

# Coaxial QPSK Modulator

## ZMQ-1050

50Ω

800 to 1050 MHz



### Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
Input power	100mW
Control current	40mA
Permanent damage may occur if any of these limits are exceeded.	

### Coaxial Connections

RF IN	3
RF OUT	1
CONTROL-1	4
CONTROL-2	2

### Features

- rugged shielded case
- good phase and amplitude balance

### Applications

- communication systems
- cellular

CASE STYLE: HHH141

Connectors	Model
SMA	ZMQ-1050

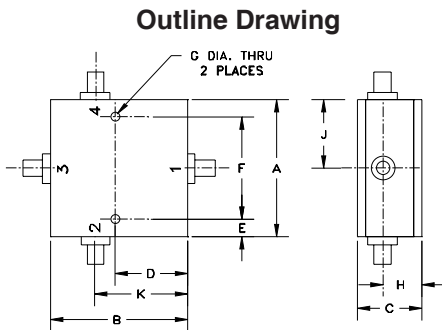
### Modulator Electrical Specifications

MODEL NO.	FREQUENCY (MHz)		INSERTION LOSS (dB)		AMPLITUDE UNBALANCE (dB)		PHASE UNBALANCE (Deg.)± with reference to 90°		1 dB COMPR. (dBm)	VSWR (:1) Typ.	
	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	In	Out
ZMQ-1050	800	1050	5.5	7.5	0.5	1.0	3	7	4	2.0	2.0

All specifications at control current ±20mA.  
Control ports drive with 50-ohm source.

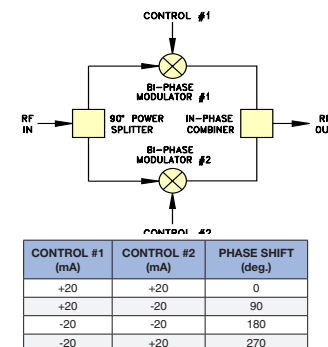
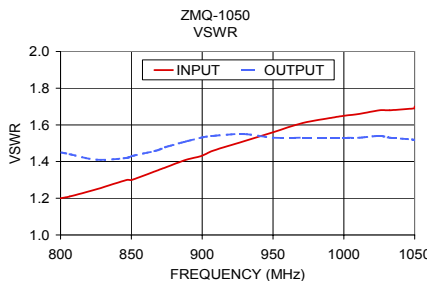
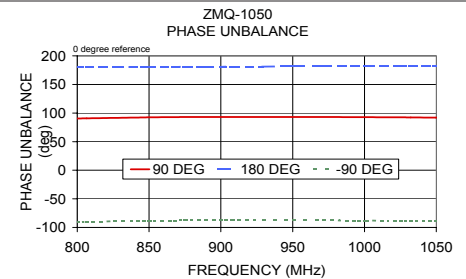
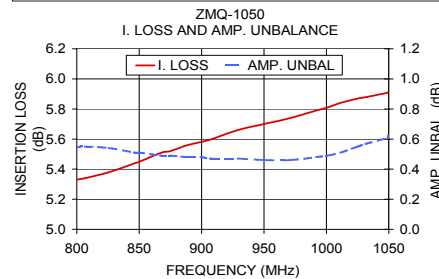
### Typical Performance Data

Freq. (MHz)	Insertion Loss		Amplitude Unbalance $\bar{x}$ (dB)	Phase Unbalance (deg)			VSWR	
	$\bar{x}$ (dB)	$\sigma$ (dB)		90°	180° $\bar{x}$	-90° $\bar{x}$	IN $\bar{x}$	OUT $\bar{x}$
800.00	5.33	0.21	0.55	90.43	180.31	-90.46	1.20	1.45
806.50	5.34	0.20	0.55	90.65	180.30	-90.22	1.21	1.44
825.75	5.38	0.19	0.54	91.46	180.40	-89.37	1.25	1.41
846.75	5.44	0.17	0.51	92.33	180.55	-88.42	1.30	1.42
850.25	5.45	0.17	0.51	92.47	180.58	-88.31	1.30	1.43
867.75	5.51	0.16	0.49	92.89	180.73	-87.87	1.35	1.46
874.75	5.52	0.16	0.49	92.97	180.77	-87.76	1.37	1.48
888.75	5.56	0.15	0.48	93.03	180.87	-87.69	1.41	1.51
899.25	5.58	0.14	0.48	93.04	180.98	-87.67	1.43	1.53
908.00	5.60	0.14	0.47	93.07	181.08	-87.63	1.46	1.54
929.00	5.66	0.14	0.47	93.18	181.26	-87.56	1.51	1.55
950.00	5.70	0.14	0.46	93.17	181.36	-87.60	1.56	1.53
971.00	5.74	0.14	0.46	93.03	181.47	-87.78	1.61	1.53
992.00	5.79	0.14	0.48	92.84	181.53	-87.97	1.64	1.53
1000.75	5.81	0.14	0.49	92.76	181.57	-88.02	1.65	1.53
1011.25	5.84	0.14	0.51	92.66	181.59	-88.10	1.61	1.53
1025.25	5.87	0.14	0.55	92.50	181.62	-88.26	1.68	1.54
1032.25	5.88	0.15	0.57	92.42	181.67	-88.31	1.68	1.53
1049.75	5.91	0.15	0.61	92.10	181.72	-88.52	1.69	1.52
1050.00	5.92	0.14	0.62	92.04	181.75	-88.55	1.70	1.52



### Outline Dimensions (inch/mm)

A	B	C	D	E	F
2.00	2.00	.95	1.062	.125	1.75
50.80	50.80	24.13	26.97	3.18	44.45
G	H	J	K	wt	
.125	.575	1.00	1.35	grams	
3.18	14.61	25.40	34.29	200	



### Notes

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
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