

MODULATORS/DEMODULATORS 50 Ω

52 MHz to 2000 MHz

LTCC

IQBG Case SM20A

SYIQ Case TTT1289

JCIQ Case BG291

I&Q MODULATORS

MODEL PREFIX	FREQUENCY (MHz)				CONVERSION LOSS (dB)			CARRIER REJECTION (-dBc)		SIDE BAND REJECTION (-dBc)		HARMONIC SUPPRESSION (-dBc)			
	RF (signal)/ LO (carrier)		I&Q		$\bar{X}$	σ	Max.	Typ.	Min.	Typ.	Min.	3X1/Q		5X1/Q	
	f_L - f_U	f_U	Min.	Max.								Typ.	Min.	Typ.	Min.

High rejection of carrier and sideband 52 MHz to 2000 MHz I&Q up to 0 dBm LO Power 10 dBm

JCIQ-88M	52	88	DC	5	5.6	0.1	7.0	40	32	35	30	45	35	65	50
JCIQ-176M	104	176	DC	5	5.6	0.1	7.0	35	30	35	30	45	35	65	50
SYIQ-895M	868	895	DC	5	6.4	0.1	7.5	38	30	39	30	45	35	64	50
IQBG-2000A	1800	2000	DC	10	7.5	—	9.0	30	20	34	28	50	45	70	50

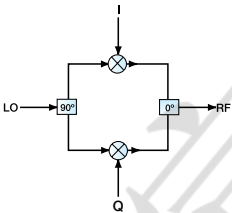
I&Q DEMODULATORS

MODEL PREFIX	FREQUENCY (MHz)				CONVERSION LOSS (dB)			AMPLITUDE UNBALANCE (dB)		PHASE UNBALANCE (Degrees)		HARMONIC SUPPRESSION (-dBc)			
	RF (signal)/ LO (carrier)		I&Q		$\bar{X}$	σ	Max.	Typ.	Max.	Typ.	Max.	3X1/Q		5X1/Q	
	f_L - f_U	f_U	Min.	Max.								Typ.	Min.	Typ.	Min.

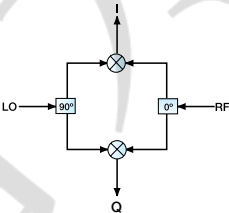
104 MHz to 1880 MHz LO Power 10 dBm RF up to 4 dBm

JCIQ-176D	104	176	DC	5	5.5	0.1	7.0	0.15	0.6	2	5	52	40	65	50
SYIQ-895D	868	895	DC	5	6.4	0.1	7.5	0.15	0.4	1.5	4	45	35	64	50
JCIQ-1880D	1805	1880	DC	5	8.0	0.2	10.5	0.2	0.6	2	5	50	35	65	50

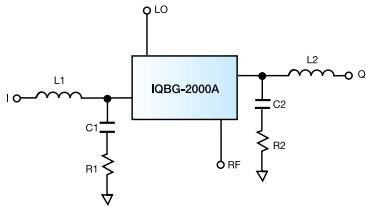
I&Q Modulation Block Diagram



I&Q Demodulation Block Diagram



Recommended IF Diplexer



L1, L2 33 nH CHIP INDUCTOR (1206)
C1, C2 10 pF NPO CHIP CAPACITOR (0603)
R1, R2 47 Ω 5% CHIP RESISTOR (0603)

