2016size Band1 Balanced SAW Duplexer For UMTS and LTE

P/N: SD20-1950R9UBQ1(Rev.Q1-02)

2011.Jun

KYOCERA Corporation
Circuit Device division
Design Technology Section

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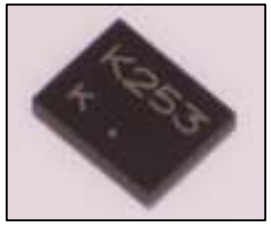
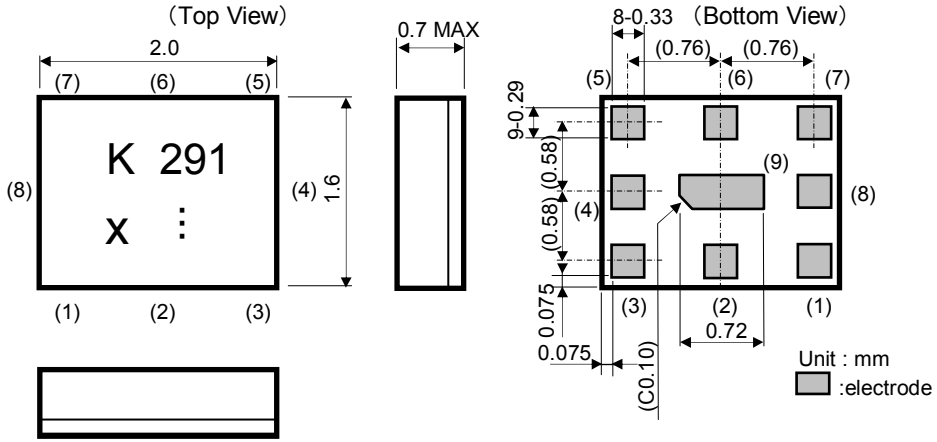
Appearance



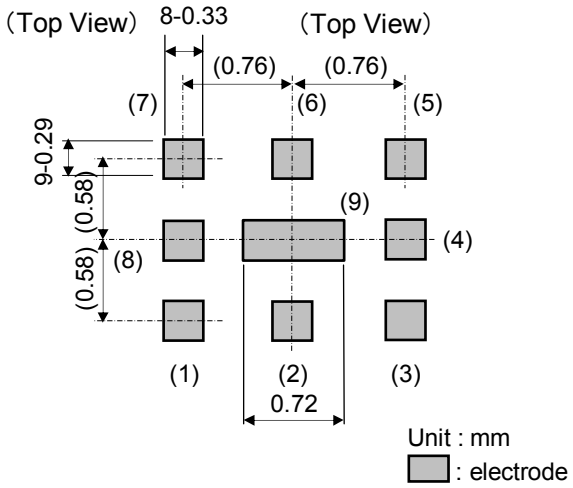
Marking should be “K291”

Dimensions

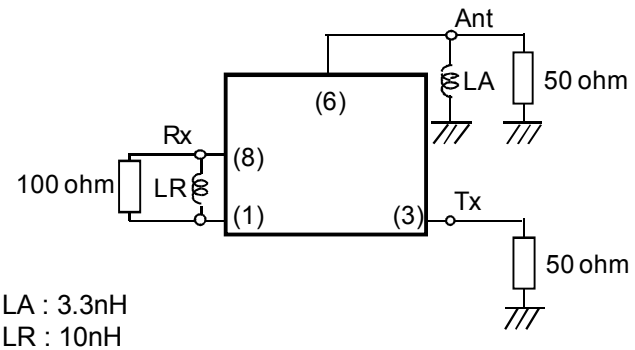


(1),(8)	: Rx
(3)	: Tx
(6)	: ANT
Other	: GND

Land Pattern



Measurement Circuit



LA : 3.3nH
LR : 10nH
Other Terminals are connected to GND.
Inductances are ideal. Balance Characteristics is calculated
Port Extension: 97ps
(Line-loss 0.15dB excluded for each port)

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Specifications and Sample Data (1)

