

MA2823-1 & MA2823-2 MPD Magnetron Product Information

The MA2823 family consists of 5 kW 9.345 GHz "positive pulse" magnetrons originally designed for use in OEM airborne weather radars. They work up to 55,000 feet in altitude and between -55 °C and +95 °C. The MA2823 is tested to work in waveguide/antenna systems with a VSWR of 1.5:1 or less.

The MA2823-1 and MA2823-2 differ only on the frequency band of operation. The MA2823-1 magnetron cross-references to OEM P/N 257-0261-020. The MA2823-2 cross-references to OEM P/N 257-0261-030.

Electrical Characteristics

Characteristic	Symbol	Test Condition	Minimum	Nominal	Maximum	Units
Peak RF Power Output	P_O	Long Pulse	5.0	6.25	7.5	kW
Peak RF Power Output	P_O	Short Pulse	3.5		7.0	kW
Frequency (MA2823-1)	FREQ		9320	9345	9370	MHz
Frequency (MA2823-2)			9334		9356	MHz
Spectrum (Side Lobes)		Short & Long Pulse	8			dB _c
Peak Anode Voltage	E_{px}	Long Pulse $i_b=4.5$ A	4,100	4,700	4,700	Volts
Filament Current	I_f	6.3 VDC	N/A	0.59	0.85	A
Life			500	1,400		Hours

Test Condition

Adjust the anode current for best spectral response.

Characteristic	Symbol	Long Pulse	Short Pulse	Units
Filament Voltage	E_f	6.3	6.3	VDC
Peak Plate Current	i_b	3.0 to 4.5	2.0 to 4.5	A
Pulse Width	t_p	5.5×10^{-6}	1.0×10^{-6}	Second
Pulse Repetition Rate				
Duty	D_u	.001	.001	

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