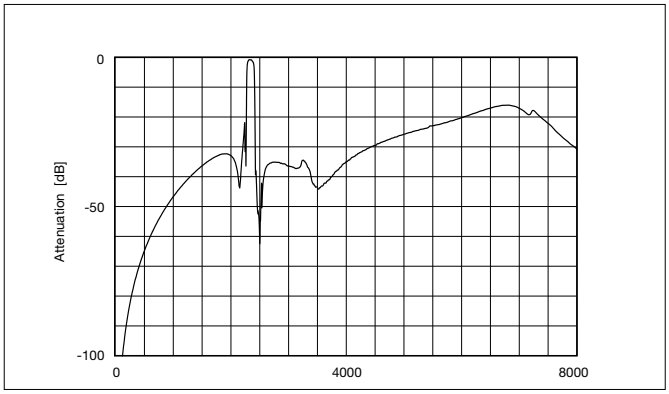
Part No.: SF14-2605M5UUA1



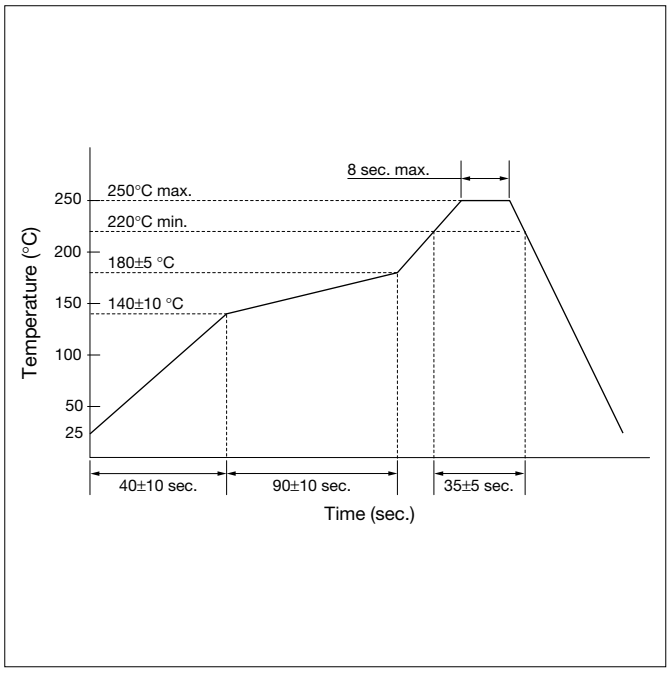
Part No.: SF14-2350M5UUA1



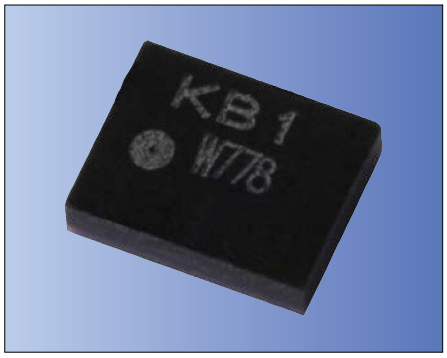
Part No.: SF14-2350M5UUA1



Recommended Reflow Profile



SAW Filters
RF SAW Filters for TD-LTE SF15 Series/ SF18 Series (Diplex Type Dual Filter)



RoHS Compliant

Features
- Small size
- Low insertion loss
- High selectivity

Applications
- TD-LTE

How to Order

SF 15 - 2605 A A SU A1
① ② ③ ④ ⑤ ⑥ ⑦

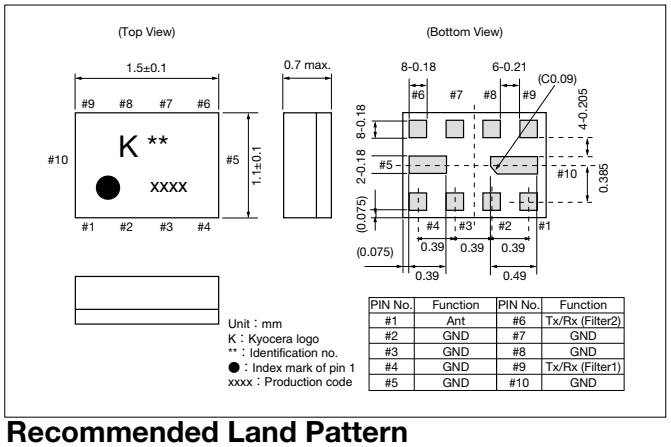
① Type of Product (SAW Filters)
② Package Size
③ Nominal Center Frequency
④ Spec.
⑤ Number of Terminals
⑥ Input/ Output
⑦ Custom Specification

Specifications

Part No.	Output	Application	Pass Band Frequency	Insertion Loss (dB)	Pass Band Variation (dB)	VSWR	Absolute Rejection (dB)							Operating Temperature	Storage Temperature
SF15-2605AASUA1	Unbalance	(Filter1) BAND41	2555MHz - 2655MHz	3.1 max.	—	2.0 max.	880MHz - 915MHz	1880MHz - 1920MHz	2010MHz - 2025MHz	2110MHz - 2170MHz	2300MHz - 2400MHz	2400MHz - 2482MHz	7520MHz - 7680MHz	−20 to +85°C	−40 to +85°C
							40 min.	30 min.	30 min.	30 min.	35 min.	35 min.	20 min.		
		(Filter2) BAND39	1880MHz - 1920MHz	2.5 max.	—	2.0 max.	880MHz - 915MHz	880MHz - 915MHz	2010MHz - 2025MHz	2300MHz - 2400MHz	2400MHz - 2482MHz	2550MHz - 2655MHz	7520MHz - 7680MHz		
							40 min.	20 min.	30 min.	30 min.	30 min.	30 min.	30 min.		
SF18-1900BASUA1	Unbalance	(Filter1) BAND39	1880MHz - 1920MHz	2.2 max.	—	2.0 max.	880MHz - 915MHz	1805MHz - 1850MHz	2010MHz - 2025MHz	2300MHz - 2400MHz	2400MHz - 2482MHz	2550MHz - 2655MHz	7520MHz - 7680MHz	−20 to +85°C	−40 to +85°C
							40 min.	20 min.	30 min.	30 min.	30 min.	30 min.	25 min.		
		(Filter2) BAND41	2555MHz - 2655MHz	3.1 max.	—	2.0 max.	880MHz - 915MHz	1880MHz - 1920MHz	2010MHz - 2025MHz	2110MHz - 2170MHz	2300MHz - 2400MHz	2400MHz - 2482MHz	7520MHz - 7680MHz		
							40 min.	30 min.	30 min.	30 min.	35 min.	35 min.	5 min.		

Dimensions

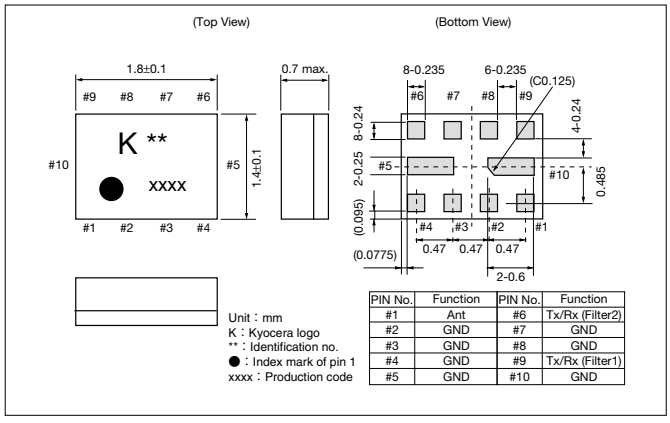
SF15 series



PIN No.	Function	PIN No.	Function
#1	Ant	#6	Tx/Rx (Filter2)
#2	GND	#7	GND
#3	GND	#8	GND
#4	GND	#9	Tx/Rx (Filter1)
#5	GND	#10	GND

Unit : mm
K : Kyocera logo
** : Identification no.
● : Index mark of pin 1
xxxx : Production code

