

Frequency Mixer

Level 17 (LO Power +17 dBm) 0.05 to 300 MHz

TAK-3H+

Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power	200mW
IF Current	40mA

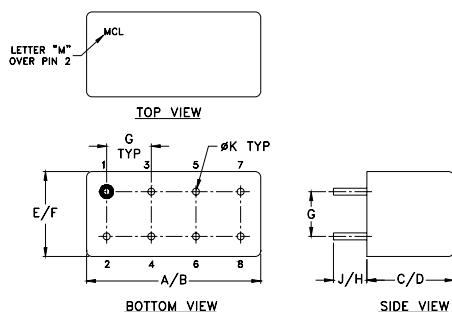
Permanent damage may occur if any of these limits are exceeded.

Pin Connections

LO	8
RF	1
IF	3,4 [^]
GROUND	2,5,6,7
CASE GROUND	2

[^] pins must be connected together externally

Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F
.770	.800	.240	.250	.370	.400
19.56	20.32	6.10	6.35	9.40	10.16
G	H	J	K	wt	
.200	.20	.14	.031	grams	
5.08	5.08	3.56	0.79	3.7	

Features

- low conversion loss, 4.82 dB typ.
- high isolation, 40 dB typ. L-R, 35 dB typ. L-I
- rugged welded construction
- hermetically sealed

Applications

- VHF
- FM radio
- instrumentation



Generic photo used for illustration purposes only

CASE STYLE: A05

+RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

Electrical Specifications

FREQUENCY (MHz)		CONVERSION LOSS (dB)				LO-RF ISOLATION (dB)						LO-IF ISOLATION (dB)					
LO/RF	IF	Mid-Band m		Total Range		L		M		U		L		M		U	
f_L - f_U		$\bar{X}$	σ	Max.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.
0.05-300	DC-300	4.82	0.09	7.0	8.5	55	45	40	30	30	25	50	40	35	25	25	20

1 dB COMP.: +14 dBm typ.

L = low range [f_L to $10 f_L$]

M = mid range [$10 f_L$ to $f_U/2$]

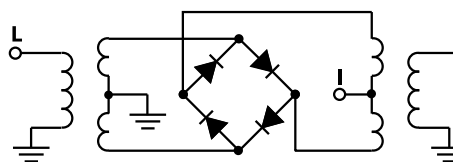
U = upper range [$f_U/2$ to f_U]

m = mid band [$2f_L$ to $f_U/2$]

Typical Performance Data

Frequency (MHz)		Conversion Loss (dB)	Isolation L-R (dB)	Isolation L-I (dB)	VSWR RF Port (:1)	VSWR LO Port (:1)
RF	LO	LO +17dBm	LO +17dBm	LO +17dBm	LO +17dBm	LO +17dBm
0.05	30.05	5.81	65.01	59.81	1.63	1.53
1.00	31.00	4.70	61.51	56.17	1.64	1.52
2.00	32.00	4.63	62.05	56.05	1.64	1.39
10.00	40.00	4.79	64.41	56.12	1.61	1.53
20.00	50.00	5.00	57.00	52.66	1.61	1.46
29.94	59.94	4.75	51.03	48.60	1.60	1.56
49.23	79.23	4.69	47.42	46.33	1.56	1.51
68.52	98.52	4.67	42.12	42.25	1.53	1.51
87.81	57.81	4.57	38.18	38.54	1.51	1.54
100.00	70.00	4.50	36.56	37.81	1.46	1.59
136.03	106.03	4.45	35.70	36.26	1.40	1.60
155.32	125.32	4.61	33.06	33.98	1.31	1.59
174.61	144.61	4.84	32.15	32.92	1.28	1.59
193.90	163.90	4.96	31.48	32.48	1.22	1.65
213.19	183.19	4.98	29.23	30.80	1.17	1.75
232.48	202.48	5.17	27.78	29.94	1.11	1.87
242.13	212.13	5.27	28.94	32.37	1.05	1.81
261.42	231.42	5.60	31.41	33.19	1.03	1.76
280.71	250.71	6.03	34.81	33.60	1.02	1.78
300.00	270.00	6.64	36.67	31.62	1.02	1.72

Electrical Schematic



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ISO 9001 ISO 14001 AS 9100 CERTIFIED

