

RoHS Compliant

**Features**

- High attenuation
- High isolation
- Rx unbalanced output type

**Applications**

- UMTS (W-CDMA)
- CDMA

**How to Order**

**SD 20 - 1950 R 9 UU Q1**  
① ② ③ ④ ⑤ ⑥ ⑦

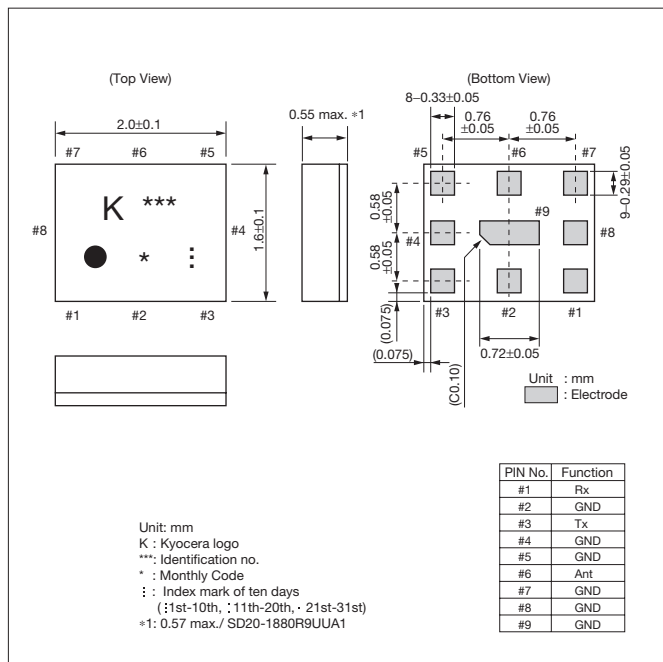
- ① Type of Product (SAW Duplexer)
- ② Package Size
- ③ Nominal Center Frequency
- ④ Spec.
- ⑤ Number of Terminals
- ⑥ Input/ Output
- ⑦ Custom Specification

