

PROGRAMMABLE OSCILLATORS

Abracon's programming capability, offered under the Abracon and Ecliptek brands, provides a quick-turn delivery of low, medium and high-volume programmable oscillators, resulting in the shortening of the customer design cycle and the delivery of production lots. These solutions are ideally suited for industrial, consumer, data centers and telecommunications infrastructure architectures.

The programming capability enables the Abracon and Ecliptek brands to offer the following:

- Output frequencies in the 1.000MHz to 1,500MHz range
- Industry-standard and custom/non-standard frequencies
- All industry-standard packages available to include 2.0 x 1.6, 2.5 x 2.0, 3.2 x 2.5, 5.0 x 3.2 and 7.0 x 5.0 mm
- Output logic types: CMOS, LVDS, LVPECL (series dependent)
- Power supply voltage options: 1.8V, 2.5V, 2.8V, 3.0V, 3.3V, and 5.0V
- Commercial, industrial and extended industrial OTR options, including -55°C to +125°C
- E/D Tri-State and power down output control functions

Programmable MEMS Oscillators

BRAND	SERIES	PACKAGE SIZE (mm)		PACKAGE	OSCILLATOR TYPE	FREQUENCY (MHz)	VDD OPTIONS (V)	OUTPUT LOGIC TYPE	WIDEST AVAILABLE OPERATING TEMPERATURE RANGE
		L	W						
Ecliptek	EMRA51	2.0	1.6	4 Pad SMD	MEMS	1 to 137	1.8	CMOS	-55°C to +125°C
Ecliptek	EMRA52	2.0	1.6	4 Pad SMD	MEMS	1 to 137	2.5	CMOS	-55°C to +125°C
Ecliptek	EMRA53	2.0	1.6	4 Pad SMD	MEMS	1 to 137	3.3	CMOS	-55°C to +125°C
Ecliptek	EMRA54	2.0	1.6	4 Pad SMD	MEMS	1 to 137	2.8	CMOS	-55°C to +125°C
Ecliptek	EMRA55	2.0	1.6	4 Pad SMD	MEMS	1 to 137	3.0	CMOS	-55°C to +125°C
Ecliptek	EMRA56	2.0	1.6	4 Pad SMD	MEMS	1 to 137	2.25~3.6	CMOS	-55°C to +125°C
Abracon	ASDM	2.5	2.0	4 Pad SMD	MEMS	1 to 150	1.8, 2.5, 2.8, 3.0, 3.3	CMOS	-40°C to +85°C
Abracon	ASDMB	2.5	2.0	4 Pad SMD	MEMS	1 to 150	1.8~3.3	CMOS	-40°C to +105°C
Ecliptek	EMRA41	2.5	2.0	4 Pad SMD	MEMS	1 to 137	1.8	CMOS	-55°C to +125°C
Ecliptek	EMRA42	2.5	2.0	4 Pad SMD	MEMS	1 to 137	2.5	CMOS	-55°C to +125°C
Ecliptek	EMRA43	2.5	2.0	4 Pad SMD	MEMS	1 to 137	3.3	CMOS	-55°C to +125°C
Ecliptek	EMRA44	2.5	2.0	4 Pad SMD	MEMS	1 to 137	2.8	CMOS	-55°C to +125°C
Ecliptek	EMRA45	2.5	2.0	4 Pad SMD	MEMS	1 to 137	3.0	CMOS	-55°C to +125°C
Ecliptek	EMRA46	2.5	2.0	4 Pad SMD	MEMS	1 to 137	2.25~3.6	CMOS	-55°C to +125°C
Ecliptek	EMK41	2.5	2.0	4 Pad SMD	MEMS	1 to 125	1.8	CMOS	-40°C to +85°C
Ecliptek	EMK42	2.5	2.0	4 Pad SMD	MEMS	1 to 125	2.5	CMOS	-40°C to +85°C
Ecliptek	EMK43	2.5	2.0	4 Pad SMD	MEMS	1 to 125	3.3	CMOS	-40°C to +85°C
Abracon	ASEM	3.2	2.5	4 Pad SMD	MEMS	1 to 150	1.8, 2.5, 2.8, 3.0, 3.3	CMOS	-40°C to +85°C
Abracon	ASEMB	3.2	2.5	4 Pad SMD	MEMS	1 to 150	1.8~3.3	CMOS	-40°C to +105°C
Ecliptek	EMRA31	3.2	2.5	4 Pad SMD	MEMS	1 to 137	1.8	CMOS	-55°C to +125°C
Ecliptek	EMRA32	3.2	2.5	4 Pad SMD	MEMS	1 to 137	2.5	CMOS	-55°C to +125°C