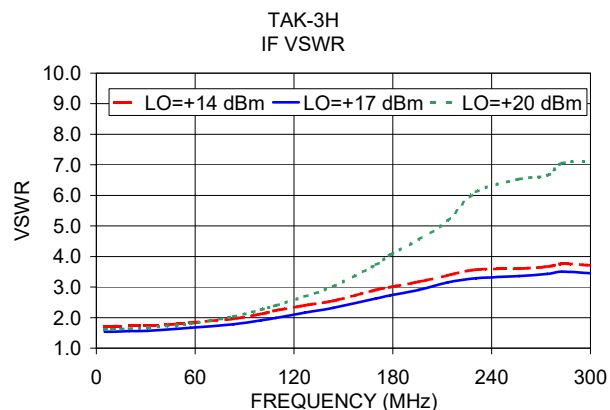
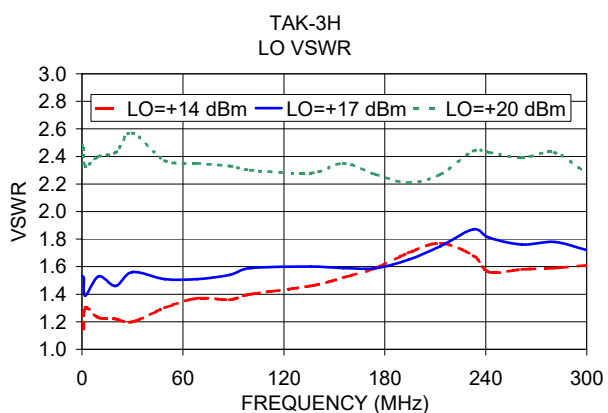
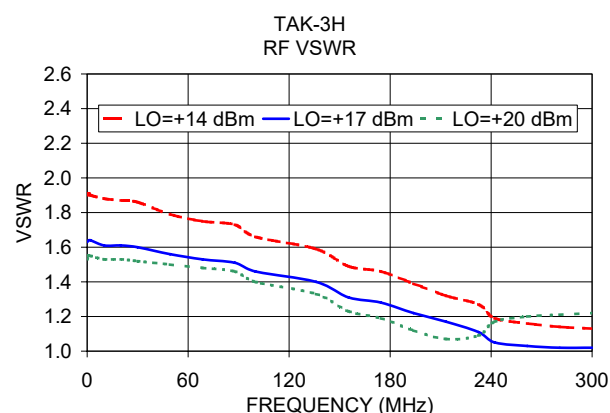
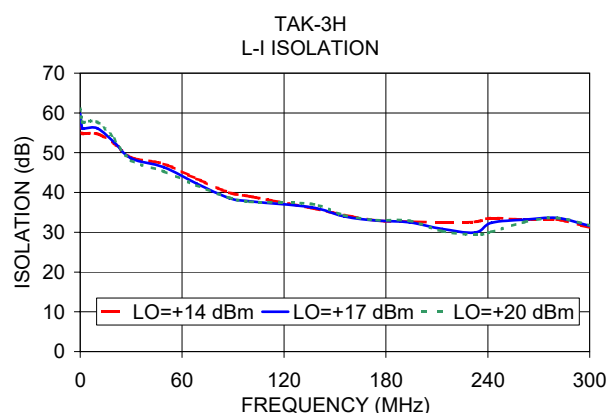
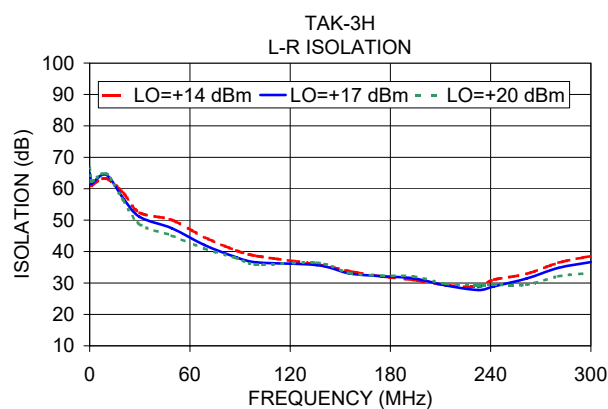
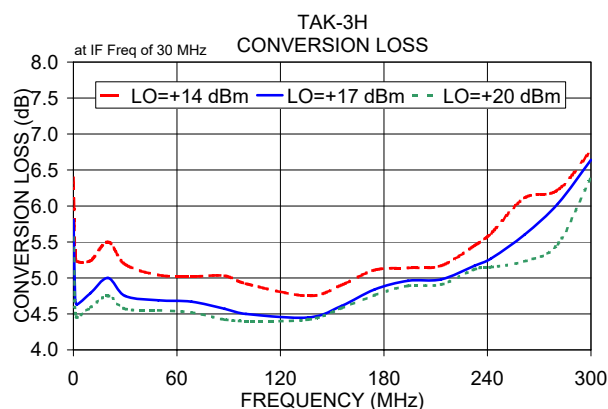
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IF/RF MICROWAVE COMPONENTS

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