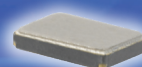
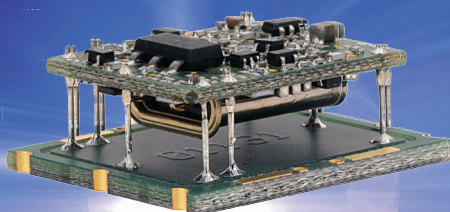
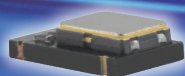




Frequency Products Selection Guide

April 2016



Quartz Crystals

Clock Oscillators

Automotive Crystals & Oscillators to AEC-Q200/TS16949

VCXOs

TCXOs & VCTCXOs

OCXOs

GPS Disciplined OCXOs

Rubidium Oscillators

Quartz Crystals

Recommended standard products are highlighted in blue

Model	Package (mm)	Frequency Range	Frequency Tolerance (Tightest)	Frequency Stability (Tightest)	Operating Temperature Range (Widest)	Key Feature	SMD
CX18 AT	1.5 x 1	30 to 50MHz	±30ppm	±10ppm	-55 to 125°C	Full military testing available	✓
IQXC-90	1.6 x 1	32.768kHz	±20ppm	-0.035/°C ²	-40 to 85°C	Low height 0.5mm	✓
IQXC-26	1.6 x 1.2	26 to 80MHz	±10ppm	±10ppm	-40 to 85°C	Industry standard 4 Pad	✓
IQXC-25	2 x 1.2	32.768kHz	±20ppm	-0.03/°C ²	-40 to 85°C	Low height 0.6mm	✓
CX16 AT	2 x 1.2	24 to 50MHz	±100ppm	±10ppm	-55 to 125°C	Extended temperature range	✓
IQXC-140	2 x 1.6	19.2 to 52MHz	±10ppm	±12ppm	-40 to 85°C	Temperature sensor output	✓
IQXC-42	2 x 1.6	20 to 50MHz	±10ppm	±10ppm	-40 to 85°C	Industry standard 4 Pad	✓
CFPX-56	2 x 6 cyl	32.768kHz	±20ppm	-0.035/°C ²	-40 to 85°C	Pre-Formed legs for SMD	✓
Cylinder Watch	2x6, 3x8 cyl	32.768kHz	±20ppm	-0.035/°C ²	-10 to 60°C	Industry standard	
CFPX-218	2.5 x 2	16 to 50MHz	±10 ppm	±15ppm	-40 to 85°C	Industry standard 4 Pad	✓
CFPX-217	3.2 x 1.5	32.768kHz	±20ppm	-0.034/°C ²	-40 to 85°C	Industry standard	✓
CX11V TF	3.2 x 1.5	32.768kHz to 1.8kHz	±20ppm	-	-55 to 125°C	Extended temperature range	✓
CX11 AT	3.2 x 1.5	16 to 250MHz	±30ppm	±10ppm	-55 to 125°C	Full military testing available	✓
CFPX-180	3.2 x 2.5	10 to 200MHz	±10ppm	±10ppm	-40 to 85°C	Industry standard 4 Pad	✓
IQXC-32	3.2 x 2.5	16 to 32MHz	±10ppm	±15ppm	-40 to 125°C	AEC-Q200	✓
CX9 AT	4 x 1.5	14 to 250MHz	±100ppm	±10ppm	-55 to 125°C	Excellent shock and vibration	✓
CX75M TF	4 x 1.8	80kHz to 160kHz	±50ppm	-	-55 to 125°C	Extended temperature range	✓
CX75M AT	4 x 1.8	14 to 250MHz	±100ppm	±10ppm	-55 to 125°C	Excellent shock and vibration	✓
CX4V TF	5 x 1.83	30kHz to 250kHz	±30ppm	-	-55 to 125°C	Extended temperature range	✓
CX4HG	5 x 2.16	14 to 50MHz	±100ppm	±10ppm	-55 to 125°C	Ultra high shock 100000G	✓
CFPX-104	5 x 3.2	8 to 133MHz	±10ppm	±10ppm	-40 to 85°C	Industry standard 4 Pad	✓
CFPX-225	5 x 3.2	8 to 150MHz	±10ppm	±15ppm	-40 to 85°C	Industry standard 2 Pad	✓
IQXC-31	5 x 3.2	12 to 32MHz	±10ppm	±15ppm	-40 to 125°C	AEC-Q200	✓
CX4VHT TF	5.3 x 2.1	30kHz to 250kHz	±30ppm	-	0 to 200°C	High operating temperature	✓
CX4HT AT	5.33 x 2.16	14 to 250MHz	±100ppm	-	-55 to 225°C	Wide operating temperature range	✓
CFPX-228	6 x 3.5	8 to 133MHz	±10ppm	±15ppm	-40 to 85°C	Industry standard 2 & 4 Pad	✓
IQXC-30	7 x 5	6 to 80MHz	±10ppm	±15ppm	-40 to 125°C	AEC-Q200	✓
12SMX	7 x 5	6 to 84MHz	±20ppm	±20ppm	-40 to 85°C	Industry standard 2 & 4 Pad	✓
UM1	8 x 3.2	6 to 175MHz	-	±5ppm	-55 to 125°C	Industry standard	
CX1 EXT	8 x 4	555kHz to 2.1MHz	±500ppm	-	-55 to 125°C	Full military testing available	✓
CX1 AT	8 x 4	6 to 250MHz	±100ppm	±10ppm	-55 to 125°C	Full military testing available	✓
85SMX	8.7 x 3.8	32.768kHz	±20ppm	-0.035/°C ²	-40 to 85°C	Industry standard	✓
90SMX	10.4 x 4	32.768kHz	±20ppm	-0.035/°C ²	-40 to 85°C	Industry standard	✓
91SMX	10.4 x 4	32.768kHz	±20ppm	-0.035/°C ²	-40 to 85°C	Industry standard	✓
HC49	11.05 x 4.65	1.8432 to 270MHz	±5ppm	-	-55 to 125°C	Industry standard	
HC49/4H	11.05 x 4.7	3.2 to 100MHz	±10ppm	±15ppm	-55 to 105°C	Industry Standard	
IQXC-33	11.4 x 4.9	3.01 to 100MHz	±10ppm	±15ppm	-40 to 125°C	AEC-Q200	✓
86SMX	13.1 x 5	3.5 to 90MHz	±10ppm	±10ppm	-40 to 85°C	Industry standard	✓
HC49/4HSMX	13.4 x 4.9	3.2 to 100MHz	±10ppm	±15ppm	-55 to 105°C	Industry standard	✓