Programmable MEMS Oscillators

BRAND	SERIES	PACKAGE SIZE (mm)		PACKAGE	OSCILLATOR TYPE	FREQUENCY (MHz)	VDD OPTIONS (V)	OUTPUT LOGIC TYPE	WIDEST AVAILABLE OPERATING TEMPERATURE RANGE
		L	W						
Ecliptek	EMRA33	3.2	2.5	4 Pad SMD	MEMS	1 to 137	3.3	CMOS	-55°C to +125°C
Ecliptek	EMRA34	3.2	2.5	4 Pad SMD	MEMS	1 to 137	2.8	CMOS	-55°C to +125°C
Ecliptek	EMRA35	3.2	2.5	4 Pad SMD	MEMS	1 to 137	3.0	CMOS	-55°C to +125°C
Ecliptek	EMRA36	3.2	2.5	4 Pad SMD	MEMS	1 to 137	2.25~3.6	CMOS	-55°C to +125°C
Ecliptek	EMK31	3.2	2.5	4 Pad SMD	MEMS	1 to 125	1.8	CMOS	-40°C to +85°C
Ecliptek	EMK32	3.2	2.5	4 Pad SMD	MEMS	1 to 125	2.5	CMOS	-40°C to +85°C
Ecliptek	EMK33	3.2	2.5	4 Pad SMD	MEMS	1 to 125	3.3	CMOS	-40°C to +85°C
Abrakon	ASFLM	5.0	3.2	4 Pad SMD	MEMS	1 to 150	1.8, 2.5, 2.8, 3.0, 3.3	CMOS	-40°C to +85°C
Abrakon	ASFLMB	5.0	3.2	4 Pad SMD	MEMS	1 to 150	1.8, 2.5, 2.8, 3.0, 3.3	CMOS	-40°C to +105°C
Ecliptek	EMRA21	5.0	3.2	4 Pad SMD	MEMS	1 to 137	1.8	CMOS	-55°C to +125°C
Ecliptek	EMRA22	5.0	3.2	4 Pad SMD	MEMS	1 to 137	2.5	CMOS	-55°C to +125°C
Ecliptek	EMRA23	5.0	3.2	4 Pad SMD	MEMS	1 to 137	3.3	CMOS	-55°C to +125°C
Ecliptek	EMRA24	5.0	3.2	4 Pad SMD	MEMS	1 to 137	2.8	CMOS	-55°C to +125°C
Ecliptek	EMRA25	5.0	3.2	4 Pad SMD	MEMS	1 to 137	3.0	CMOS	-55°C to +125°C
Ecliptek	EMRA26	5.0	3.2	4 Pad SMD	MEMS	1 to 137	2.25~3.6	CMOS	-55°C to +125°C
Ecliptek	EMK21	5.0	3.2	4 Pad SMD	MEMS	1 to 125	1.8	CMOS	-40°C to +85°C
Ecliptek	EMK22	5.0	3.2	4 Pad SMD	MEMS	1 to 125	2.5	CMOS	-40°C to +85°C
Ecliptek	EMK23	5.0	3.2	4 Pad SMD	MEMS	1 to 125	3.3	CMOS	-40°C to +85°C
