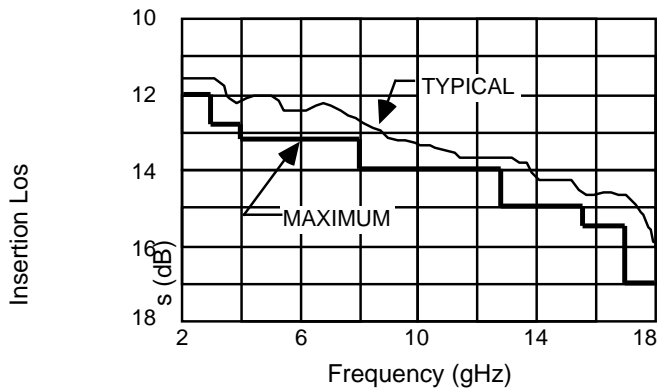# CMCI0230

POWER DIVIDER/SWITCH MATRIX

Model CMCI0230 is a wide band (2 to 18 gHz) eight by eight power divider/switch matrix. It consists of a series of eight 8-way power dividers connected perpendicularly to a series of eight non-reflective single-pole eight-throw switches. This results in a "blocking" switch matrix where any of eight signals present at the eight input ports can be directed to any combination of eight output ports. Each output port, however, can be accessed by only a single input at any one time. Some of the CMCI0230's salient features are its extreme small size and modular contruction made possible by a unique flush-mount press-fit R.F. in-terconnect system. System integration is simplified since all of the power supply and control interfaces are located on a single multi-pin connector.

ELECTRICAL PERFORMANCE

RF Frequency Range.......... 2.0 - 18.0 gHz

VSWR (input)...................... 2.0:1 max.
                             1.9:1 typ.

VSWR (output)................... 2.5:1 max.
                             2.0:1 typ.

Isolation............................. 15 dB min.
 (power dividers)   16 dB typ.

Isolation............................. 60 dB min.
(switches)   65 dB typ.

CONTROL CHARACTERISTICS

Impedance............... TTL

Logic........................ each switch is three   bit decoded with a   fourth control for   disabling all switch   arms
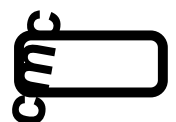
Switching Speed...... 2 μsec max.
                         0.3 μsec typ.

POWER SUPPLY RQMNTS

+5 VDC, 1.2 A max.,1.0 A typ.

-15 VDC, 0.6 A max., 0.5 A typ.

INSERTION LOSS (dB)	FREQUENCY (gHz)						
	2.0-3.0	3.0-4.0	4.0-8.0	8.0-12.4	12.4-15.5	15.5-17.0	17.0-18.0
MAX.	12.0	12.8	13.2	14.0	15.0	15.5	17.0
TYP.	11.5	12.0	12.5	13.5	14.5	15.0	16.0

MECHANICAL

Dimension................ per OUTLINE drawing   on page 3

CONNECTORS:

  RF Input/Output.... field replaceable SMA-F (SMA-M is also available)

  Control/Power....... Type "D" 37 pin socket (CANNON MDM-37S with jackposts)
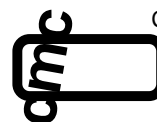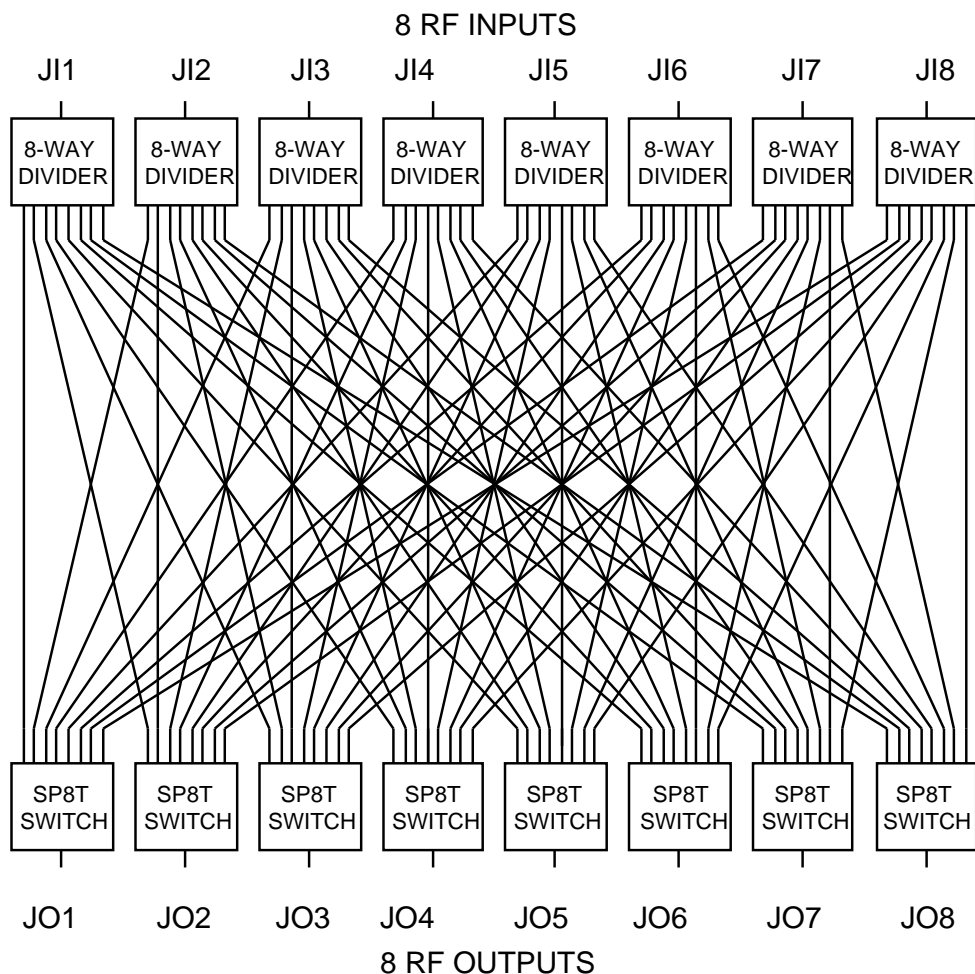
ENVIRONMENTAL RATINGS

  Operating Temp.......... 0 °C to +65°C

  Storage Temp............. -20°C to +71 °C

  Humidity...................... 95% relative humidity

  Burn-in........................ each unit is subjected to a 100 hours burn-in test at +50°C

SCHEMATIC

8 RF INPUTS

| JI1 | JI2 | JI3 | JI4 | JI5 | JI6 | JI7 | JI8 |

| JO1 | JO2 | JO3 | JO4 | JO5 | JO6 | JO7 | JO8 |

8 RF OUTPUTS

Custom Microwave Components, Inc.
44249 Old Warm Springs Blvd.
Fremont, California 94538
510-651-3434

OUTLINE

37 PIN SOCKET
D" CONNECTOR
(CANNON MDM - 37S
WITH JACKPOSTS)

10.50

4.50

D/C

JO1
JO2
JO3
JO4
JO5
JO6
JO7
JO8

CMCI0230
S/N

1.70

3.40

10.00

SMA CONN (FEMALE)
(16) PLACES

0.177 DIA THRU
(6) PLACES

JI4
JI3
JI2
JI1

JI5
JI6
JI7
JI8

2.40

0.13

*NOTE:

REFER TO CMC DRAWING
7177 FOR MORE DETAIL

REL I0230-0788

cmc