SF18 series

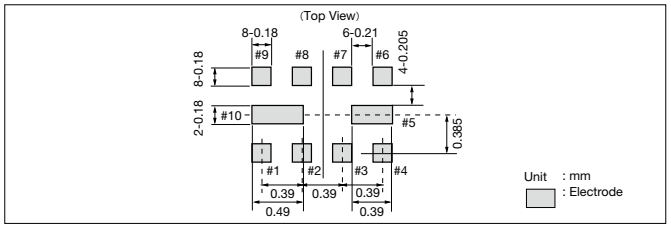


PIN No.	Function	PIN No.	Function
#1	Ant	#6	Tx/Rx (Filter2)
#2	GND	#7	GND
#3	GND	#8	GND
#4	GND	#9	Tx/Rx (Filter1)
#5	GND	#10	GND

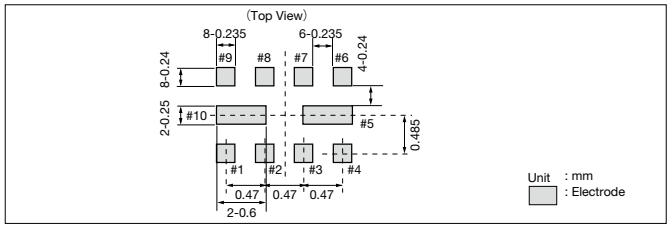
Unit : mm
K : Kyocera logo
** : Identification no.
● : Index mark of pin 1
xxxx : Production code

Recommended Land Pattern

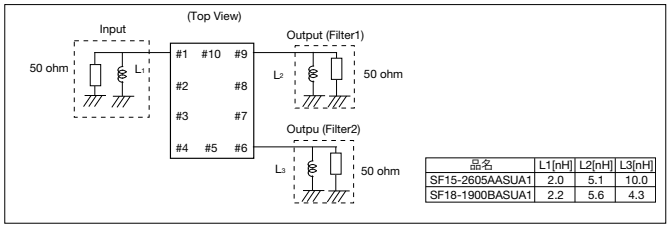
SF15 series



SF18 series



Test Circuit

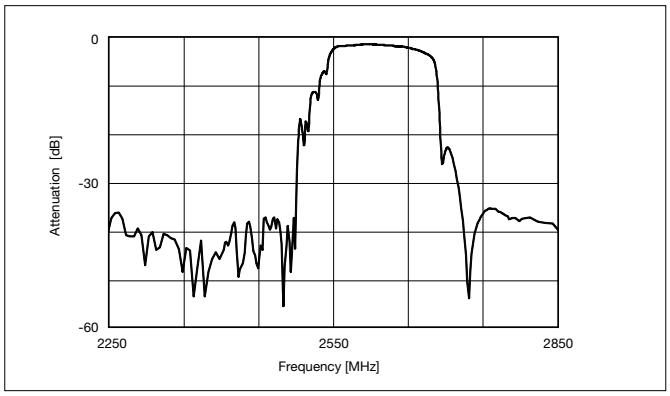


品名	L1[nH]	L2[nH]	L3[nH]
SF15-2605AASUA1	2.0	5.1	10.0
SF18-1900BASUA1	2.2	5.6	4.3

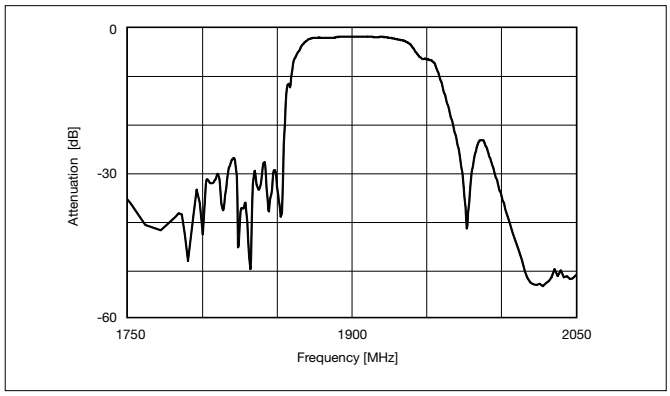
Characteristics

Part No.: SF15-2605AASUA1

<BAND41>

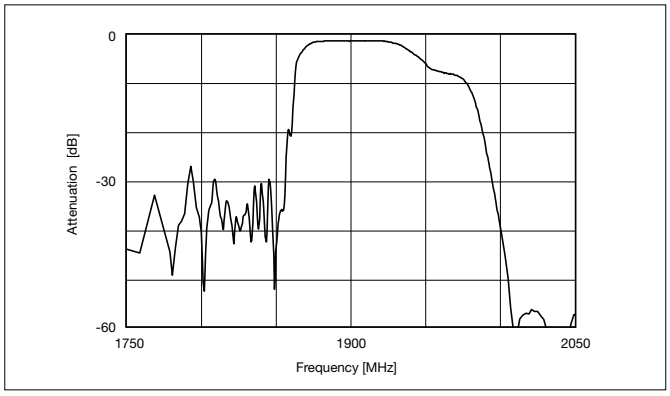


<BAND39>

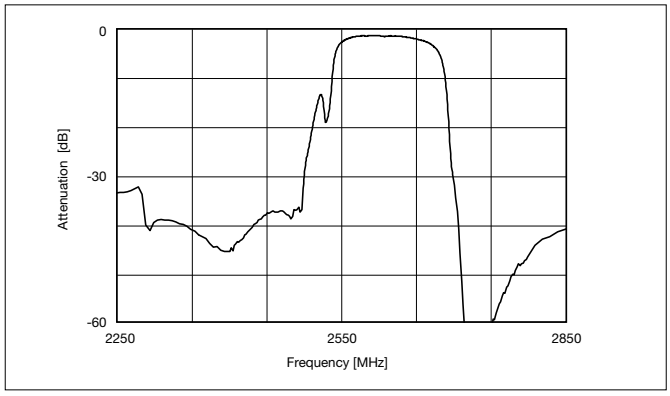


Part No.: SF18-1900BASUA1

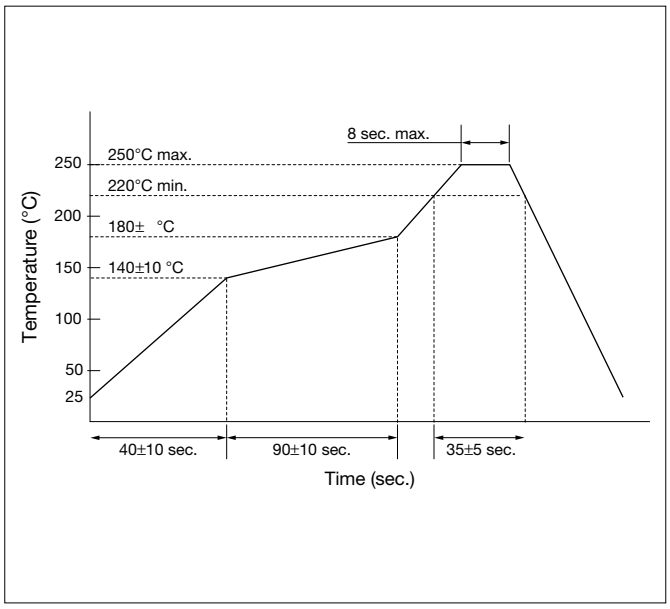
<BAND39>



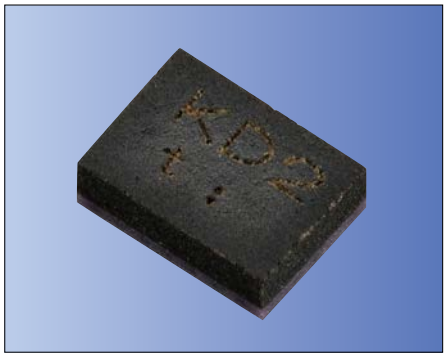
<BAND41>



Recommended Reflow Profile



SAW Filters
RF SAW Filters for TD-SCDMA SF15 Series (Diplex Type Dual Filter)



