

UHF IOT Tube & Trolley

80 kW CW IOT Amplifier (L-4444C)

The CW 80 kW IOT is a high-efficiency tube operating in the UHF-frequency range of 470 to 810 MHz.

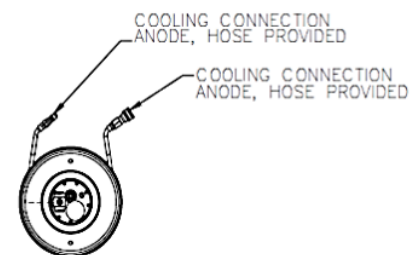
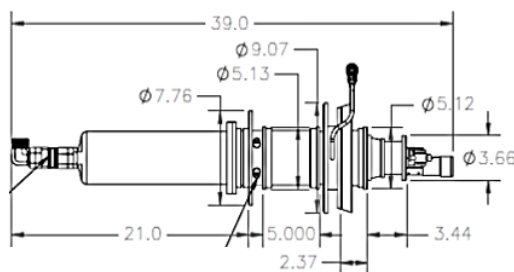
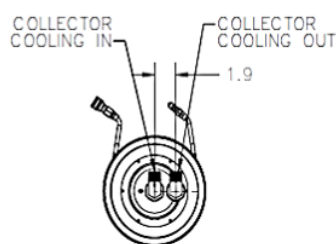
Specifications

Ratings:

Heater Voltage (See Note 1)	5	7		V
Heater Current (Operating)	20	30		A
Heater Current (Surge)	---	60	60	A
Heater Warm-Up Time	300	---		Seconds
Beam Voltage	20	40	40	kV
Beam Current	---	3.5	4.0	A
Idle Current	0.0	0.5		A
Body Current	---	100	100	mA
Solenoid Current	23	27	27	A
Collector Dissipation	---	55	55	kW
Load VSWR	---	1.5:1	1.5:1	---
Bias Voltage with respect to Cathode	-50	-150	-250	V
Grid Current	---	± 150	± 150	mA
Ion Pump Current (Beam On)	---	20	20	uA
Ion Pump to Cathode Voltage	3	4		kV
Frequency Range (Tunable)	470	810		MHz
Bandwidth (-1 dB)	4.0	---		MHz
Gain @ 90 kW	22.0	---		dB
Drive Power	---	570	600	W
Output Power	---	90	90	kW
Beam Efficiency @ 90 kW	65	---		%

Min.	Max.	Absolute Values (See Note 2)	
5	7		V
20	30		A
---	60	60	A
300	---		Seconds
20	40	40	kV
---	3.5	4.0	A
0.0	0.5		A
---	100	100	mA
23	27	27	A
---	55	55	kW
---	1.5:1	1.5:1	---
-50	-150	-250	V
---	± 150	± 150	mA
---	20	20	uA
3	4		kV
470	810		MHz
4.0	---		MHz
22.0	---		dB
---	570	600	W
---	90	90	kW
65	---		%

Mechanical Outline IOT



(Dimensions in inches)

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Mechanical Specification Trolley Assembly:

		See Page 1
Mechanical Outline IOT		
Electromagnet Voltage	V	4.5 - 5.75
Electromagnet Current	A	23 - 27
RF Input		Type N
RF Output		4 1/16 inch 50 Ohm coaxial line
Net Weight of tuning cavity (Approx)		40
Net Weight of magnet assembly (Approx)		250 lbs.
Collector Cooling:		
Maximum Inlet Pressure	psi	70
Maximum Inlet Water Temp.	°C	55
Maximum Outlet Water Temp.	°C	75
Minimum Collector Flow RO or DI Water	gpm	12.5
Collector Pressure Drop	psi	40
Anode/Body/Output Cavity Cooling		
Maximum Inlet Temperature Water	°C	55
Minimum Flow RO or DI Water	gpm	0.6
Pressure Drop	psi	40
Cavity Air Cooling (See Note 3):		
Air flow to Input and Output Cavities	cfm	125
Air pressure at Intake	inches	25
Maximum air temp. @ intake	°C	30

Tube Protection:

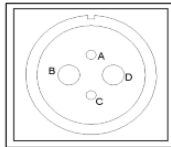
A photo-resistor type arc detector is fitted to each of the primary and secondary output cavities. The beam voltage must be removed within 100 ms of an arc being detected.

Focus Coil Connector Connections:

Amphenol Connector P/N MS3102A-22-4P Mounted to Magnet Cart
Amphenol P/N MS3106F-22-4S Socket Supplied

Depicted is the Female Connector on the transmitter side

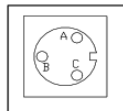
Pin	Element
A	Lid Switch
C	Lid Switch
D	Focus coil negative



Note: Pins A and C are connected within the circuit assembly for use as an interlock circuit.

Lid Switch Interlock Connections

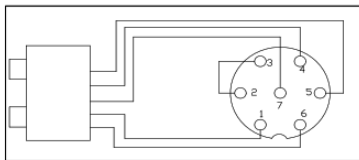
Pin	Connection
A	Lid Switch
B	Not Connected
C	Lid Switch



Arc Detector Connections

Test Lamp

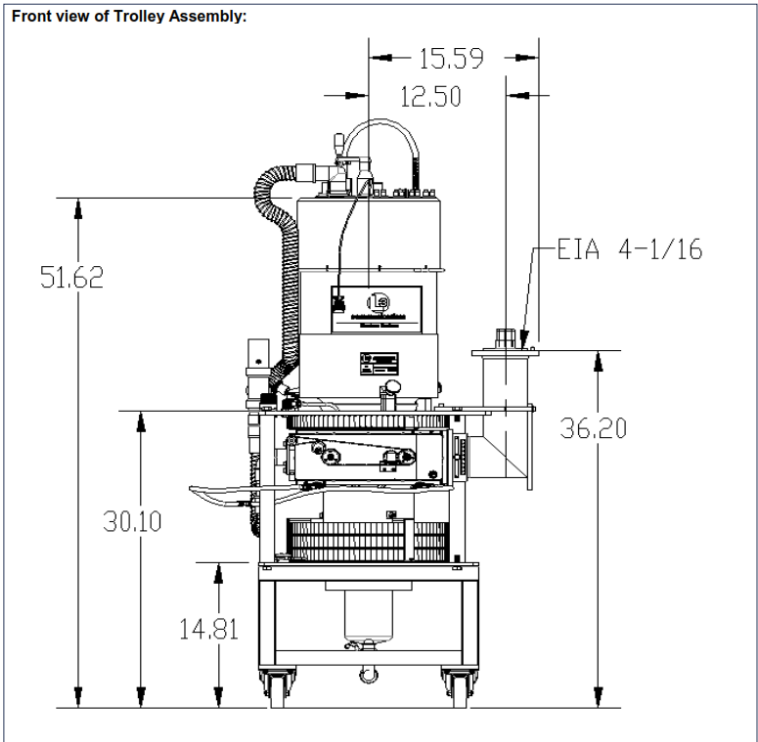
Photo Resistor



Mechanical Description

Item	Description
Mounting Position	Collector End Down
Weight	50 lbs.

Front view of Trolley Assembly:



(Dimensions in inches)

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