

DIRECTIONAL COUPLERS

50 & 75Ω

Surface Mount □

MICRO-MINIATURE, 9 to 20 dB COUPLING 5 MHz to 2000 MHz

BLUE CELL™



AT790-7

AT1030

NEW!

MODEL NO.	FREQ. RANGE MHz f_l - f_u	COUPLING dB		MAINLINE LOSS dB						DIRECTIVITY dB				VSWR ² (:1) Typ.	POWER INPUT, W		CASE STYLE Note B	PCB CONNECTION	PCB Lay-out PL-	PRICE \$ ea. Qty. (25)							
		Nom.	Max. Flatness	L Typ.	M ^o Typ.	U Typ.	U Typ.	L Typ.	M ^o Typ.	U Typ.	U Typ.	L Max.	MU Max.														
NEW ■ DBTC-6-4-75*	5-1250	6.8±0.3	±0.8	2.2	3.1	2.2	2.6	2.3	2.8	2.3	2.9	15	13	17	13	16	10	12	7	1.40	0.5	1.0	AT790-1	na	048	1.99	
■ DBTC-9-4*	5-1000	9.0±0.5	±0.5	1.2	2.0	1.2	1.8	1.5	2.0	—	—	21	17	18	13	15	—	—	—	—	1.30	0.5	1.0	AT790-1	na	020	1.99
■ DBTC-10-4-75*	5-1000	10.5±0.5	±0.7	1.5	2.2	1.4	2.0	1.5	2.0	—	—	21	16	20	13	16	—	—	—	—	1.30	0.5	1.0	AT790-1	na	048	1.99
■ DBTC-12-4*	5-1000	12.2±0.5	±0.9	0.9	1.8	0.7	1.3	1.1	1.6	—	—	33	22	21	14	15	—	—	—	—	1.30	0.5	1.0	AT790-1	na	020	1.99
■ DBTC-13-4*	5-1000	13.0±0.5	±0.6	0.7	1.3	0.7	1.3	1.1	1.6	—	—	21	17	18	13	13	—	—	—	—	1.30	0.5	1.0	AT790-1	na	020	1.99
■ DBTC-13-5-75*	5-1000	13.2±0.5	±0.6	0.9	1.4	1.0	1.5	1.1	1.6	—	—	21	17	19	14	18	—	—	—	—	1.30	0.5	1.0	AT790-1	na	048	1.99
	1000-1500	13.6±0.5	±0.8			1.4	2.2							17	—												
■ DBTC-16-5-75*	5-1000	16.3±0.5	±0.7	1.2	2.0	1.0	1.5	1.1	1.6	—	—	22	16	21	13	20	—	—	—	—	1.30	1.0	1.0	AT790-1	na	048	1.99
	1000-1500	16.8±0.7	±0.7			1.3	1.9							19	—												
DBTC-17-5*	50-1000	17.0±0.7	±0.9			0.9	1.4							20	13					1.30	—	2.0	AT790-1	na	020	1.99	
	1000-1500	17.7±0.9	±1.0			1.0	1.5							20	10					1.30	—	2.0					
	1500-2000	18.0±1.0	±0.8			1.1	1.6							14	—					1.30	—	2.0					
■ DBTC-18-4-75*	5-1000	18.2±0.5	±0.7	0.8	1.5	0.8	1.4	1.0	1.6	—	—	25	16	21	14	15	—	—	—	—	1.30	1.0	1.0	AT790-1	na	048	1.99
■ DBTC-20-4*	20-1000	20.4±0.6	±0.8	0.3	1.0	0.4	1.0	0.7	1.3	—	—	21	13	21	14	16	—	—	—	—	1.20	1.0	1.0	AT790-1	na	020	1.99
NEW ■ DBTC-20-4-75*	5-1250	20.5±0.5	±0.9	0.4	0.7	0.6	0.9	0.8	1.2	1.1	1.5	20	16	19	13	11	7	9	6	1.40	0.5	1.0	AT790-1	na	048	1.99	

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

M = mid range [$10f_l$ to $f_u/2$]

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

U=1000-1250 MHz

*The above models are also available with leads at an additional cost of \$0.15

To order, add "L" suffix to model number. See suggested PCB layout

PL-150 for 50Ω -L models, PL-151 for 75Ω -L models.

features

- very flat coupling
- very broadband, multi octave
- temperature stable, BLUE CELL™ base
- all welded construction
- micro-miniature coupler, 0.15"x0.15"x0.15"

applications

- instrumentation
- cable tv
- communication receivers & transmitters

NOTES:

- ◆ DBTC models, aqueous washable.
 - Non-hermetic
 - Denotes 75 ohm models. For coaxial connector models BNC connectors are standard.
 - ⊕ When specification for only M range given, specification applies to entire frequency range.
 - * DBTC models protected under U.S. Patent 6140887 and 6784521
- General Quality Control Procedures, Environmental Specifications, Hi-Rel and MIL description are given in section 0, see "Mini-Circuits Guarantees Quality" article.
 - Connector types and case mounted options, case finishes are given in section 0, see "Case styles & Outline Drawings".
 - Prices and specifications subject to change without notice.
- Mainline Loss includes theoretical power loss at coupled port.
 - For coupled port VSWR above 500 MHz, 1.6:1 typ.
 - ZX Series specified @ 25°C

designers kits available

KIT No.	No. of Units in KIT	Description	Price \$ per KIT
K1-DBTC	25	5 of each: DBTC-9-4, DBTC-12-4 DBTC-13-4, DBTC-17-5, DBTC-20-4	49.95
K2-DBTC	20	5 of each: DBTC-10-4-75, DBTC-13-5-75 DBTC-16-5-75, DBTC-18-4-75	39.95

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Coaxial

9 to 20 dB COUPLING 5 MHz to 2000 MHz

NEW!



ZX30



Z30-75

MODEL NO.	FREQ. RANGE MHz f_L - f_U	COUPLING dB		MAINLINE LOSS dB			DIRECTIVITY dB			VSWR (:1) Typ.	POWER INPUT, W		CASE STYLE Note B	CONNECTION	PRICE \$ ea. Qty. (1-24)						
		Nom.	Typ. Flatness	L	M ^o	U	L	M ^o	U		L	MU									
				Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Max.									
ZX30-9-4	5-1200	8.9±0.5	±0.1	1.1	1.4	1.1	1.4	1.3	1.8	21	19	20	13	16	12	1.20	0.5	1.0	FL905	db	29.95
■ Z30-10-4-75	5-1000	10.5±0.5	±0.3	1.5	2.5	1.5	2.3	1.5	2.2	22	16	21	14	19	—	1.30	0.5	1.0	K18	db	29.95
ZX30-12-4	5-1000	12.0±0.5	±0.3	0.7	1.0	0.75	1.0	0.9	1.2	35	28	30	18	20	13	1.15	0.5	1.0	FL905	db	29.95
ZX30-13-4	5-1200	13.0±0.5	±0.3	0.6	0.9	0.7	1.1	0.9	1.5	21	18	19	13	15	10	1.15	0.5	1.0	FL905	db	29.95
■ Z30-13-5-75	5-1000	13.4±0.5	±0.4	0.85	1.4	0.9	1.6	1.0	1.7	22	17	20	14	19	—	1.30	0.5	1.0	K18	db	29.95
	1000-1500	14.0±0.5	±0.5			1.2	2.2					18	—			1.40	0.5	1.0			
■ Z30-16-5-75	5-1000	16.5±0.5	±0.5	1.1	2.0	1.1	1.6	1.2	1.7	22	16	24	16	24	—	1.30	0.5	1.0	K18	db	29.95
	1000-1500	17.7±0.5	±0.7			1.3	1.9					19	—			1.30	0.5	1.0			
ZX30-17-5	5-1000	16.8±0.7	±0.4			0.7	1.1					16	14			1.30	0.5	1.0	FL905	db	29.95
	1000-1500	17.5±0.9	±0.4			0.85	1.4					18	12			1.30	0.5	1.0			
	1500-2000	18.5±1.0	±0.3			1.1	1.7					14	—			1.30	0.5	1.0			
■ Z30-18-4-75	5-1000	18.5±0.5	±0.5	0.8	1.5	0.85	1.5	0.95	1.6	28	17	23	16	15	—	1.30	1.0	1.0	K18	db	29.95
ZX30-20-4	5-1000	20.5±0.6	±0.5	0.3	0.5	0.35	0.6	0.6	0.9	21	19	22	19	19	11	1.11	1.0	1.0	FL905	db	29.95

L = low range [f_L to $10f_L$] M = mid range [$10f_L$ to $f_U/2$] U = upper range [$f_U/2$ to f_U]

features

- very flat coupling
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- all welded construction
- protected by U.S. patent 6140887 and 6784521

applications

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- cable tv
- communication receivers & transmitters

pin connections

See case style outline drawing for pin locations

PORT	na	db
INPUT	3	1
OUTPUT	4	2
COUPLED (forward)	1	3
NOT USED (isolate)	6	—
GND	2	—
DEMO BOARD	TB-102 (50Ω)	—
	-L TB-278	—
	TB-103 (75Ω)	—
	-L TB-279	—



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