RoHS Compliant

Features
- Small size
- Low insertion loss
- High selectivity
- Hermetic seal

Applications
- TD-SCDMA

How to Order

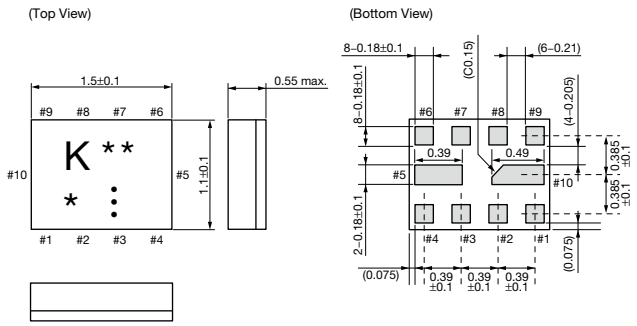
SF 15 - 1900 T A SB A1
① ② ③ ④ ⑤ ⑥ ⑦

① Type of Product (SAW Filters)
② Package Size
③ Nominal Center Frequency
④ Spec.
⑤ Number of Terminals
⑥ Input/ Output
⑦ Custom Specification

Specifications

Part No.	Output	Application	Pass Band Frequency	Insertion Loss (dB)	Pass Band Variation (dB)	VSWR	Absolute Rejection (dB)										Operating Temperature	Storage Temperature
SF15-1900TASBA1	Balanced	(Filter1) BAND39	1880MHz - 1920MHz	2.0 max.	1.0 max.	2.0 max.	10MHz - 1000MHz	1000MHz - 1500MHz	1500MHz - 1795MHz	1795MHz - 1820MHz	1820MHz - 1840MHz	1980MHz - 2005MHz	2005MHz - 2110MHz	2110MHz - 2500MHz	2500MHz - 3000MHz	3000MHz - 4500MHz	4500MHz - 6000MHz	-30 to +85°C	-40 to +85°C
							50min.	38min.	30min.	20min.	10min.	15min.	25min.	29min.	32min.	45min.	40min.	
		(Filter2) BAND34	2010MHz - 2025MHz	2.5 max.	1.0 max.	2.0 max.	10MHz - 1013MHz	1013MHz - 1925MHz	1925MHz - 1950MHz	1950MHz - 1990MHz	2045MHz - 2075MHz	2075MHz - 2110MHz	2110MHz - 2170MHz	2170MHz - 2500MHz	2500MHz - 4000MHz	4000MHz - 6000MHz	—		
							50min.	32min.	14min.	3.5min.	2min.	17min.	32min.	32min.	41min.	38min.	—		
SF15-2017TASBA1		Filter1 BAND34	2010MHz - 2025MHz	2.5 max.	1.0 max.	2.0 max.	10MHz - 1013MHz	1013MHz - 1925MHz	1925MHz - 1950MHz	1950MHz - 1990MHz	2045MHz - 2075MHz	2075MHz - 2110MHz	2110MHz - 2170MHz	2170MHz - 2500MHz	2500MHz - 4000MHz	4000MHz - 6000MHz	—		
							50min.	32min.	14min.	3.5min.	2min.	17min.	32min.	32min.	41min.	38min.	—		
		Filter2 BAND39	1880MHz - 1920MHz	2.0 max.	1.0 max.	2.0 max.	10MHz - 1000MHz	1000MHz - 1500MHz	1500MHz - 1795MHz	1795MHz - 1820MHz	1820MHz - 1840MHz	1980MHz - 2005MHz	2005MHz - 2110MHz	2110MHz - 2500MHz	2500MHz - 3000MHz	3000MHz - 4500MHz	4500MHz - 6000MHz		
							50min.	38min.	30min.	20min.	10min.	15min.	26min.	29min.	32min.	40min.	35min.		

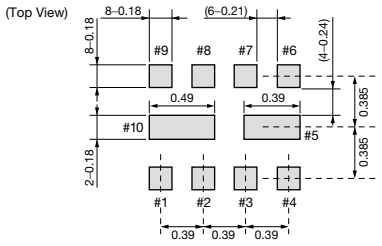
Dimensions



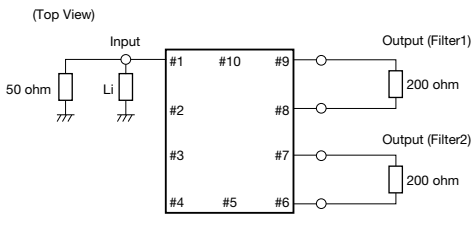
Unit: mm
K: Kyocera logo
**: Identification no.
* : Monthly Code
⋮: Index mark of ten days
(⋮1st-10th, ⁚11th-20th, ⋰ 21st-31st)

PIN No.	Function	PIN No.	Function
#1	Input	#6	Output (Filter2)
#2	GND	#7	Output (Filter2)
#3	GND	#8	Output (Filter1)
#4	GND	#9	Output (Filter1)
#5	GND	#10	GND

Recommended Land Pattern



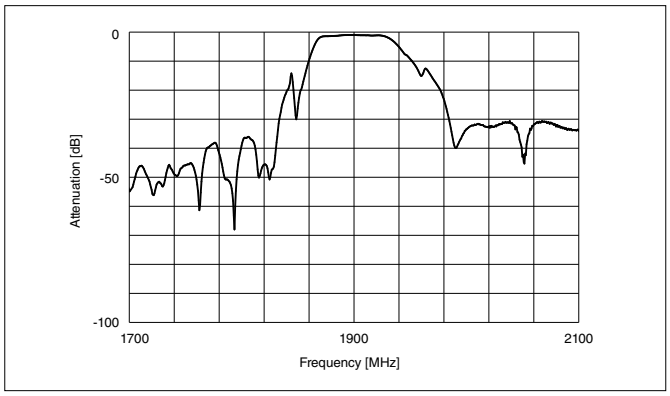
Test Circuit



Characteristics

Part No.: SF15-1900TASBA1

<BAND39>



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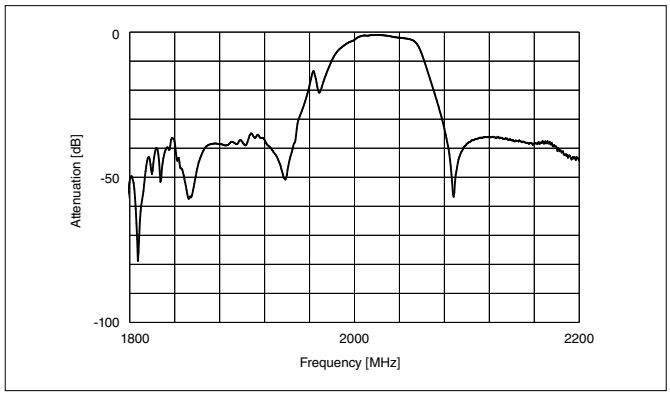

Part No.: SF15-2017TASBA1

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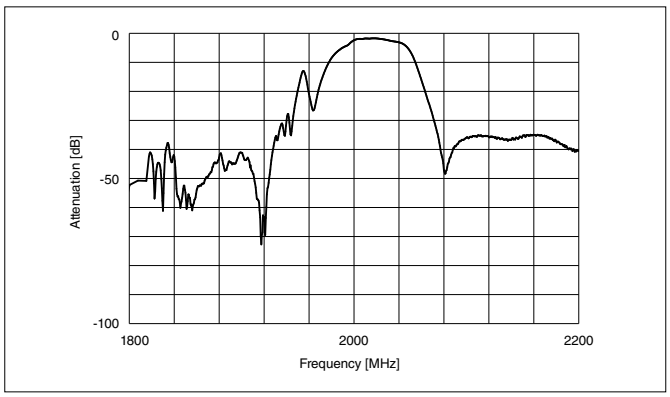