**Specifications**

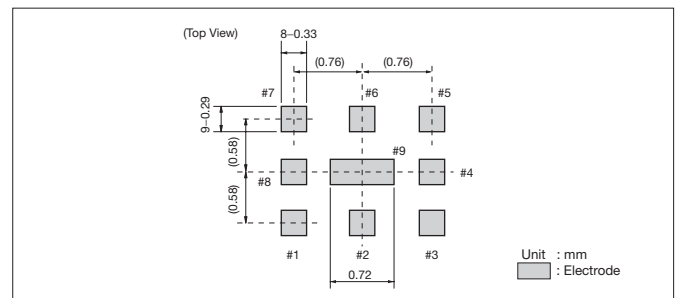
Part No.	Band	Condition	Pass Band Frequency	Insertion Loss (dB)	Pass Band Variation (dB)	VSWR	Absolute Rejection (dB)						Isolation Tx to Rx (dB)	Operating Temperature	Storage Temperature
SD20-1950R9UUQ1	Band1	Tx to Ant	1920.48MHz - 1979.52MHz	2.1 max.	0.5 max.	2.2 max.	843MHz, 894MHz, 1MHz, 1920MHz, 1980MHz, 2025MHz, 2400MHz, 2484MHz, 6000MHz	1573.374MHz, 1577.466MHz, 1920MHz, 1980MHz, 2255MHz, 2400MHz, 2484MHz, 6000MHz	1805MHz, 1865MHz, 1880MHz, 2025MHz, 2500MHz	1865MHz, 1880MHz, 2025MHz, 2400MHz, 2484MHz, 6000MHz	2010MHz, 2400MHz, 2500MHz	2400MHz, 2500MHz	51 min. (1920.48-1979.52MHz), 47 min. (2111.25-2168.75MHz)	-30 to +85°C	-40 to +85°C
		Ant to Rx	2110.48MHz - 2169.52MHz	2.6 max.	0.5 max.	2.2 max.	1920MHz, 1980MHz, 2025MHz, 2400MHz, 2484MHz, 6000MHz	1920MHz, 1980MHz, 2025MHz, 2400MHz, 2484MHz, 6000MHz	2400MHz, 2500MHz	2400MHz, 2484MHz, 6000MHz	2400MHz, 2500MHz	2400MHz, 2500MHz	51 min. (1920.48-1979.52MHz), 47 min. (2111.25-2168.75MHz)	-30 to +85°C	-40 to +85°C
SD20-1880R9UUA1	Band2	Tx to Ant	1850.48MHz - 1909.52MHz	2.4 max.*2 (1852.4-1907.6MHz), 2.5 max.*3 (1851.25-1908.75MHz)	1.8 max.	2.1 max.	869MHz, 894MHz, 44 min., 43 min., 35 min., 20 min., 40 min., 48 min.*2 (1932.4-1987.6MHz), 3.98 max.*3 (1934.25-1988.75MHz)	1573.374MHz, 1577.466MHz, 1920MHz, 1980MHz, 2255MHz, 2400MHz, 2484MHz, 6000MHz	2400MHz, 2500MHz	2400MHz, 2500MHz	4900MHz, 5850MHz	4900MHz, 5850MHz	53 min.*2 (1852.4-1907.6MHz), 52 min.*3 (1851.25-1908.75MHz)	-30 to +85°C	-40 to +85°C
		Ant to Rx	1930.48MHz - 1989.52MHz	3.5 max.*2 (1932.4-1987.6MHz), 3.98 max.*3 (1934.25-1988.75MHz)	2.5 max.	2.1 max.	824MHz, 849MHz, 40 min., 48 min.*2 (1932.4-1987.6MHz), 3.98 max.*3 (1934.25-1988.75MHz)	1852.4MHz, 1907.6MHz, 1908.75MHz, 2500MHz, 5950MHz	1851.25MHz, 2400MHz, 4900MHz	2400MHz, 4900MHz	4900MHz, 5950MHz	4900MHz, 5950MHz	51 min.*2 (1932.4-1987.6MHz), 48 min.*3 (1931.25-1988.75MHz)	-30 to +85°C	-40 to +85°C
SD20-0836R9UUQ1	Band5	Tx to Ant	824MHz - 849MHz	2.1 max.	1.0 max.	2.0 max.	869MHz, 894MHz, 48 min., 45 min., 38 min., 36 min., 5 min., 40 min., 48 min.*2 (1932.4-1987.6MHz), 3.98 max.*3 (1934.25-1988.75MHz)	1573.374MHz, 1577.466MHz, 1920MHz, 1980MHz, 2255MHz, 2400MHz, 2484MHz, 6000MHz	1638MHz, 1708MHz, 2557MHz, 5950MHz	2400MHz, 2500MHz	4900MHz, 5950MHz	4900MHz, 5950MHz	55 min. (824-849MHz)	-30 to +85°C	-40 to +85°C
		Ant to Rx	869MHz - 894MHz	2.4 max.	1.0 max.	2.0 max.	824MHz, 849MHz, 45 min., 50 min., 30 min., 3 min., 40 min., 25 min.	824MHz, 849MHz, 854MHz, 979MHz, 2500MHz, 5950MHz	2400MHz, 4900MHz	2400MHz, 4900MHz	2400MHz, 4900MHz	2400MHz, 4900MHz	53 min. (869.7-893.37MHz)	-30 to +85°C	-40 to +85°C
SD20-0897R9UUQ1	Band8	Tx to Ant	880.48MHz - 914.52MHz	2.7 max.*2 (882.4-912.6MHz)	1.5 max.	2.2 max.	927.4MHz, 957.6MHz, 44 min., 37 min., 30 min., 23 min., 23 min., 15 min.	1573.374MHz, 1577.466MHz, 1920MHz, 1980MHz, 2255MHz, 2400MHz, 2484MHz, 6000MHz	1760MHz, 1880MHz, 2500MHz, 2745MHz, 5950MHz	2400MHz, 2500MHz	2620MHz, 4900MHz	4900MHz, 5950MHz	53 min. (882.4-912.6MHz)	-30 to +85°C	-40 to +85°C
		Ant to Rx	925MHz - 960MHz	2.9 max.*2 (927.4-957.6MHz)	1.5 max.	2.2 max.	880MHz, 912.6MHz, 2500MHz, 5950MHz	880MHz, 912.6MHz, 2500MHz, 5950MHz	2400MHz, 4900MHz	2400MHz, 4900MHz	4900MHz, 5950MHz	4900MHz, 5950MHz	49 min. (927.4-957.6MHz)	-30 to +85°C	-40 to +85°C

\*1 Operating Temperature of +15 to +85°C \*2 Integrated calculation, WCDMA Modulation (±1.92MHz). Unit : dBint  
\*3 Integrated calculation, NCDMA Modulation (±0.615MHz). Unit : dBint