Abrakon	AP2S	2.5	2.1	4 Pad SMD	MEMS	2.048 to 200	1.8, 2.5, 3.3	CMOS	-40°C to +85°C
Abrakon	AP3S	3.2	2.5	4 Pad SMD	MEMS	2.048 to 200	1.8, 2.5, 3.3	CMOS	-40°C to +85°C
Abrakon	ASVM	7.0	5.0	4 Pad SMD	MEMS	1 to 110	1.8, 2.5, 2.8, 3.3	CMOS	-40°C to +85°C
Abrakon	ASVMB	7.0	5.0	4 Pad SMD	MEMS	1 to 150	1.8~3.3	CMOS	-40°C to +105°C
Ecliptek	EMRA11	7.0	5.0	4 Pad SMD	MEMS	1 to 137	1.8	CMOS	-55°C to +125°C
Ecliptek	EMRA12	7.0	5.0	4 Pad SMD	MEMS	1 to 137	2.5	CMOS	-55°C to +125°C
Ecliptek	EMRA13	7.0	5.0	4 Pad SMD	MEMS	1 to 137	3.3	CMOS	-55°C to +125°C
Ecliptek	EMRA14	7.0	5.0	4 Pad SMD	MEMS	1 to 137	2.8	CMOS	-55°C to +125°C
Ecliptek	EMRA15	7.0	5.0	4 Pad SMD	MEMS	1 to 137	3.0	CMOS	-55°C to +125°C
Ecliptek	EMRA16	7.0	5.0	4 Pad SMD	MEMS	1 to 137	2.25~3.6	CMOS	-55°C to +125°C
Ecliptek	EMK11	7.0	5.0	4 Pad SMD	MEMS	1 to 125	1.8	CMOS	-40°C to +85°C
Ecliptek	EMK12	7.0	5.0	4 Pad SMD	MEMS	1 to 125	2.5	CMOS	-40°C to +85°C
Ecliptek	EMK13	7.0	5.0	4 Pad SMD	MEMS	1 to 125	3.3	CMOS	-40°C to +85°C
Ecliptek	EMRC12	7.0	5.0	6 Pad SMD	MEMS	1 to 625	2.5	LVPECL	-40°C to +85°C
Ecliptek	EMRC13	7.0	5.0	6 Pad SMD	MEMS	1 to 625	3.3	LVPECL	-40°C to +85°C
Ecliptek	EMRC22	5.0	3.2	6 Pad SMD	MEMS	1 to 625	2.5	LVPECL	-40°C to +85°C
Ecliptek	EMRC23	5.0	3.2	6 Pad SMD	MEMS	1 to 625	3.3	LVPECL	-40°C to +85°C
Ecliptek	EMRE12	7.0	5.0	6 Pad SMD	MEMS	1 to 625	2.5	LVDS	-40°C to +85°C
Ecliptek	EMRE13	7.0	5.0	6 Pad SMD	MEMS	1 to 625	3.3	LVDS	-40°C to +85°C
Ecliptek	EMRE22	5.0	3.2	6 Pad SMD	MEMS	1 to 625	2.5	LVDS	-40°C to +85°C
Ecliptek	EMRE23	5.0	3.2	6 Pad SMD	MEMS	1 to 625	3.3	LVDS	-40°C to +85°C

