

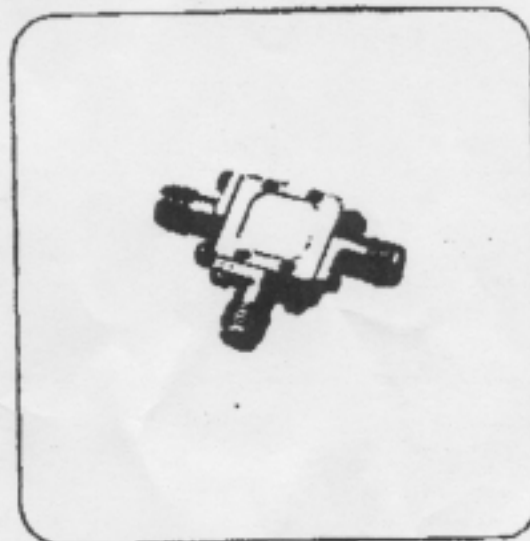
# 4 TO 40 GHz DOUBLE-BALANCED MIXER

UKR 8026

MODELS: DB0440LW1, DB0440HW1

## FEATURES

- RF/LO coverage ..... 4 to 40 GHz
- IF operation ..... DC to 2 GHz
- LO power range ..... +10 to +15 dBm
- Input 1 dB comp. .... +5 dBm typical
- Packaging ..... Hermetically sealed



The DB0440 series provides a broad frequency span in a single device. Furthermore, from 12 to 40 GHz this mixer can be used in the third harmonic mode with a lower frequency 4 to 13 GHz local oscillator. The conversion loss is typically 10 dB higher in this mode.

## ELECTRICAL SPECIFICATIONS

INPUT PARAMETERS	CONDITIONS	UNITS	MIN.	TYP.	MAX.
RF frequency range		GHz	4		40
RF VSWR (RF = -10 dBm, LO = +13 dBm)	8 to 30 GHz	Ratio		2.5:1	
	4 to 40 GHz	Ratio		3:1	
LO frequency range		GHz	4		40
LO power range	L	dBm	+10	+13	+15
	H	dBm	+15	+17	+20
LO VSWR (LO = +13 dBm)	8 to 30 GHz	Ratio		2.5:1	
	4 to 40 GHz	Ratio		3:1	
TRANSFER CHARACTERISTICS	CONDITION	UNITS	MIN.	TYP.	MAX.
Conversion loss (IF = 100 MHz, LO = +13 dBm)	4 to 40 GHz	dB		9	10
	8 to 30 GHz	dB		8	9
Single-sideband noise figure	8 to 30 GHz	dB		8.5	
	4 to 40 GHz	dB		9.5	
Isolation - LO to RF	4 to 40 GHz	dB	EO	25	
Isolation - LO to IF	4 to 40 GHz	dB		20	
Isolation - RF to IF	4 to 40 GHz	dB		30	
Input power at 1 dB compression	LO = +13 dBm	dBm		+5	
Input two-tone third-order intercept point	LO = +13 dBm	dBm		+15	
OUTPUT PARAMETERS	CONDITION	UNITS	MIN.	TYP.	MAX.
IF frequency range	3 dB bandwidth	GHz	DC		2
IF VSWR (IF = -10 dBm, LO = +13 dBm)		Ratio		2.5:1	