

MODEL KAW2051M12
125 WATTS CW
450 MHz - 500 MHz (476MHz +/- 5MHz)

The Model KAW2051M12 is an RF power amplifier designed for linear accelerator applications operating with signals in the 450 MHz to 500 MHz frequency range. No tuning, band switching, or adjustments of any kind are required to operate this unit. Power output is in excess of 125 Watts into a 50-Ohm load. Power gain is a minimum 55 dB.

Construction of this model is in a 5¼-inch high cabinet, 14½ inches deep, exclusive of handles, and 11½ inches wide. It is intended for bench-top use, but may be supplied with 19-in rack mounting kit installed. Input and output connectors are N-type female and are located on the front. Forced-air cooling is by a highly reliable, tube-axial fan mounted at the rear.

Protection against excessive heat rise of the amplifier module heatsink is by a temperature-sensing switch that interrupts the gate bias supply to the amplifier devices when activated. Operation resumes automatically when temperature has returned to normal operating temperature.

SPECIFICATIONS

RATED POWER OUTPUT	125 Watts (at 476 MHz \pm 5 MHz)
FREQUENCY RESPONSE.....	450 MHz - 500 MHz instantaneously
INPUT FOR RATED OUTPUT	-3 dBm
LARGE SIGNAL GAIN VARIATION OVER FREQUENCY	\pm 1.5 dB (full span at half power)
LARGE SIGNAL GAIN VARIATION OVER FREQUENCY	\pm 0.5dB (476 MHz \pm 5 MHz span at half power)
SMALL SIGNAL GAIN VARIATION OVER FREQUENCY	\pm 0.5dB (476MHz \pm 1 MHz in presence of 30W carrier)
GAIN VARIATION OVER TEMPERATURE.....	\pm 1dB
GAIN	55 dB minimum
INPUT/OUTPUT IMPEDANCE.....	50 Ohm nominal
INPUT/OUTPUT VSWR	< 1.5:1
OUTPUT VSWR	< 1.5:1 with circulator
OUTPUT PROTECTION	10:1 any phase mismatch tolerance
SPURIOUS	< -90 dBc
THIRD ORDER INTERCEPT POINT (2 tones 0.2 MHz @ 25W).....	58 dBm typical
NOISE FIGURE	10 dB maximum
GROUP DELAY @ 476 MHz.....	50 ns maximum
PROTECTION	Over-temperature
MODULATION CAPABILITY.....	Will faithfully reproduce AM, FM, or pulse modulation appearing on the input signal
HARMONIC DISTORTION	-45 dBc maximum

CONTROLS ON/OFF
INDICATORS SYSTEM ON, TEMP FAULT
MONITOR (FORWARD POWER) Type N (rear panel) (30dB \pm 0.1 dB @ 476 MHz)
RF CONNECTORS Type N female (rear panel)
OPERATING TEMPERATURE -10 to 40 °C
COOLING Forced air (self contained fan)
PRIMARY POWER 110/220 V_{ac}, 47 - 63Hz, 120 VA maximum
SIZE (W x H x D) 29.2 x 13.3 x 40.7 cm, 11½ x 5¼ x 16 in.
WEIGHT 7.7 kg, 17 lb.

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