

Circulators/Isolators

For Base-station, Strip-Line and Pin-Terminal Types

CU Series

FEATURES

- The CU series circulators and isolators are the most suitable for the transmitters of the mobile communication's base-station from VHF to 2GHz band.

PRODUCT IDENTIFICATION

Type name □*a□*b□*c-□*d-□*e□*f

- *a: Direction of circulation. Fill in with a letter A or B.
 A: CW (clock-wise)
 B: C, CW (counter clock-wise)
- *b: Bandwidth
 1: Standard bandwidth
 3, 5: Wide bandwidth
- *c: Connector type
 L: Strip-line type
 P: Pin-type (coaxial-guide type)
- *d: Center frequency (nominal frequency)
- *e: Terminal position number (Refer to the "TERMINAL POSITION" table)
- *f: Circulator/Isolator specification
 C: Circulator
 T: Isolator



TERMINAL POSITION

Terminal position group	Terminal position number			
	ISOLATOR		CIRCULATOR	
	1	2	6	7
A				
B				—
C			—	—
D		—	—	—
E		—	—	—
F				—

ELECTRICAL CHARACTERISTICS

Part No.	Frequency range*1 (MHz)	Band width (%) max.	Isolation (dB) min.	Insertion loss (dB) max.	VSWR max. Zo=50Ω	Maximum handling power (W)	Capacity of built-in resistor*2 (W)	Dimensions (mm) [Except connector] L×W×T	Terminal position group	Temperature range (°C)	Weight (g)	Connector type
CU48R□*a5*bL*c-□*d-6*eC*f/ CU48R□5L-□-□T	100 to 400	±10	18	0.7	1.25	30	30	50×50×20	F	-10 to +50	170	Strip-line
CU44R□5L-□-6C/ CU44R□5L-□-□T	470 to 600	Full	18	0.6	1.25	100	100	40×40×20	F	-10 to +50	130	Strip-line
	600 to 770	Full	18	0.6	1.25	100	100					
CU49P□3L-□-□C/ CU49P□3L-□-□T	400 to 800	±5	18	0.65	1.25	30	15	30×30×16	A	-10 to +50	45	Strip-line
	400 to 800	±5	18	0.65	1.25	70	50	30×30×17	E	-10 to +50	60	Strip-line
CU12G□3L-□-1T	800 to 1000	±5	20	0.3	1.2	150	50	30×30×16.5	E	-35 to +85	80	Strip-line
CU42J□1P-□-6C/ CU42J□1P-□-□T	800 to 1000	±1.5	18	0.6	1.3	10	4	15×15×7.1	B	-35 to +85	7	Pin
	1400 to 1900	±1.5	18	0.6	1.3	10	4					
	1900 to 2000	±1.5	15	0.7	1.35	10	4					

* All specifications are subject to change without notice.

ELECTRICAL CHARACTERISTICS

Part No.	Frequency range* ¹ (MHz)	Band width (%) max.	Isolation (dB) min.	Insertion loss (dB) max.	VSWR max. Z ₀ =50Ω	Maximum handling power (W)	Capacity of built-in resistor* ² (W)	Dimensions (mm) [Except connector] L×W×T	Terminal position group	Temperature range (°C)	Weight (g)	Connector type
CU12R□3L-□-1T	1805 to 1880	Full	20	0.4	1.2	10	4	20×20×6	D	-35 to +85	15	Strip-line
	1890 to 1920	Full	20	0.4	1.2	10	4					
	1930 to 1990	Full	20	0.4	1.2	10	4					
	1920 to 1980	Full	20	0.4	1.2	10	4					
	2110 to 2170	Full	20	0.4	1.2	10	4					
CU12H□3L-□-1T	1805 to 1880	Full	20	0.3	1.2	100	25	20×20×8	E	-35 to +85	25	Strip-line
	1890 to 1920	Full	20	0.3	1.2	100	25					
	1930 to 1990	Full	20	0.3	1.2	100	25					
	2110 to 2170	Full	20	0.3	1.2	100	25					
CU13G□3L-□-1T	1805 to 1880	Full	20	0.3	1.2	130	70	25×25×9	E	-35 to +85	35	Strip-line
	1890 to 1920	Full	20	0.3	1.2	130	70					
	1930 to 1990	Full	20	0.3	1.2	130	70					
	2110 to 2170	Full	20	0.3	1.2	130	70					

*¹ The tunable frequencies are represented in different ways for different models.

- The center frequency range and the bandwidth (the bandwidth is shown as a ratio)

Example CU48R□5L-□-1T

Center frequency tunable range (MHz)	Bandwidth (%) max.
100 to 400	±10

- A fixed frequency range (the bandwidth is shown as "Full")

Example CU44R□5L-□-1T

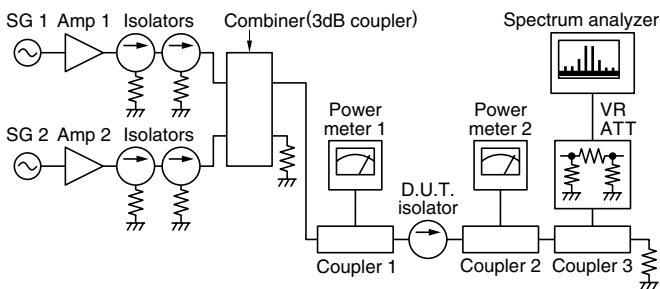
Frequency range (MHz)	
470 to 600	Full
600 to 700	

*² Dummy load capability when converted to isolator.

*³ IMD: -70dBc max.(30dBm/tone: Ave. 33dBm)

*⁴ IMD: -75dBc max.(41dBm/tone: Ave. 44dBm)

- Test circuit for IMD measurement



- TDK will be pleased to submit quotations on any customer's requirements which are not included in this data. Please contact our branch office or representative.

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