VKX-8253A

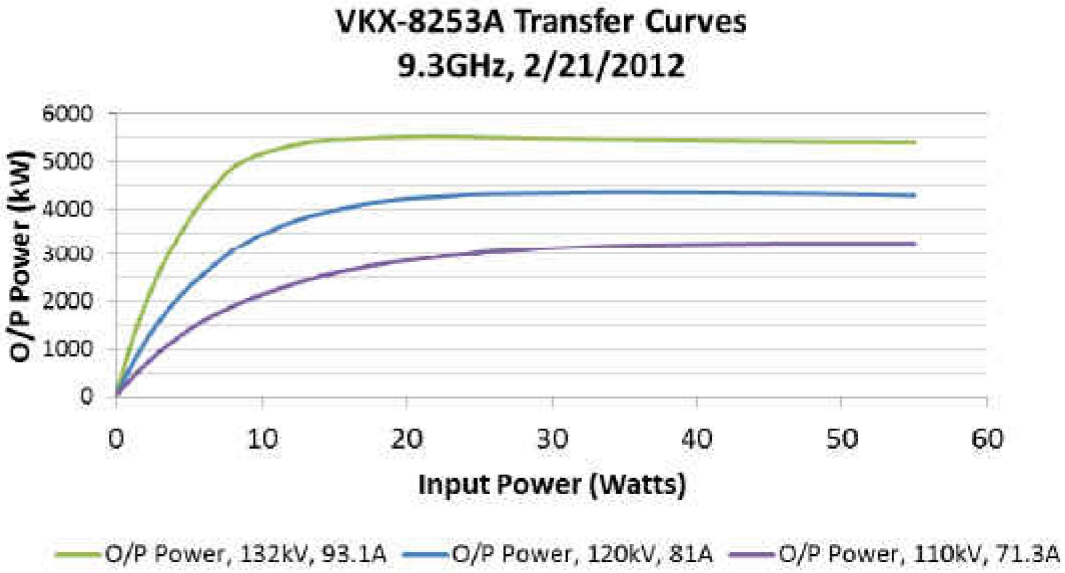
The VKX-8253A is an electromagnet focused, 9.3 GHz klystron which has demonstrated peak power of 5.5 MW with 18 kW average, at an RF pulse width of 9 µs. The klystron achieved power of 6 MW peak at 6 kW average. The unit was designed to achieve 20 kW average power at 5 MW peak.