Automotive Crystals to AEC-Q200 & TS16949

Model	Package (mm)	Frequency Range	Frequency Tolerance (Tightest)	Frequency Stability (Tightest)	Operating Temperature Range (Widest)	SMD
IQXC-42 AUTO	2 x 1.6	20 to 50MHz	±10ppm	±20ppm	-40 to 125°C	✓
CFPX-218 AUTO	2.5 x 2	12 to 50MHz	±10ppm	±20ppm	-40 to 125°C	✓
IQXC-180 AUTO	3.2 x 2.5	11 to 150MHz	±10ppm	±15ppm	-40 to 125°C	✓
IQXC-104 AUTO	5 x 3.2	8 to 125MHz	±10ppm	±50ppm	-40 to 125°C	✓
IQXC-228 AUTO	6 x 3.5	10 to 70MHz	±10ppm	±15ppm	-40 to 125°C	✓
12SMX AUTO	7 x 5	6 to 125MHz	±10ppm	±50ppm	-40 to 125°C	✓
HC49/4H AUTO	11.05 x 4.7	3.01 to 100MHz	±10ppm	±15ppm	-40 to 125°C	
HC49/4HSMX AUTO	11.3 x 4.7	3.01 to 100MHz	±10ppm	±15ppm	-40 to 125°C	✓

