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MODEL NO. MEC 3103

4.0 to 8.0 GHz

TYPICAL OPERATING CONDITIONS			POWER SUPPLY REQUIREMENTS			
ELEMENT	VOLTAGE	CURRENT	VOLTAGE MIN	VOLTAGE MAX	CURRENT MAX	
HEATER	-6.3 Vdc	2.25 A	-6.1 Vdc	-6.5 Vdc	3.0 A	
HELIX	W/ RF	GROUND	GROUND		800 mApk	
	W/O RF					
GRID ON	216 Vpk	3 mA	100 Vpk	300 Vpk	30 mApk	
GRID OFF	-300 Vdc	0.1 mA	-300 Vdc	-500 Vdc	1.0 mA	
CATHODE (Ek)	-12.6 kV	1.9 Apk	-12 kV	-14 kV	3.0 Apk	
COLLECTOR W/ RF	#1	9.70	485 mApk	77% X Ek ±2%		700 mApk
	#2	7.30	555 mApk	58% X Ek ±2%		1200 mApk
	#3	5.65	700 mApk	45% X Ek ±2%		2700 mApk

RF PERFORMANCE			
FREQ GHz	TYP SAT POWER OUTPUT (WATTS)	MIN SPEC POWER OUTPUT (WATTS)	TYP GAIN AT SPEC POWER dB
4.0	4500	4500	32
4.5	5500	4500	33
5.0	6000	4500	33
5.5	7000	4500	34
6.0	7000	4500	34
6.5	7000	4500	34
7.0	6000	4500	33
7.5	5500	4500	33
8.0	4500	4500	32

NOTE 1: CATHODE VOLTAGE IS MEASURED WITH RESPECT TO GROUND.

NOTE 2: HEATER, COLLECTOR AND GRID VOLTAGES ARE MEASURED WITH RESPECT TO CATHODE.

SELECTED PERFORMANCE	TYPICAL	SPECIFIED
INPUT VSWR	1.8:1	2.5:1
OUTPUT VSWR	1.9:1	2.0:1
MAXIMUM DUTY	—	6%
MAXIMUM PULSEWIDTH	—	100 μsec
GRID CAPACITANCE	64 pF	70 pF
MIN HARMONIC SEPARATION	-5.1 dBc	-0.5 dBc
NOISE POWER DENSITY	-29 dBm/MHz	-5 dBm/MHz
PRIME POWER	1185 W	1800 W
TEMPERATURE RANGE	-40° to 85 °C	—

TYPICAL POWER OUTPUT IS SHOWN TO ILLUSTRATE CAPABILITY.

GAIN IS WITH EQUALIZER

An ISO 9001:2000 Quality System  
 Certified Company

12/08