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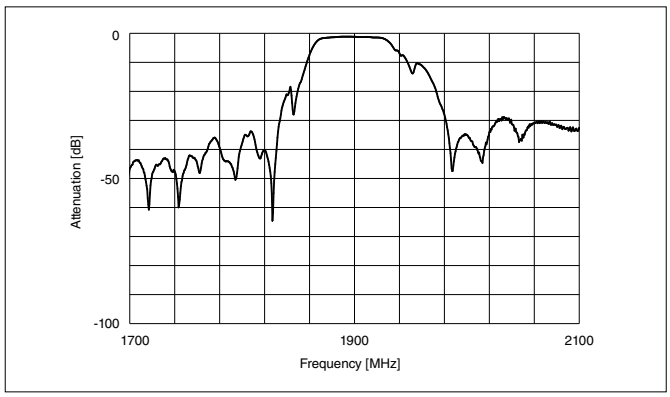
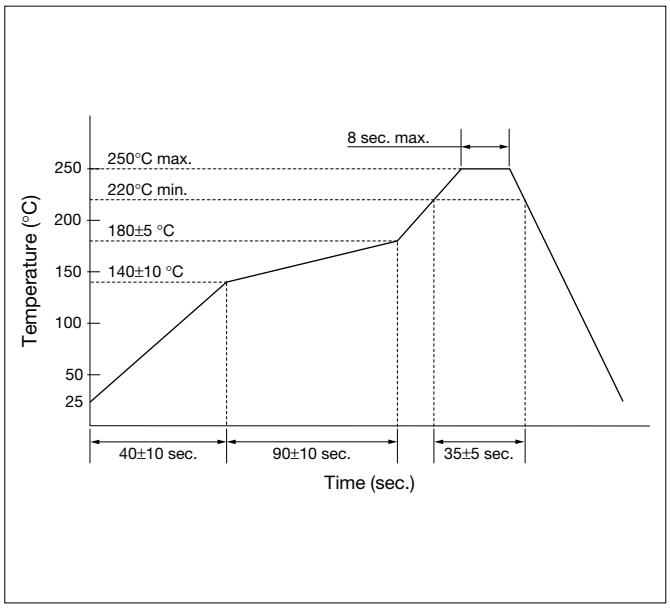
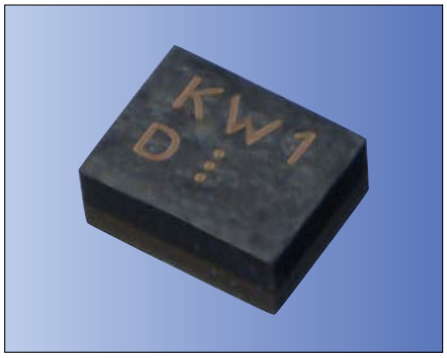


Recommended Reflow Profile



Wireless LAN/ Bluetooth® SAW Filters
SF14 Series



RoHS Compliant

Features

- Small size
- Low insertion loss
- High power durability
- Hermetic seal

Applications

- Wireless LAN/ Bluetooth®

* Bluetooth® Trademarks are owned by Bluetooth SIG Inc.

How to Order

SF 14 - 2446 M 5 UU A3
① ② ③ ④ ⑤ ⑥ ⑦

① Type of Product (SAW Filter)
② Package Type
③ Nominal Center Frequency
④ Spec.
⑤ Number of Terminals
⑥ Input/ Output
⑦ Custom Specification

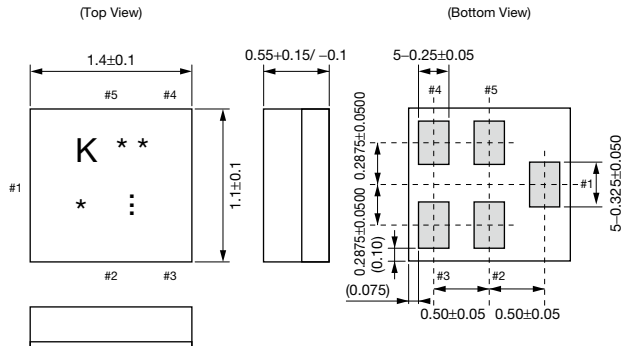
Specifications

Part No.	Output	Application	Pass Band Frequency	Insertion Loss (dB)	Pass Band Variation (dB)	VSWR	Absolute Rejection (dB)						Operating Temperature	Storage Temperature
							869MHz - 894MHz	925MHz - 960MHz	1574MHz - 1576MHz	1805MHz - 1880MHz	2110MHz - 2170MHz	2595MHz - 2625MHz		
SF14-2446M5UUA3	Unbalance	W-LAN/ Bluetooth®	2400MHz - 2493MHz	2.3 max.	1.4 max.	2.1 max.	50 min.	50 min.	38 min.	30 min.	28 min.	30 min.	−30 to +85°C	−40 to +85°C

Rating

Part No.	Max Input Power (dBm)	Condition
SF14-2446M5UUA3	+24 max.	10,000hours/ +65°C

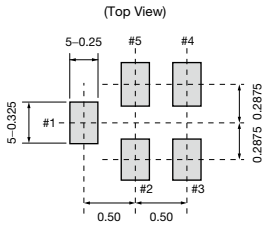
Dimensions



Unit: mm
K: Kyocera logo
**: Identification no.
* : Monthly Code
⋮: Index mark of ten days
(⁝1st-10th, ⁚11th-20th, ⋅ 21st-31st)

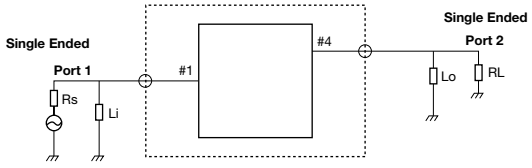
PIN No.	Function
#1	Tx/ Rx
#2	GND
#3	GND
#4	Ant
#5	GND

Recommended Land Pattern



Unit : mm
: Electrode

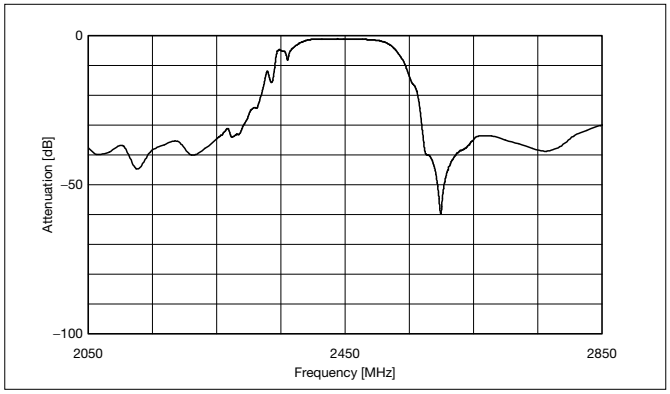
Test Circuit



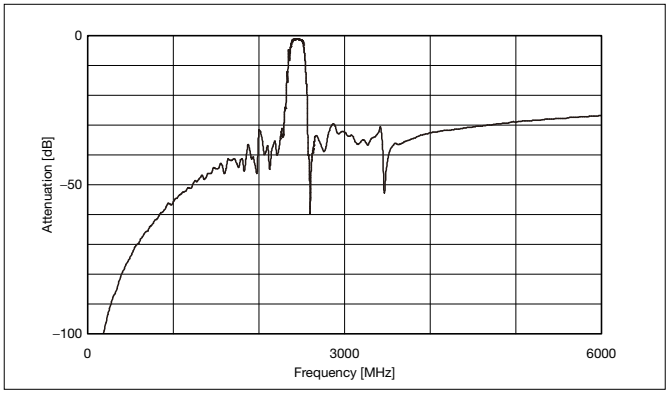
Condition: Rs=50ohm
RL=50ohm
Ll=2.7nH
Lo=2.7nH

Characteristics

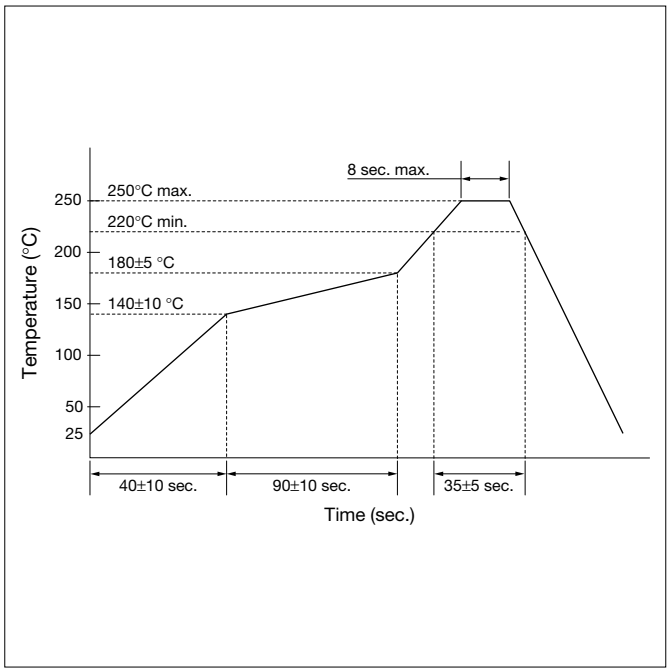
Part No.: SF14-2446M5UUA3



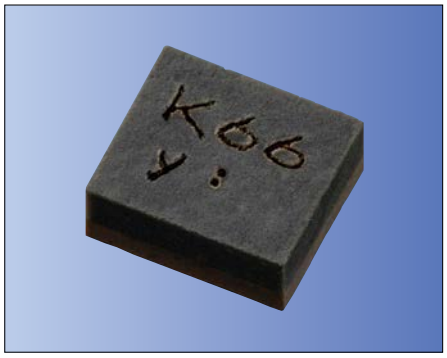
Part No.: SF14-2446M5UUA3



Recommended Reflow Profile



SAW Filters
RF SAW Filters for Short Range Communication Device
SF14 Series/ SF16 Series