Items			Frequency (MHz)	Unit	Tentative Specification (Rev. Q1-02) **		on board (@25deg.C)
					min.	max.	Rev. Q1-02
Tx to Ant	Insertion Loss		1920.48 - 1979.52	dB	-	2.1	1.7
	Ripple(any 5MHz)		1920.48 - 1979.52	dB	-	0.5	0.2
	VSWR	Tx	1920.48 - 1979.52	-	-	2.2	1.6
		Ant	1920.48 - 1979.52	-	-	2.2	1.5
	Attenuation		10 - 1574	dB	32	-	40
			843 - 894	dB	42	-	45
			1573.374 - 1577.466	dB	43	-	50
			1597.5515 - 1605.886	dB	43	-	49
			1805 - 1865	dB	30	-	37
			2010 - 2025	dB	20 *	-	46
			2110 - 2170	dB	45	-	50
			2400 - 2500	dB	34	-	39
			2496 - 2690	dB	30	-	36
			3830 - 3970	dB	25	-	32
			5150 - 5950	dB	15	-	19
Ant to Rx	Insertion Loss		2110.48 - 2169.52	dB	-	2.5	2.2
	Ripple(any 5MHz)		2110.48 - 2169.52	dB	-	0.5	0.3
	VSWR	Rx	2110.48 - 2169.52	-	-	2.2	1.7
		Ant	2110.48 - 2169.52	-	-	2.2	1.8
	Attenuation		1 - 1920	dB	38	-	44
			1730 - 1790	dB	40	-	49
			1920 - 1980	dB	47	-	57
			1980 - 2025	dB	20	-	26
			2255 - 2400	dB	35	-	51
			2400 - 2484	dB	35	-	47
			2484 - 6000	dB	35	-	46
	Amplitude Imbalance		2110.48 - 2169.52	dB dB	- -1.2	+1.2 -	0.7 -0.5
	Phase Imbalance		2110.48 - 2169.52	deg deg	- -12	+12 -	2.8 -3.2
Tx to Rx	Differential Mode		1920.48 - 1979.52	dB	52	-	56
			2111.25 - 2168.75	dB	50	-	54
	Common Mode		1920.48 - 1979.52	dB	50	-	52
Input Power (Tx port)				29dBm (0.8W) > 5,000hours (Ta=50deg.C)			
Impedance	Tx port			ohm	50ohm (Unbalance)		50ohm
	Ant port			ohm	50ohm // 3.3nH (Unbalance)		50ohm // 3.3nH
	Rx port			ohm	100ohm // 10nH (Balance)		100ohm // 10nH
Package Size				mm	2.0 x 1.6 typ. t0.7max.		
Operating Temperature Range				deg.C	-30 to +85		-
Storage Temperature Range				deg.C	-40 to +85		-