Programmable MHz Crystal Oscillators

BRAND	SERIES	PACKAGE SIZE (mm)		PACKAGE	OSCILLATOR TYPE	FREQUENCY (MHz)	VDD OPTIONS (V)	OUTPUT LOGIC TYPE	WIDEST AVAILABLE OPERATING TEMPERATURE RANGE
		L	W						
Ecliptek	EH59	2.5	2.0	4 Pad SMD	Quartz	2.6 to 133	1.8	CMOS	-40°C to +85°C
Ecliptek	EH57	2.5	2.0	4 Pad SMD	Quartz	2.6 to 166	2.5	CMOS	-40°C to +85°C
Ecliptek	EH56	2.5	2.0	4 Pad SMD	Quartz	2.6 to 200	3.3	CMOS	-40°C to +85°C
Ecliptek	EH49	3.2	2.5	4 Pad SMD	Quartz	2.6 to 133	1.8	CMOS	-40°C to +85°C
Ecliptek	EH47	3.2	2.5	4 Pad SMD	Quartz	2.6 to 200	2.5	CMOS	-40°C to +85°C
Ecliptek	EH46	3.2	2.5	4 Pad SMD	Quartz	2.6 to 200	3.3	CMOS	-40°C to +85°C
Ecliptek	EP16E7	3.2	2.5	4 Pad SMD	Quartz	3.3 to 75	1.8	CMOS	-40°C to +85°C
Ecliptek	EP15E7	3.2	2.5	4 Pad SMD	Quartz	3.3 to 88	2.5	CMOS	-40°C to +85°C
Ecliptek	EP13E7	3.2	2.5	4 Pad SMD	Quartz	3.3 to 100	3.3	CMOS	-40°C to +85°C
Ecliptek	EH39	5.0	3.2	4 Pad SMD	Quartz	2.6 to 133	1.8	CMOS	-40°C to +85°C
Ecliptek	EH37	5.0	3.2	4 Pad SMD	Quartz	2.6 to 166	2.5	CMOS	-40°C to +85°C
Ecliptek	EH36	5.0	3.2	4 Pad SMD	Quartz	1 to 155.52	3.3	CMOS	-40°C to +85°C
Ecliptek	EP36	5.0	3.2	4 Pad SMD	Quartz	1 to 106.250	3.3	CMOS	-40°C to +85°C
Ecliptek	EH35	5.0	3.2	4 Pad SMD	Quartz	1 to 155.52	5.0	CMOS	-40°C to +85°C
Ecliptek	EP35	5.0	3.2	4 Pad SMD	Quartz	1 to 125	5.0	CMOS	-40°C to +85°C
Ecliptek	EH29	7.0	5.0	4 Pad SMD	Quartz	2.6 to 133	1.8	CMOS	-40°C to +85°C
Ecliptek	EH27	7.0	5.0	4 Pad SMD	Quartz	1 to 200	2.5	CMOS	-40°C to +85°C
Ecliptek	EH26	7.0	5.0	4 Pad SMD	Quartz	1 to 155.52	3.3	CMOS	-40°C to +85°C
Ecliptek	EP26	7.0	5.0	4 Pad SMD	Quartz	1 to 106.25	3.3	CMOS	-40°C to +85°C
Ecliptek	EH25	7.0	5.0	4 Pad SMD	Quartz	1 to 155.52	5.0	CMOS	-40°C to +85°C
Ecliptek	EP25	7.0	5.0	4 Pad SMD	Quartz	1 to 125	5.0	CMOS	-40°C to +85°C
Ecliptek	EPH13	12.7	12.7	HS DIP	Quartz	1 to 106.25	3.3	CMOS	-40°C to +85°C
Ecliptek	EHH11	12.7	12.7	HS DIP	Quartz	1 to 155.52	5.0	CMOS	-40°C to +85°C
Ecliptek	EHH13	12.7	12.7	HS DIP	Quartz	1 to 155.52	3.3	CMOS	-40°C to +85°C
Ecliptek	EPH11	12.7	12.7	HS DIP	Quartz	1 to 125	5.0	CMOS	-40°C to +85°C
Ecliptek	EHF13	20.2	12.7	FS DIP	Quartz	1 to 155.52	3.3	CMOS	-40°C to +85°C
Ecliptek	EPF13	20.2	12.7	FS DIP	Quartz	1 to 106.25	3.3	CMOS	-40°C to +85°C
Ecliptek	EHF11	20.2	12.7	FS DIP	Quartz	1 to 155.52	5.0	CMOS	-40°C to +85°C
Ecliptek	EPF11	20.2	12.7	FS DIP	Quartz	1 to 125	5.0	CMOS	-40°C to +85°C
Ecliptek	EQRA22	5.0	3.2	6 Pad SMD	Quartz	10 to 250	2.5	CMOS	-40°C to +85°C
Ecliptek	EQRA24	5.0	3.2	6 Pad SMD	Quartz	10 to 250	2.8	CMOS	-40°C to +85°C
Ecliptek	EQRA25	5.0	3.2	6 Pad SMD	Quartz	10 to 250	3.0	CMOS	-40°C to +85°C
Ecliptek	EQRA23	5.0	3.2	6 Pad SMD	Quartz	10 to 250	3.3	CMOS	-40°C to +85°C
Ecliptek	EQRA12	7.0	5.0	6 Pad SMD	Quartz	10 to 250	2.5	CMOS	-40°C to +85°C
Ecliptek	EQRA14	7.0	5.0	6 Pad SMD	Quartz	10 to 250	2.8	CMOS	-40°C to +85°C
Ecliptek	EQRA15	7.0	5.0	6 Pad SMD	Quartz	10 to 250	3.0	CMOS	-40°C to +85°C
Ecliptek	EQRA13	7.0	5.0	6 Pad SMD	Quartz	10 to 250	3.3	CMOS	-40°C to +85°C
Ecliptek	EQRF32	3.2	2.5	6 Pad SMD	Quartz	10 1500	2.5	LVDS	-40°C to +85°C
Ecliptek	EQRF33	3.2	2.5	6 Pad SMD	Quartz	10 1500	3.3	LVPECL	-40°C to +85°C