RoHS Compliant

Features

- Small size
- Low insertion loss
- High selectivity
- Hermetic seal

Applications

- Short range device

How to Order

SF 16 - 0868 M 4 UU 01
① ② ③ ④ ⑤ ⑥ ⑦

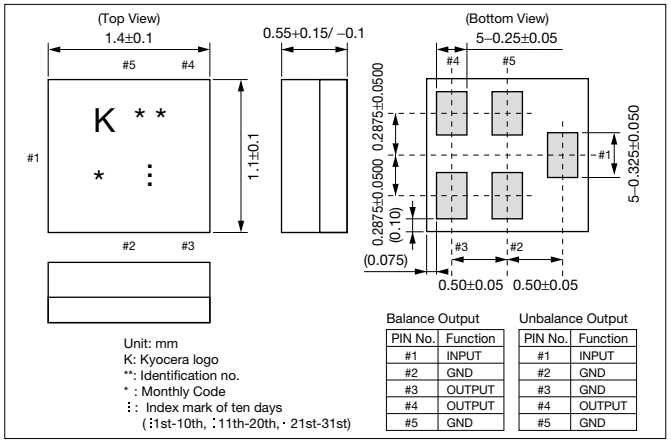
① Type of Product (SAW Filter)
② Package Size
③ Nominal Center Frequency
④ Spec.
⑤ Number of Terminals
⑥ Input/ Output
⑦ Custom Specification

Specifications

Part No.	Output	Application	Pass Band Frequency	Insertion Loss (dB)	Pass Band Variation (dB)	VSWR	Absolute Rejection (dB)								Operating Temperature	Storage Temperature
SF14-0915M5UUA1	Unbalance	Short range device	902MHz - 928MHz	3.0 max.	1.8 max.	2.0 max.	0.3MHz - 800MHz	800MHz - 845MHz	845MHz - 880MHz	947MHz - 992MHz	992MHz - 1020MHz	1020MHz - 1200MHz	—	—	−30 to +85°C	−40 to +85°C
							50 min.	45 min.	33 min.	13 min.	35 min.	45 min.	—	—		
SF16-0868M4UU01		Short range device	858.92MHz - 877.92MHz	4.0 max.	2.0 max.	2.5 max.	0.1MHz - 787.92MHz	813.92MHz - 832.92MHz	903.92MHz - 922.92MHz	948.92MHz - 1200MHz	1200MHz - 2000MHz	—	—	—		
							35 min.	20 min.	20 min.	35 min.	20 min.	—	—	—		
SF16-0908M4UU01		Short range device	898.92MHz - 917.92MHz	4.0 max.	2.0 max.	2.5 max.	0MHz - 827.92MHz	853.92MHz - 872.92MHz	943.92MHz - 962.92MHz	988.92MHz - 1200MHz	1200MHz - 2000MHz	—	—	—		
							35 min.	20 min.	20 min.	35 min.	20 min.	—	—	—		
SF16-0923M4UUA2		Short range device	919MHz - 928MHz	4.0 max.	3.0 max.	2.2 max.	0MHz - 880MHz	880MHz - 990MHz	900MHz - 910MHz	910MHz - 915MHz	940MHz - 950MHz	950MHz - 1000MHz	1000MHz - 2450MHz	2450MHz - 3000MHz		
							30 min.	20 min.	15 min.	3 min.	10 min.	27 min.	27 min.	23 min.		

Dimensions

SF14 Series



Unit: mm
K: Kyocera logo
**: Identification no.
* : Monthly Code
⋮: Index mark of ten days
(⋮1st-10th, ⋮11th-20th, ⋱ 21st-31st)

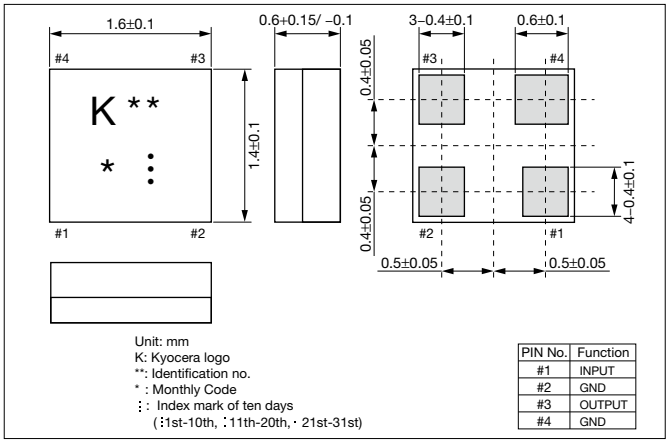
Balance Output

PIN No.	Function
#1	INPUT
#2	GND
#3	OUTPUT
#4	OUTPUT
#5	GND

Unbalance Output

PIN No.	Function
#1	INPUT
#2	GND
#3	GND
#4	OUTPUT
#5	GND

SF16 Series

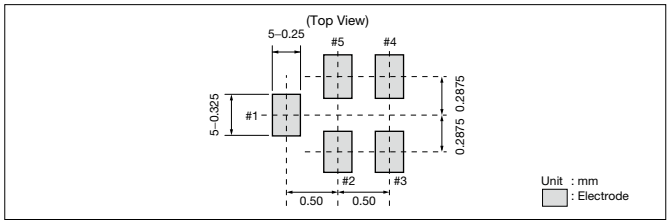


Unit: mm
K: Kyocera logo
**: Identification no.
* : Monthly Code
⋮: Index mark of ten days
(⋮1st-10th, ⋮11th-20th, ⋱ 21st-31st)

PIN No.	Function
#1	INPUT
#2	GND
#3	OUTPUT
#4	GND

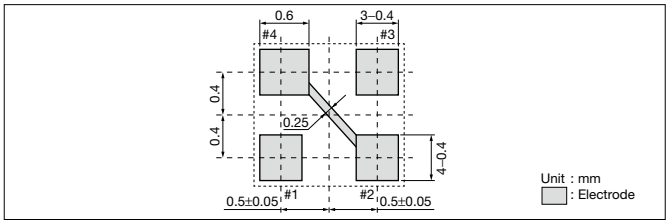
Recommended Land Pattern

SF14 Series



Unit : mm
: Electrode

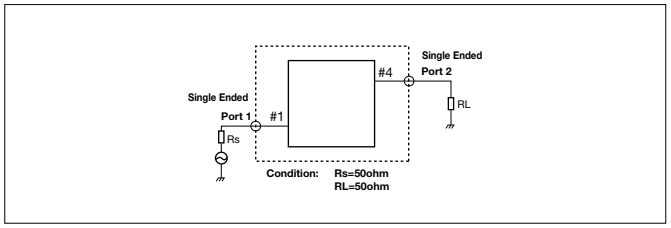
SF16 Series



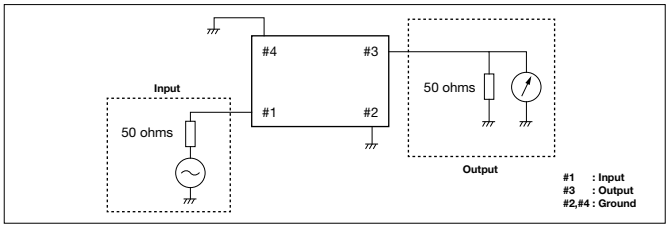
Unit : mm
: Electrode

Test Circuit

SF14 Series



SF16 Series



Characteristics

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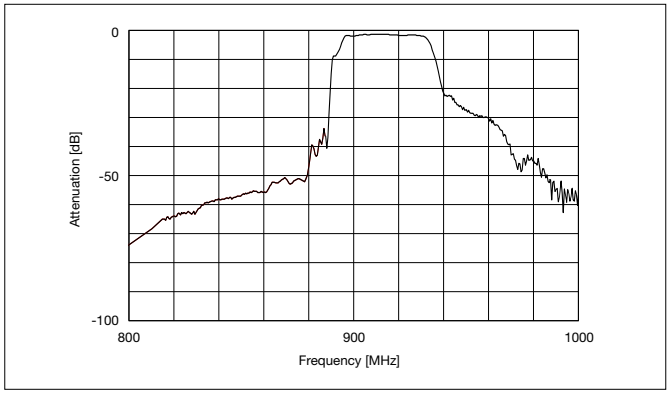

