NATIONAL

ELECTRICAL DATA

Frequency	f = 2425...2475 MHz
Isolation	D_{2-1} = 26 (≥ 20) dB
Insertion loss	d_{1-2} = 0.2 (≤ 0.3) dB

Input vswr
  w/matched output
  w/output short-circuited
	s = 1.1 (≤ 1.2)
	s = 1.3 (≤ 1.5)

Input power	P = max. 6.5kW
Reflected power	P_1 = max. 6.5kW
Sensitivity of probe *	P = 1.5 + 0.5 mW

FEATURES:

Isolator with water load and monitoring probe for industrial applications in the frequency range from 2425 to 2475 MHz. Load coupling factor is 66.5dB ± 1dB
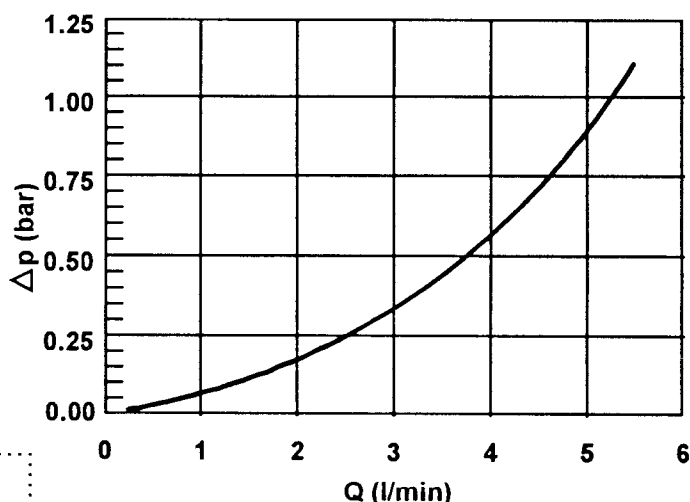
MONITORING PROBE

The load of the isolator is fitted with a monitoring probe (N-type female) giving an rf voltage proportional to the power reflected. At a reflected power level of 6.5kW, the output is between 1 and 2 mW on 50Ω. Normally a dc voltage is necessary for monitoring or controlling. Therefore the rf voltage is to be rectified. An optional diode detector (R451570) is available. Coupling load factor: 66 dB ± 1 dB.

10/01/97

COOLING DATA

Cooling medium	water (see note 1)
Water inlet temperature	T_1 = +10... +40°C
Water outlet temperature	T_2 = max. 50°C
Static water pressure	P = max. 6 bar
Water flow rate @ T_1 = 20°C; P_1 = 6 kW	Q = 3.4 l/min. (see note 2)
Water pressure drop	Δ p = (see graph)
Storage temperature	T_s = -10... +70°C

Water Pressure Drop

MECHANICAL DATA

Housing	aluminum chromatized
Waveguide type	153 IEC-R 26
Mating flange drilled to	154 IEC-PDR 26
Monitoring Probe	N-type female
Water Connection	gas, R 3/8" (DIN 256)
Mounting Position	any
Weight	5.0 kg

Notes:

1.) The water flow must be clean and free from bubbles In order to protect the isolator against failures in the water supply it is recommended to use a flow sensitive switch that controls the microwave power. (e.g. by switching off the high tension of the magnetron.

The water cooling may give condensed water in the waveguide which may lead to arcing, resulting in the destruction of the isolator. Therefore the condensation of humidity in the waveguide must be avoided.

2.) For calculating the necessary water flow this formula may be used:

$$Q\ (l/min) = 0.5 + \frac{14.4 \times P_1\ (kW)}{50 - T_1\ (°C)}$$

90462305

NATIONAL

2722-162-10311

All dimensions shown in millimeters.

Dimensions: 65, 113, 180, 209, 83, 69, 297

08/27/97

90462306