Programmable MHz Crystal Oscillators

BRAND	SERIES	PACKAGE SIZE (mm)		PACKAGE	OSCILLATOR TYPE	FREQUENCY (MHz)	VDD OPTIONS (V)	OUTPUT LOGIC TYPE	WIDEST AVAILABLE OPERATING TEMPERATURE RANGE
		L	W						
Ecliptek	EQRM32	3.2	2.5	6 Pad SMD	Quartz	10 1500	2.5	LVDS	-40°C to +85°C
Ecliptek	EQRM33	3.2	2.5	6 Pad SMD	Quartz	10 1500	3.3	LVPECL	-40°C to +85°C
Ecliptek	EQRF22	5.0	3.2	6 Pad SMD	Quartz	10 to 625	2.5	LVDS	-40°C to +85°C
Ecliptek	EQRF23	5.0	3.2	6 Pad SMD	Quartz	10 to 625	3.3	LVPECL	-40°C to +85°C
Ecliptek	EQRM22	5.0	3.2	6 Pad SMD	Quartz	10 to 625	2.5	LVDS	-40°C to +85°C
Ecliptek	EQRM23	5.0	3.2	6 Pad SMD	Quartz	10 to 625	3.3	LVPECL	-40°C to +85°C
Ecliptek	EQRF12	7.0	5.0	6 Pad SMD	Quartz	10 to 625	2.5	LVDS	-40°C to +85°C
Ecliptek	EQRF13	7.0	5.0	6 Pad SMD	Quartz	10 to 625	3.3	LVPECL	-40°C to +85°C
Ecliptek	EQRM12	7.0	5.0	6 Pad SMD	Quartz	10 to 625	2.5	LVDS	-40°C to +85°C
Ecliptek	EQRM13	7.0	5.0	6 Pad SMD	Quartz	10 to 625	3.3	LVPECL	-40°C to +85°C
Ecliptek	EQVA22	5.0	3.2	6 Pad SMD	Quartz	10 to 250	2.5	CMOS	-40°C to +85°C
Ecliptek	EQVA23	5.0	3.2	6 Pad SMD	Quartz	10 to 250	3.3	CMOS	-40°C to +85°C
Ecliptek	EQVD22	5.0	3.2	6 Pad SMD	Quartz	10 to 625	2.5	LVPECL	-40°C to +85°C
Ecliptek	EQVD23	5.0	3.2	6 Pad SMD	Quartz	10 to 625	3.3	LVPECL	-40°C to +85°C
Ecliptek	EQVE22	5.0	3.2	6 Pad SMD	Quartz	10 to 625	2.5	LVDS	-40°C to +85°C
Ecliptek	EQVE23	5.0	3.2	6 Pad SMD	Quartz	10 to 625	3.3	LVDS	-40°C to +85°C
Ecliptek	EQVA12	7.0	5.0	6 Pad SMD	Quartz	10 to 250	2.5	CMOS	-40°C to +85°C
Ecliptek	EQVA13	7.0	5.0	6 Pad SMD	Quartz	10 to 250	3.3	CMOS	-40°C to +85°C
Ecliptek	EQVD12	7.0	5.0	6 Pad SMD	Quartz	10 to 625	2.5	LVPECL	-40°C to +85°C
Ecliptek	EQVD13	7.0	5.0	6 Pad SMD	Quartz	10 to 625	3.3	LVPECL	-40°C to +85°C
Ecliptek	EQVE12	7.0	5.0	6 Pad SMD	Quartz	10 to 625	2.5	LVDS	-40°C to +85°C
Ecliptek	EQVE13	7.0	5.0	6 Pad SMD	Quartz	10 to 625	3.3	LVDS	-40°C to +85°C
Ecliptek	EQTA32	3.2	2.5	6 Pad SMD	Quartz	10 to 250	2.5	CMOS	-40°C to +85°C
Ecliptek	EQTA34	3.2	2.5	6 Pad SMD	Quartz	10 to 250	2.8	CMOS	-40°C to +85°C
Ecliptek	EQTA35	3.2	2.5	6 Pad SMD	Quartz	10 to 250	3.0	CMOS	-40°C to +85°C
Ecliptek	EQTA33	3.2	2.5	6 Pad SMD	Quartz	10 to 250	3.3	CMOS	-40°C to +85°C
Ecliptek	EQTG32	3.2	2.5	6 Pad SMD	Quartz	10 to 625	2.5	LVPECL	-40°C to +85°C
Ecliptek	EQTG33	3.2	2.5	6 Pad SMD	Quartz	10 to 625	3.3	LVPECL	-40°C to +85°C
Ecliptek	EQTJ32	3.2	2.5	6 Pad SMD	Quartz	10 to 625	2.5	LVDS	-40°C to +85°C
Ecliptek	EQTJ33	3.2	2.5	6 Pad SMD	Quartz	10 to 625	3.3	LVDS	-40°C to +85°C
Ecliptek	EQUA32	3.2	2.5	6 Pad SMD	Quartz	10 to 250	2.5	CMOS	-40°C to +85°C
Ecliptek	EQUA33	3.2	2.5	6 Pad SMD	Quartz	10 to 250	3.3	CMOS	-40°C to +85°C
Ecliptek	EQUA34	3.2	2.5	6 Pad SMD	Quartz	10 to 250	2.5	CMOS	-40°C to +85°C
Ecliptek	EQUA35	3.2	2.5	6 Pad SMD	Quartz	10 to 250	3.3	CMOS	-40°C to +85°C
Ecliptek	EQUG32	3.2	2.5	6 Pad SMD	Quartz	10 to 625	2.5	LVPECL	-40°C to +85°C
Ecliptek	EQUG33	3.2	2.5	6 Pad SMD	Quartz	10 to 625	3.3	LVPECL	-40°C to +85°C
Ecliptek	EQUJ32	3.2	2.5	6 Pad SMD	Quartz	10 to 625	2.5	LVDS	-40°C to +85°C
Ecliptek	EQUJ33	3.2	2.5	6 Pad SMD	Quartz	10 to 625	3.3	LVDS	-40°C to +85°C