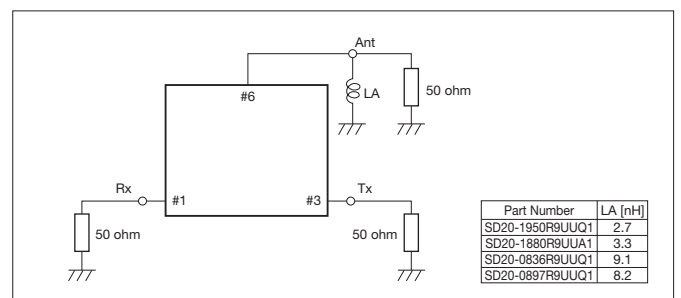
**Dimensions**



**Recommended Land Pattern**



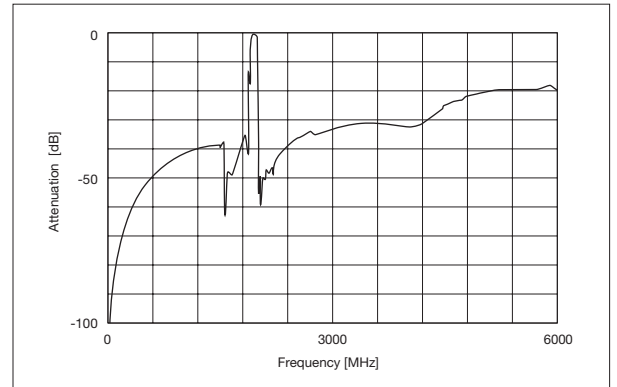
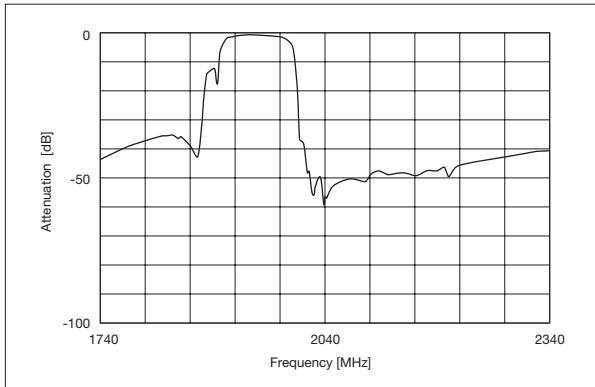
**Test Circuit**



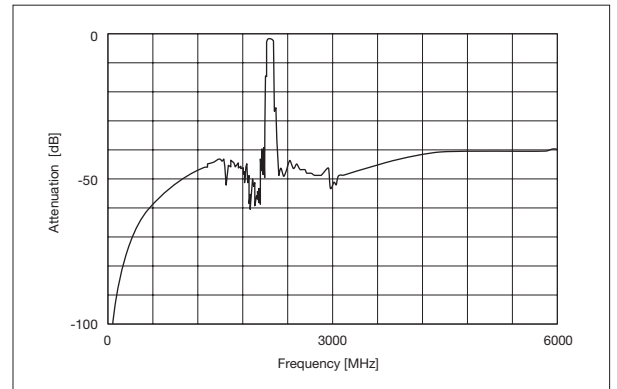
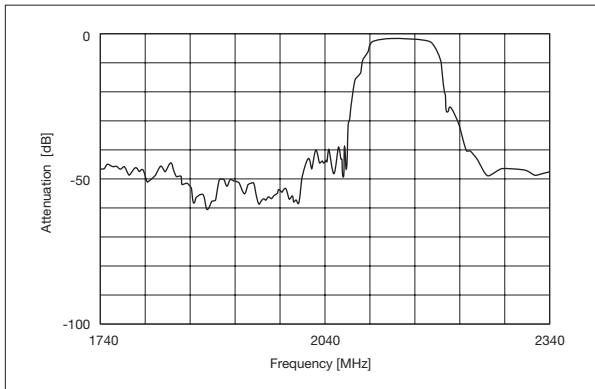
**Characteristics**

<Band1> Part No.: SD20-1950R9UUQ1

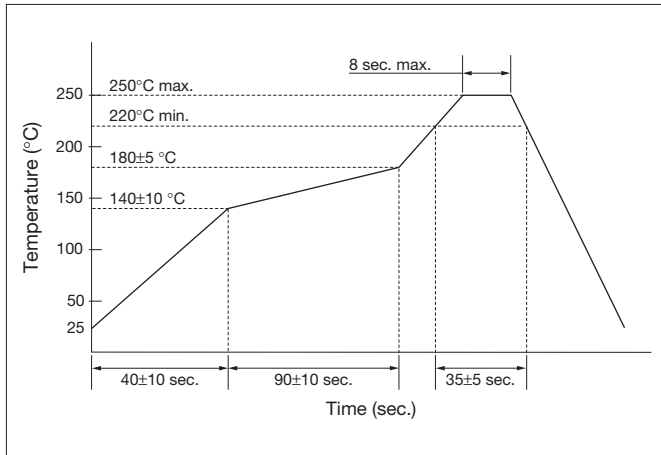
Tx to Ant



Ant to Rx



**Recommended Reflow Profile**



**Tape & Reel Specifications**

**SAW Duplexers/ SAW Filters**

(Unit: mm)

		SAW Duplexers			SAW Filters				
		SD18	SD20	SD25	SF14	SF15	SF16	SF18	SF20
T A P E	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	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	4.0±0.1
	C	φ1.5+0.1/ -0	1.5±0.1	φ1.5±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	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	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	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±0.2	8.0±0.1	8.0±0.2
	H	φ0.8±0.05	1.1±0.1	φ1.1±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	2.9±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	2.4±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	1.15±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	0.25±0.05	0.2±0.05	0.2±0.05	0.25±0.05	0.2±0.05	0.2±0.05	
R E E L	P	φ178±2	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	φ60±2
	R	φ13±0.2	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	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	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	9.5±1
Qty.		3000	3000	3000	3000	3000	3000	3000	3000

