

MODULATORS/DEMODULATORS

9 MHz to 10.5 GHz QPSK, I&Q 50 Ω



ZFMQ
Case J17



ZMQ, ZAMQ
Case HH141

MODEL PREFIX	FREQUENCY (MHz)	INSERTION LOSS (dB)		AMPLITUDE UNBALANCE (dB)		PHASE UNBALANCE (Deg.)± With reference to 90°	1dB COMPR. (dBm)	VSWR (:1) TYP.	
		Typ.	Max.	Typ.	Max.	Typ.	Typ.	In	Out

QPSK MODULATORS wideband 360° in 90° steps Control current ±20 mA

ZMQ-1050	800-1050	5.5	7.5	0.5	1.0	3	7	4	2.0	2.0
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MODEL PREFIX	FREQUENCY (MHz)		CONVERSION LOSS (dB)			CARRIER REJECTION (-dBc)		SIDE BAND REJECTION (-dBc)		HARMONIC SUPPRESSION (-dBc)			
	RF (signal)/ LO (carrier) $f_L - f_U$	I&Q Min. Max.	$\bar{X}$	σ	Max.	Typ.	Min.	Typ.	Min.	3X1/Q Typ. Min.	5X1/Q Typ. Min.	Typ.	Min.

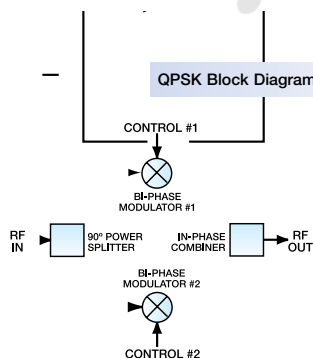
I&Q MODULATORS High Rejection of Carrier and Sideband LO = 10 dBm IF up to 0 dBm

ZFMQ-10M	9	11	DC	2	5.8	0.20	7.0	41	30	40	30	58	45	68	58
ZFMQ-70ML	66	73	DC	5	5.7	0.10	6.5	38	30	38	30	48	43	58	55
ZFMQ-91M	86	95	DC	5	5.5	0.17	6.5	38	30	38	30	48	45	58	55
ZFMQ-100M	95	105	DC	5	5.5	0.17	6.5	38	30	38	30	48	45	58	55
ZAMQ-895M	868	895	DC	5	8.0	0.10	10.5	40	30	40	30	52	35	58	50

MODEL PREFIX	FREQUENCY (MHz)		CONVERSION LOSS (dB)			AMPLITUDE UNBALANCE (dB)		PHASE UNBALANCE (Deg.)± With reference to 90°	HARMONIC SUPPRESSION (-dBc)	3X1/Q Typ. Min.	5X1/Q Typ. Min.
	RF (signal)/ LO (carrier) $f_L - f_U$	I&Q Min. Max.	$\bar{X}$	σ	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.

I&Q DEMODULATORS LO = 10 dBm RF up to 4 dBm

ZFMQ-10D	9	11	DC	2	6.0	0.10	7.0	0.15	0.3	1.0	3.0	50	35	35	55
ZFMQ-70D	66	73	DC	2	6.2	0.10	7.0	0.15	0.5	0.7	3.0	56	45	58	55
ZAMQ-895D	868	895	DC	5	8.0	0.20	10.5	0.15	0.3	1.5	4.0	52	35	58	50



Phase Shift VS. Control Current

Cont-1 (mA)	Cont-2 (mA)	Phase Shift (Deg.)
+20	+20	0
+20	-20	90
-20	-20	180
-20	+20	270