Frequency Control and Timing Devices

With service, quality and technical expertise at Abracon's core, our brands enable innovative, connected IoT solutions. Abracon powers the Ecliptek, Fox, ILSI, MMD and Oscilent brands, providing the latest technical design support and global supply chain flexibility to solve customers' unique challenges of today. Our frequency control and timing devices include crystals and oscillators designed to meet automotive, IoT and precision timing design requirements. The collection includes compact size, low phase noise, and wide operating temperature range solutions.

KEY MARKET SEGMENTS AND APPLICATIONS



PRODUCT TYPE BY BRAND

	QUARTZ CRYSTALS	CRYSTAL OSCILLATORS	MEMS OSCILLATORS	OCXO	TCXO	VCXO	REAL TIME CLOCKS (RTC)	PROGRAMMABLE XO/VCXO/TCXO/VCTCXO	RESONATORS
ABRACON	•	•	•	•	•	•	•	•	•
ECLIPTEK	•	•	•					•	
FOX	•	•			•	•			
ILSI	•	•	•		•				
MMD	•	•							
OSCILENT	•	•							•

LOCATED GLOBALLY

Australia | Canada | China | Germany | Hong Kong
Hungary | India | Israel | Italy | Korea | Malaysia
Mexico | New Zealand | Nordics | Taiwan
United Kingdom | United States

LEARN MORE AT
ABRACON.COM

CONTACT

General Inquiries
abInfo@abracon.com

Technical Support
tech-support@abracon.com

PR and Media Inquiries
marketing@abracon.com