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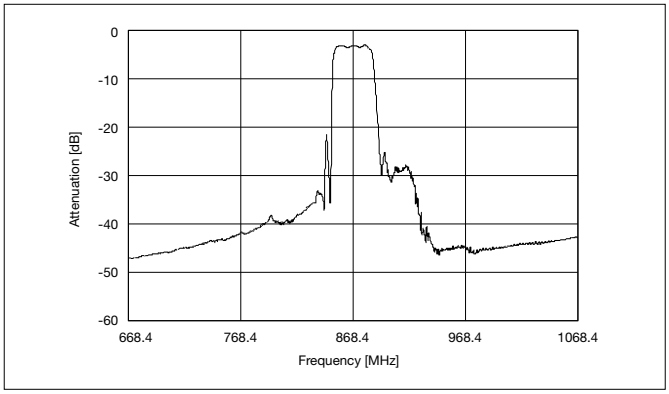

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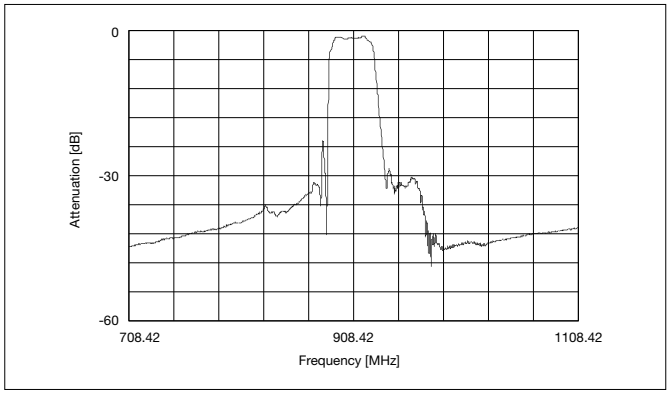

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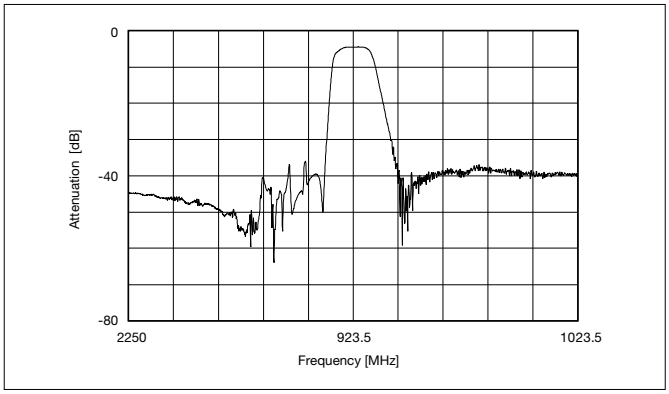
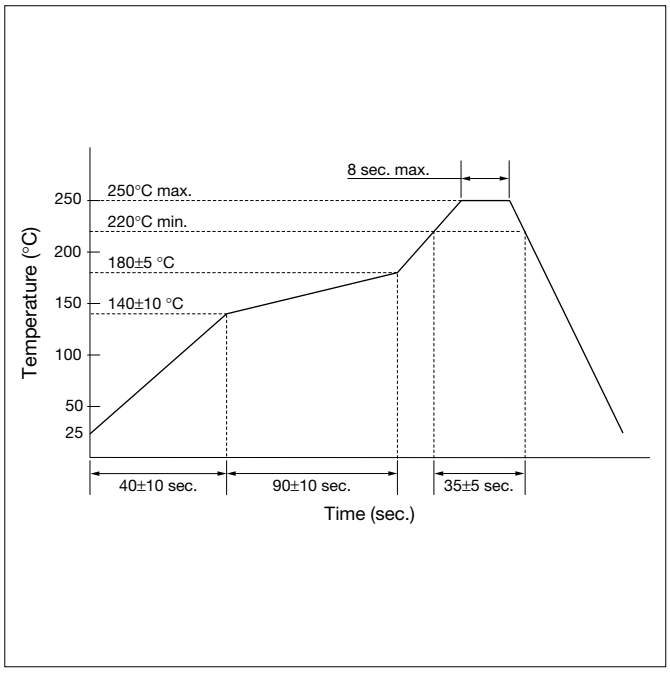
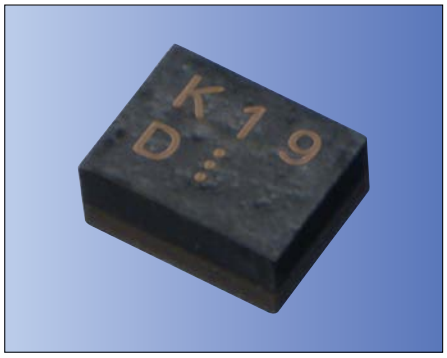


Recommended Reflow Profile



GNSS RF SAW Filters
SF14 Series

KYOCERA



RoHS Compliant

Features

- Small size
- Low insertion loss
- High selectivity
- Hermetic seal

Applications

- GNSS

How to Order

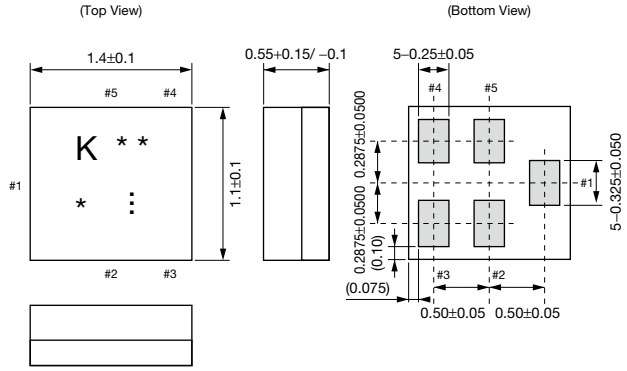
SF 14 - 1575 M 5 UB A1
① ② ③ ④ ⑤ ⑥ ⑦

① Type of Product (SAW Filter)
② Package Size
③ Nominal Center Frequency
④ Spec.
⑤ Number of Terminals
⑥ Input/ Output
⑦ Custom Specification

