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Preliminary Outline Specification For Multichannel Oscillator

Frequency range	3.5 to 3.9GHz	
Number of channels	40	
Channel spacing	10MHz	
Channel selection code	6 bits binary 000000 represents lowest frequency 100111 represent highest frequency Output is suppressed to -60dBm max for illegal codes	
Control interface	differential TTL	
Number of outputs	2, SMA female	
Output return loss	14dB max	
Isolation between outputs	14dB min	
Output power	20dBm \pm 1.5dB	
Frequency accuracy	\pm 20 ppm max	
Long term stability	\pm 4 ppm per year max	
Vibration sensitivity	10E-9/g max	
Phase noise (max)	10Hz	-50dBc/Hz
	100Hz	-85dBc/Hz
	1kHz	-115dBc/Hz
	10kHz	-130dBc/Hz
	100kHz	-137dBc/Hz
	\geq 1MHz	-140dBc/Hz
Amplitude noise (max)	10Hz	-100dBc/Hz
	100Hz	-110dBc/Hz
	1kHz	-120dBc/Hz
	10kHz	-130dBc/Hz
	100kHz	-140dBc/Hz
	\geq 1MHz	-150dBc/Hz
Spurious outputs		
Non harmonic	-80dBc max	
Harmonics	-40dBc max	
Switching speed		
Amplitude settling	\pm 0.1dB max 5us after channel change	
Phase settling	\pm 0.5deg max 10us after channel change	

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Built in test	Differential TTL Fail indicated for low output level. Transition region, 19.5 to 13.5dBm
Power supply	15V, 5 Amps max
Operating temperature range	10 to 50°C

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