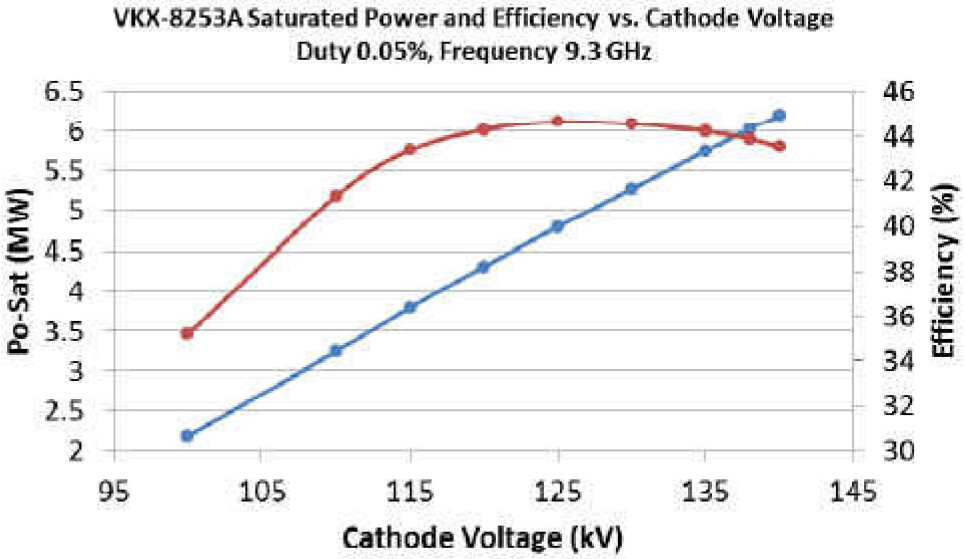
FEATURES

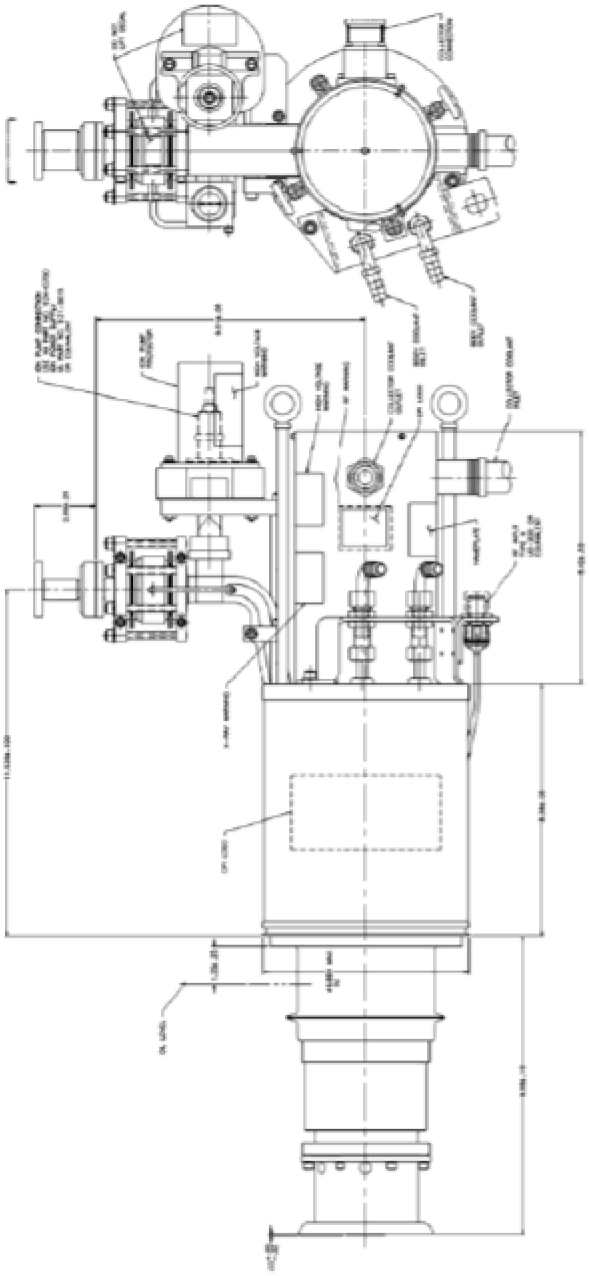
- Proven Medical, Scientific, and Industrial Klystron Derivation
- Low Cost, High Volume Manufacturing Design
- Proven S Band Gun Design
- Typical Life Exceeds 80,000 Hours
- Possible to Scale to 12 GHz Version

Prototype Operating Parameters		
Item	Value	Units
Beam Voltage	132	kV
Beam Current	95	A
Frequency	9.3	GHz
Bandwidth, 1dB	± 10	MHz
Peak Power	5.5	MW
Average Power	18	KW
Saturated Gain	51	dB
Efficiency	44.3	%
Pulse Width	2.5	µs
Duty	0.34	%

VKX-8253A


VKX-8253A Transfer Curves
9.3GHz, 2/21/2012
O/P Power (kW)
6000
5000
4000
3000
2000
1000
0
0
10
20
30
40
50
60
Input Power (Watts)
O/P Power, 132kV, 93.1A
O/P Power, 120kV, 81A
O/P Power, 110kV, 71.3A


VKX-8253A Saturated Power and Efficiency vs. Cathode Voltage
Duty 0.05%, Frequency 9.3 GHz
Po-Sat (MW)
6.5
6
5.5
5
4.5
4
3.5
3
2.5
2
Efficiency (%)
46
44
42
40
38
36
34
32
30
95
105
115
125
135
145
Cathode Voltage (kV)



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