Specifications

Part No.	Output	Application	Pass Band Frequency	Insertion Loss (dB)	Pass Band Variation (dB)	VSWR (In/ Out)	Absolute Rejection (dB)						Operating Temperature	Storage Temperature
SF14-1575M5UBA1	Balanced	GPS Rx	1574.42MHz - 1576.42MHz	1.6 max.	1.0 max.	1.6 max. / 1.6 max.	810MHz - 960MHz	1429MHz - 1453MHz	1501MHz - 1525MHz	1920MHz - 1980MHz	1980MHz - 2400MHz	2400MHz - 2500MHz	−30 to +85°C	−40 to +85°C
							50 min.	35 min.	27 min.	41 min.	29 min.	46 min.		
SF14-1575M5UBB1		GPS Rx	1574.42MHz - 1576.42MHz	2.0 max.	1.0 max.	1.8 max. / 1.8 max.	810MHz - 960MHz	1429MHz - 1453MHz	1453MHz - 1525MHz	1625MHz - 1920MHz	1920MHz - 1980MHz	1980MHz - 5000MHz		
							50 min.	35 min.	30 min.	23 min.	50 min.	35 min.		
SF14-1575F5UUA1	Unbalanced	GPS Rx	1573.92MHz - 1576.92MHz	1.2 max.	0.6 max.	1.7 max. / 1.7 max.	843MHz - 925MHz	1429MHz - 1501MHz	1501MHz - 1525MHz	1920MHz - 1980MHz	1980MHz - 2500MHz	2500MHz - 3000MHz		
							40 min.	38 min.	30 min.	40 min.	40 min.	35 min.		
SF14-1575F5UUC1		GPS Rx	1574.42MHz - 1576.42MHz	0.8 max.	0.6 max.	1.8 max. / 1.8 max.	824MHz - 960MHz	1500MHz - 1525MHz	1625MHz - 1650MHz	1710MHz - 2170MHz	—	—		
							20 min.	20 min.	20 min.	20 min.	—	—		
SF14-1582M5UUD2		GPS GLONASS COMPASS	1574.39MHz - 1576.45MHz	1.5 max.	—	2.0 max. / 2.0 max.	10MHz - 925MHz	925MHz - 960MHz	1427MHz - 1463MHz	1850MHz - 1910MHz	1920MHz - 1980MHz	2401MHz - 2483MHz		
			1565.19MHz - 1585.65MHz	2.0 max.		2.0 max. / 2.0 max.								
			1559.05MHz - 1563.15MHz	2.3 max.		2.2 max. / 2.3 max.								
			1597.55MHz - 1605.89MHz	2.2 max.		2.0 max. / 2.0 max.	40 min.	40 min.	40 min.	37 min.	39 min.	38 min.		

Dimensions



Unit: mm
K: Kyocera logo
**: Identification no.
* : Monthly Code
⋮: Index mark of ten days
(⋮1st-10th, ⋮11th-20th, ・21st-31st)

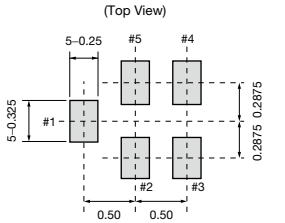
Balance Output

PIN No.	Function
#1	INPUT
#2	GND
#3	OUTPUT
#4	OUTPUT
#5	GND

Unbalance Output

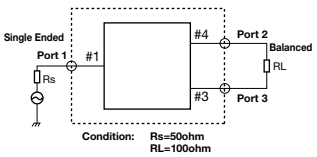
PIN No.	Function
#1	INPUT
#2	GND
#3	GND
#4	OUTPUT
#5	GND

Recommended Land Pattern

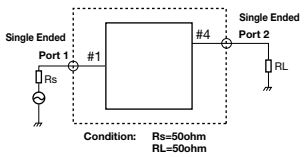


Test Circuit

<Balance Output Type>

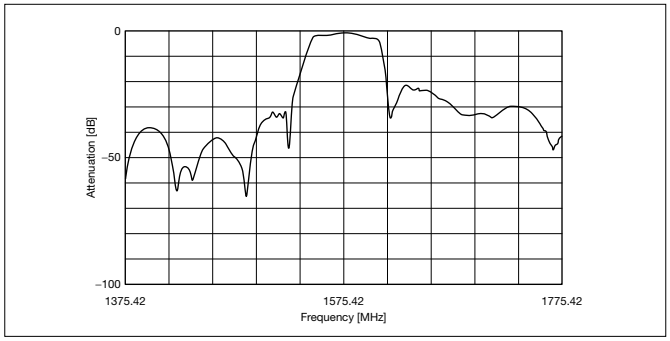


<Unbalance Output Type>

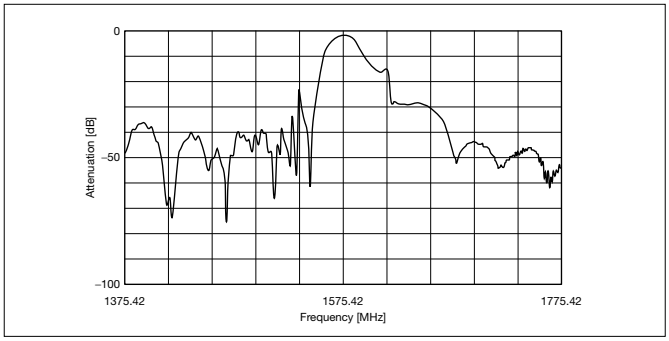


Characteristics

Part No.: SF14-1575M5UBA1



Part No.: SF14-1575M5UBB1



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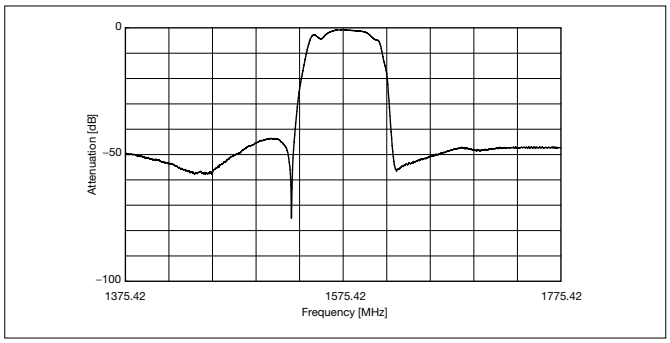
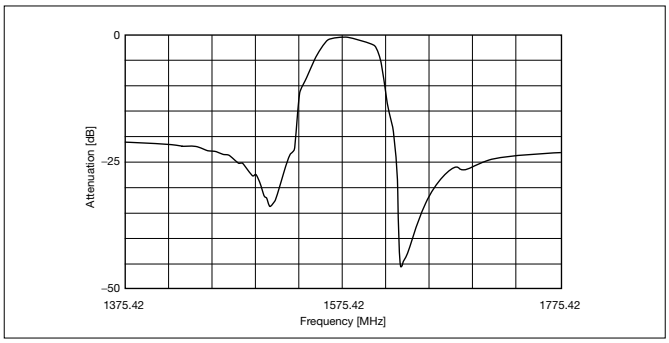
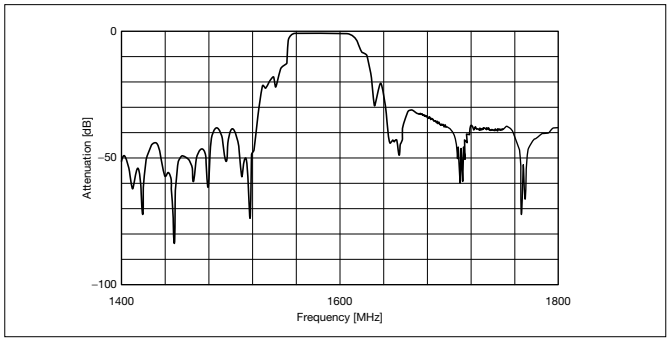


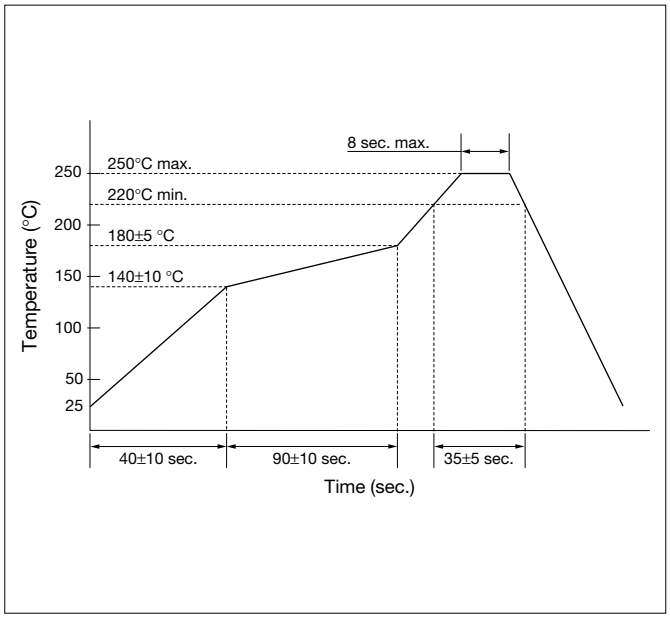
Part No.: SF14-1575F5UUC1



Part No.: SF14-1582M5UUD2



Recommended Reflow Profile



1. Operating Environment

1) Use products within the rated operating temperature, otherwise it may not satisfy electrical characteristics specifications. It might work initially, but there is a high possibility that it will cause degradation, breakdown and lower reliability.

