

APPROVALS			REVISIONS			
	INITIALS	DATE	REV	DESCRIPTION	DATE	APPR
Drawn	JFG	14APR16	1	Release	14APR16	JFG
Engineering			2	Added versions	02JUN16	JFG
Manufacturing						
Marketing						

1.0 General Description

This document describes standard and customized versions of the Toshiba E3327 magnetron. The standard version E3327 is a substitute for the National YJ1600 used in many 6 kW industrial microwave generators. Customized versions include the addition of flying leads which ensures a more secure and reliable connection than the fast-on connections provided with the standard E3327 magnetron.

2.0 Specifications

2.1 Electrical

Frequency (matched load)	2460 +/- 10 MHz
Filament voltage	5 Vac
Filament current	33 Aac
Filament resistance (cold)	0.023 Ohm
Anode potential	Ground
Filament potential	Negative high voltage

2.2 Mechanical:

Filament connections	Standard: 1/4" fast-on terminals Optional: #8 ring terminals on 6" flying leads
Cooling	Anode: Water, 3.5 lpm min. @ 50 °C max. input temperature Antenna and filter box: Forced air
Cooling water connections	Hose-barb, 12 mm diameter
Cooling interlock	Thermal cut-out switch with 1/4" fast-on tabs
Weight	4.3 kg

2.3 Typical Operation:

Power supply type	Three-phase, full-wave bridge rectifier with choke coil
Load VSWR	2.5
Load phase	Sink

ITEM	Example 1	Example 2	UNITS
Frequency	2460	2460	MHz
Filament voltage (standby)	5	5	Vdc
Filament voltage (operate)	0.5	0	Vac
Anode voltage, peak	7.2	7.2	kV
Anode current, average	950	1150	mVdc
Output power, average	5	6	kW
Electromagnet current	-1.7	-2.0	Adc
Ambient temperature	+25	+25	°C
Frequency pulling	9	9	MHz

6 kW CW Magnetron, 2450 MHz**2.4 Absolute Maximum Ratings:**

ITEM	SYM	MIN	MAX	UNITS
Filament voltage, Stand-by	Ef	4.5	5.5	Vac
Filament surge current	-	-	85	Aac
Filament voltage, Ib = 900 mAdc	Ef	0.1	0.6	Vac
Filament warm-up	Tk	10	-	Sec
Anode voltage, peak	Ebm	-	8	kV
Anode surge voltage, peak	-	-	10	kV
Anode current, peak	Ibm	-	1.4	Adc
Anode current, average	Ib	-	1150	mAdc
Anode input power	Pi	-	9	kW
Load VSWR	ϕL	-	4	-
Electromagnet coil current	Iem	-	5	Adc
Voltage between coil and tube	-	-	48	Vdc
Anode temperature (ref. outline)	Tp	-	+85	°C
Seal temperature	-	-	+220	°C
Cooling water outlet temperature				
Closed cooling circuit	-	-	+75	°C
Open cooling circuit	-	-	+65	°C
Storage temperature	-	-30	+60	°C
Storage humidity	-	-	95	%
Ambient operating temperature	-	-	+60	°C

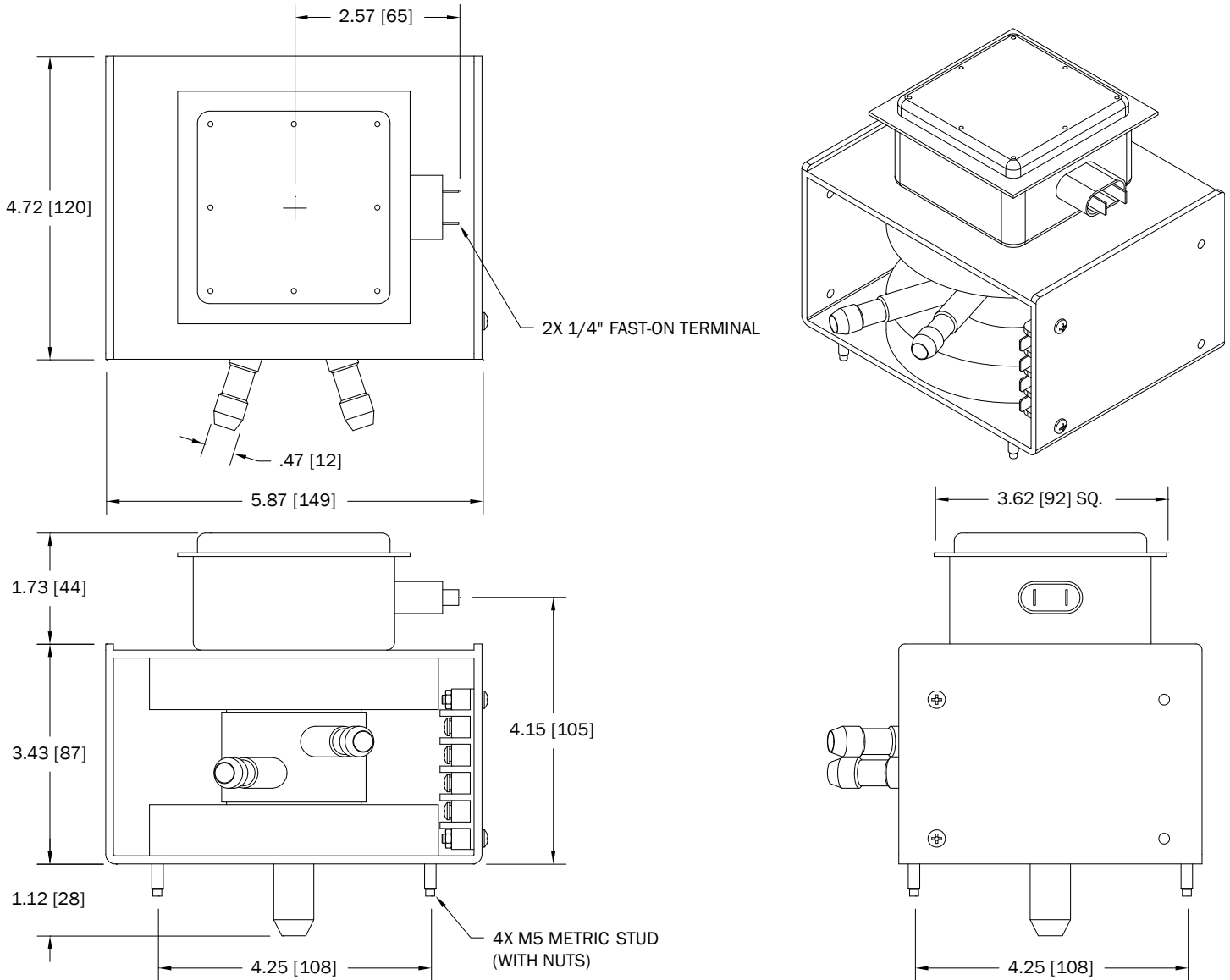
3.0 Ordering Information

<u>GAE P/N</u>	<u>Description</u>
010226	6 kW CW Magnetron, 2450 MHz, 1/4" Fast-on Terminals (standard E3327)
914761	6 kW CW Magnetron, 2450 MHz, 6" Flying Leads

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6 kW CW Magnetron, 2450 MHz

4.0 Outline Drawing, p/n 010226



TPS No: 900155
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6 kW CW Magnetron, 2450 MHz

5.0 Outline Drawing, p/n 914761