* -20 - +85 degC

** The specification might change.

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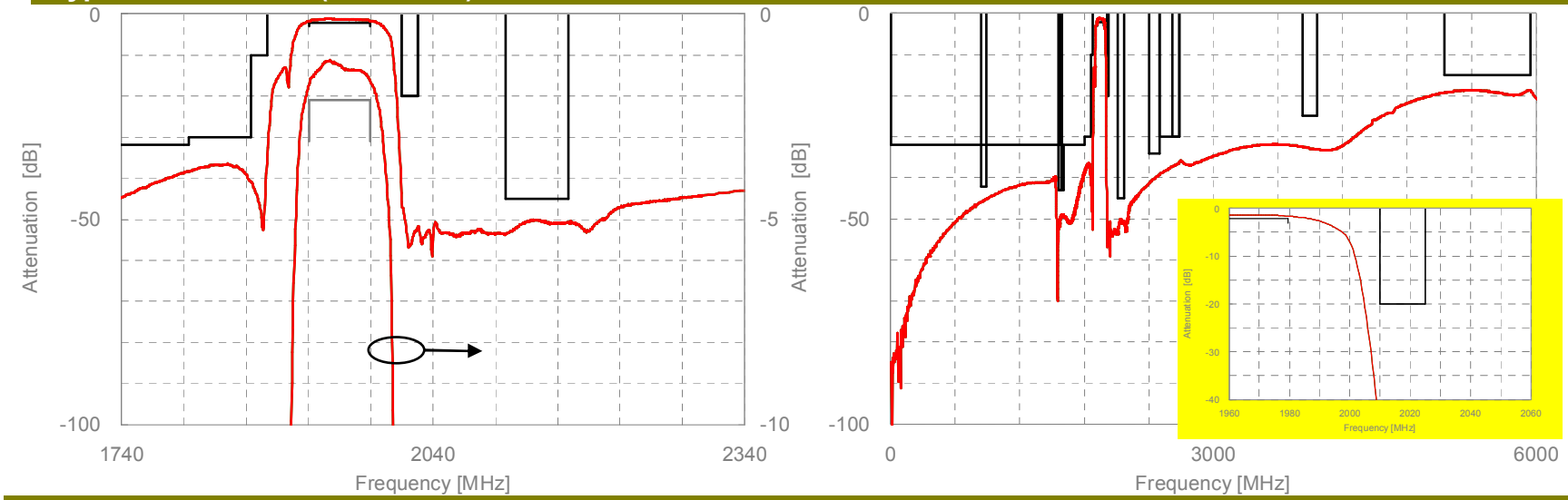
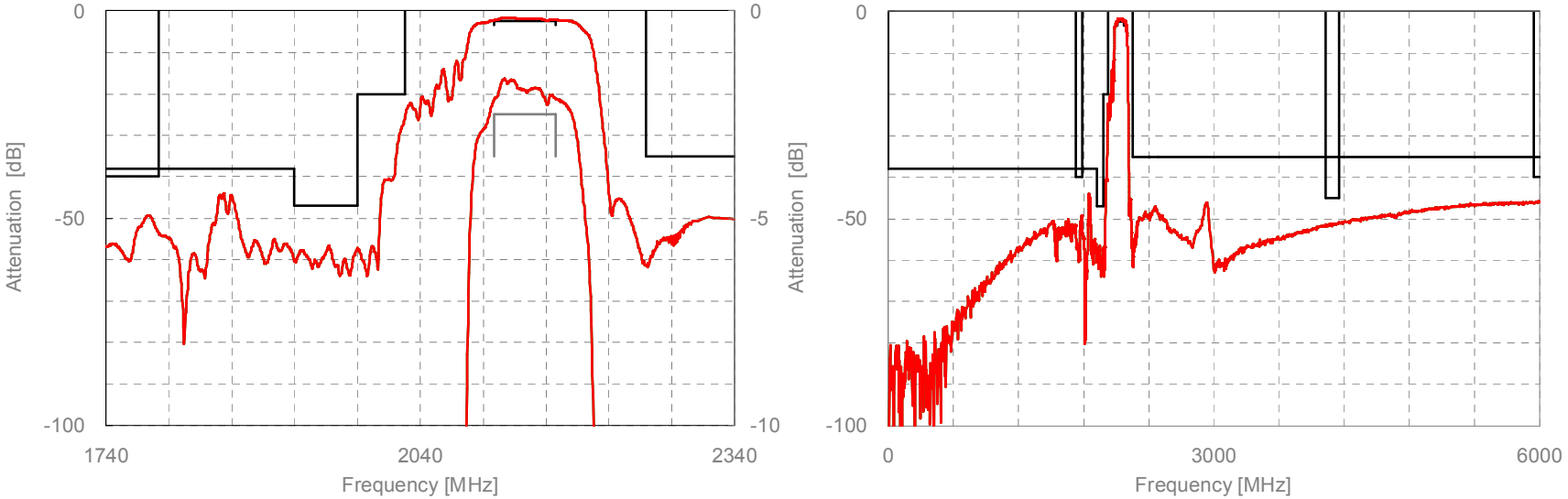
Typical Curve Data (Tx to ANT)



Typical Curve Data (ANT to Rx)



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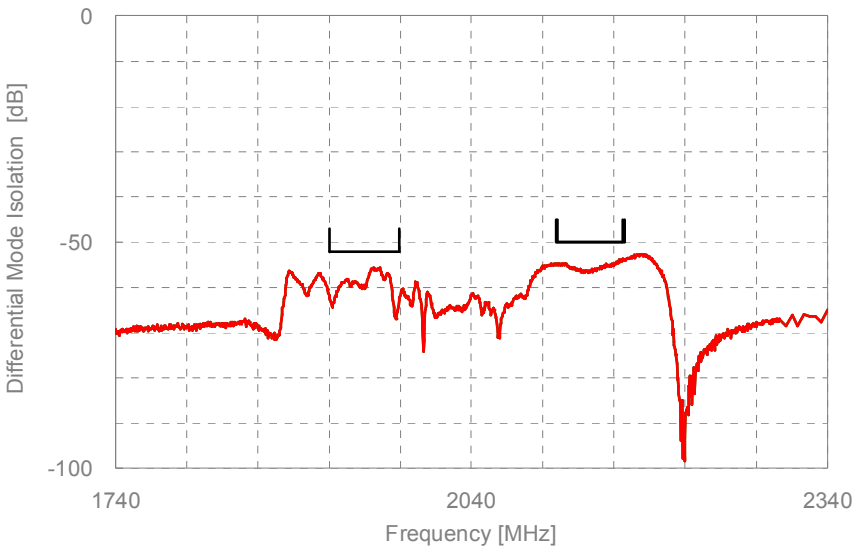
Typical Curve Data (Tx to Rx)



THE NEW VALUE FRONTIER

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