2) This product is designed and manufactured with intention to be used in electronic devices for standard applications, but not in the following environment which may affect performance of the product. Be sure not to use products in the following conditions which may cause electrical characteristics and reliability degradation.
   · Under corrosive gas (Cl_2, H_2S, NH_3, SOx, NOx, etc.)
   · Under volatile and inflammability gas
   · Dusty environment
   · Direct exposure to water, or high humidity environment
   · Direct sunlight
   · High static electricity, or high electric intensity.

   Please consult with us if you intend to use products in the above environment.

3) This product can not be used in liquid such as water, oil, chemical and organic solvent.

4) Operate under rated voltage, otherwise it may not satisfy electrical characteristics specifications. It might work initially, but there is high possibility that it will cause degradation, breakdown and lower the reliability.

5) Avoid contact with other components on the board, since outer resin is not intended for the insulation with other components.

6) There might be a strong electrical charge when rapid thermal change is applied to this product. This charge may damage the product and the peripheral circuit. Therefore, insert load discharge path between input/output and ground.

7) Do not apply larger load greater than the one loaded in the environmental test. It might work initially, but there is a high possibility that it will cause degradation, breakdown and lower the reliability.

8) Do not use transfer mold for this product. It may break hermetic seal and cause abnormal operation. Please consult us when molding by resin.

2. Storage instructions

1) Do not store products in the following environment which may deteriorate solderability.
   · Under corrosive gas (Cl_2, H_2S, NH_3, SOx, NOx, etc.)
   · Under volatile and inflammability gas
   · Dusty environment
   · Direct exposure to water, or high humidity environment
   · Direct sunlight
   · High static electricity, or high electric intensity

   Please consult with us if you intend to use products in the above environment.

2) Store products under normal temperature and humidity in the sealed or unopened package.
   Storage of products for over 12months after shipment may deteriorate solderability, and it is advised to perform solderability test before use. Also, be cautioned that color of electrode might change after a long term storage.

3) Open the sealed pack just before use.
   Practice assembly within 168 hours after opening the pack, and in the condition of 5-30deg.C and below 60%RH.

4) Stacking the box too high may cause fall over. It is advised to stack the box at the maximum of 5 boxes.

3. Handling instructions

1) Do not apply larger vibration or shock greater than specified, since it may cause degradation, breakdown and lower reliability.

2) Do not apply larger shock or load greater than specified, while carrying the board with products mounted.

3) Take appropriate measure to avoid static electricity and high voltage when handling products, since it may cause degradation or damage to the products.

4) Do not handle this product with bear hands.

4. Assembly instructions

1) Place products in the place to avoid stress from bending and camber of the board.
   There may be a large stress or shock when the product is placed near the connection parts with other outer parts.

2) Please do not apply larger stress greater than the one loaded in the environmental test when mounting on the board.

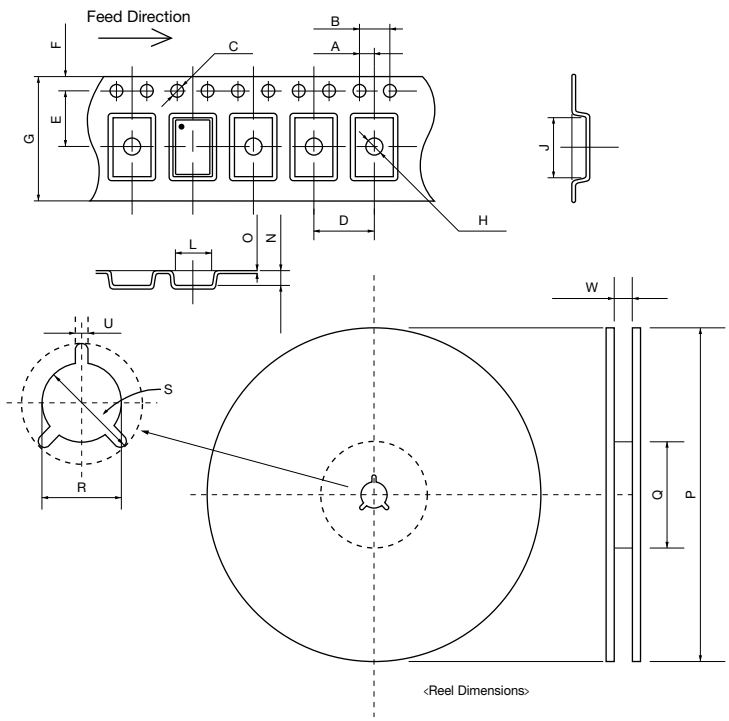
3) Make sure to solder all electrodes to the board, otherwise it may cause lower electrode strength.

Tape & Reel Specifications

■ SAW Duplexers/ SAW Filters

(Unit: mm)

		SAW Duplexers		SAW Filters				
		SD18	SD20	SF14	SF15	SF16	SF18	SF20
TAPE	A	2.0±0.05	2.0±0.05	2.0±0.05	2.0±0.05	2.0±0.05	2.0±0.05	2.0±0.05
	B	4.0±0.1	4.0±0.1	4.0±0.1	4.0±0.1	4.0±0.1	4.0±0.1	4.0±0.1
	C	ϕ1.5+0.1/ -0	1.5±0.1	ϕ1.5±0.1	1.5±0.1	1.5±0.1	ϕ1.5+0.1/ -0	1.5±0.1
	D	4.0±0.1	4.0±0.1	4.0±0.1	4.0±0.1	4.0±0.1	4.0±0.1	4.0±0.1
	E	3.5±0.05	3.5±0.05	3.5±0.05	3.5±0.05	3.5±0.05	3.5±0.05	3.5±0.05
	F	1.75±0.1	1.75±0.1	1.75±0.1	1.75±0.1	1.75±0.1	1.75±0.1	1.75±0.1
	G	8.0±0.1	8.0±0.2	8.0±0.2	8.0±0.2	8.0±0.2	8.0±0.1	8.0±0.2
	H	ϕ0.8±0.05	1.1±0.1	ϕ0.5±0.05	0.5±0.1	1.1±0.1	ϕ0.8±0.05	1.1±0.1
	J	2.05±0.1	2.25±0.1	1.7±0.1	1.80±0.1	1.90±0.1	2.05±0.1	2.25±0.1
	L	1.7±0.1	1.8±0.1	1.4±0.1	1.4±0.1	1.85±0.1	1.7±0.1	1.8±0.1
	N	0.85+0/ -0.5	0.7±0.1	0.8±0.1	0.7±0.1	0.95±0.2	0.85+0/ -0.5	0.7±0.1
	O	0.2±0.05	0.2±0.05	0.2±0.05	0.2±0.05	0.25±0.05	0.2±0.05	0.2±0.05
REEL	P	ϕ178±2	ϕ178±2	ϕ178±2	ϕ178±2	ϕ178±2	ϕ178±2	ϕ178±2
	Q	ϕ60±2	ϕ60±2	ϕ60±2	ϕ60±2	ϕ60±2	ϕ60±2	ϕ60±2
	R	ϕ13±0.2	ϕ13±0.2	ϕ13±0.2	ϕ13±0.2	ϕ13±0.2	ϕ13±0.2	ϕ13±0.2
	S	ϕ21±0.8	ϕ21±0.8	ϕ21±0.8	ϕ21±0.8	ϕ21±0.8	ϕ21±0.8	ϕ21±0.8
	U	2±0.5	2±0.5	2±0.5	2±0.5	2±0.5	2±0.5	2±0.5
	W	9.5±1	9.5±1	9.5±1	9.5±1	9.5±1	9.5±1	9.5±1
Qty.		3000	3000	3000	3000	3000	3000	3000



‹Reel Dimensions›