Clock Oscillators

Model	Supply Voltage	Package (mm)	Output Compatibility	Frequency Range	Frequency Stability (Tightest)	Operating Temperature Range (Widest)	Key Feature	SMD
IQMS-141	1.2 to 3.63V	1.54 x 0.84	CMOS	32.768kHz	±75ppm	−40 to 85°C	MEMS technology	✓
IQMS-143	1.5 to 3.63V	1.54 x 0.84	CMOS	32.768kHz	±5ppm	−40 to 85°C	MEMS technology	✓
IQMS-142	1.5 to 3.63V	2 x 1.2	CMOS	32.768kHz	±75ppm	−40 to 105°C	MEMS technology	✓
IQXO-986	1.8V	1.6 x 1.2	CMOS	32.768kHz	±30ppm	−40 to 85°C	Low power	✓
IQXO-642	1.8V	1.6 x 1.2	CMOS	1 to 80MHz	±30ppm	−40 to 85°C	Low current	✓
IQXO-542	1.8V	2 x 1.6	CMOS	1 to 80MHz	±30ppm	−40 to 85°C	Low current	✓
CFPS-107	1.8V	2.5 x 2	CMOS	32.768kHz	±20ppm	−40 to 85°C	Low current	✓
IQXO-794	1.8V	2.5 x 2	HCMOS	1 to 50MHz	±20ppm	−40 to 85°C	Industry standard	✓
CFPS-102	1.8V	3.2 x 2.5	CMOS	32.768kHz	±20ppm	−40 to 85°C	Low current	✓
CFPS-41	1.8V	3.2 x 2.5	CMOS	2 to 50MHz	±25ppm	−40 to 85°C	Industry standard	✓
CFPS-36	1.8V	5 x 3.2	CMOS	500kHz to 156MHz	±20ppm	−40 to 85°C	Industry standard	✓
CXOQ	1.8, 2.5, 3.0, 3.3V	2.5 x 2	CMOS	400kHz to 100MHz	±50ppm	−55 to 125°C	Extended temperature range	✓
CXOLAT	1.8, 2.5, 3.0, 3.3V	3.2 x 1.5	CMOS	32.768kHz	±10ppm	−40 to 85°C	Ultra low current	✓
CXOX	1.8, 3.3, 5.0V	3.2 x 2.5	CMOS	1 to 160MHz	±50ppm	−55 to 125°C	Extended temperature range	✓
IQXO-985	2.5V	1.6 x 1.2	CMOS	32.768kHz	±30ppm	−40 to 85°C	Low power	✓
IQXO-641	2.5V	1.6 x 1.2	CMOS	1 to 80MHz	±30ppm	−40 to 85°C	Low current	✓
IQXO-541	2.5V	2 x 1.6	CMOS	1 to 80MHz	±30ppm	−40 to 85°C	Low current	✓
CFPS-108	2.5V	2.5 x 2	CMOS	32.768kHz	±20ppm	−40 to 85°C	Low current	✓
IQXO-447	2.5V	2.5 x 2	CMOS	4 to 54MHz	±10ppm	−40 to 85°C	Tight stability	✓
IQXO-793	2.5V	2.5 x 2	HCMOS	1 to 50MHz	±20ppm	−40 to 85°C	Industry standard	✓
CFPS-103	2.5V	3.2 x 2.5	CMOS	32.768kHz	±20ppm	−40 to 85°C	Low current	✓
CFPS-40	2.5V	3.2 x 2.5	CMOS	2 to 50MHz	±25ppm	−40 to 85°C	Industry standard	✓
IQXO-432	2.5V	3.2 x 2.5	CMOS	4 to 54MHz	±10ppm	−40 to 85°C	Tight stability	✓
CFPS-37	2.5V	5 x 3.2	CMOS	1.8 to 125MHz	±25ppm	−40 to 85°C	Industry standard	✓
IQXO-741	2.5V	5 x 3.2	LVDS	80 to 160MHz	±20ppm	−40 to 85°C	Industry standard	✓
CFPS-32	2.5V	7 x 5	CMOS	0.5 to 156MHz	±25ppm	−40 to 85°C	Industry standard	✓
IQXO-661	2.5V	7 x 5	LVDS	15 to 160MHz	±25ppm	−40 to 85°C	Industry standard	✓
IQXO-621	2.5V	7 x 5	LVPECL	25 to 212.5MHz	±25ppm	−40 to 85°C	Industry standard	✓
IQXO-936	2.5, 3.3V	2.5 x 2	CMOS, LVPECL, LVDS	8 to 1500MHz	±35ppm	−40 to 85°C	Dual output	✓
IQXO-931	2.5, 3.3V	2.5 x 2	CMOS, LVPECL, LVDS	8 to 1500MHz	±10ppm	−40 to 85°C	Low jitter (0.5ps)	✓
IQXO-935	2.5, 3.3V	5 x 3.2	CMOS, LVPECL, LVDS	1 to 200MHz	±30ppm	−10 to 70°C	Ultra low Jitter (0.05 to 0.3ps)	✓
IQXO-940	2.5, 3.3V	5 x 3.2	CMOS, LVPECL, LVDS	8 to 1500MHz	±10ppm	−40 to 85°C	Low jitter (0.5ps)	✓
IQXO-941	2.5, 3.3V	5 x 3.2	CMOS, LVPECL, LVDS	8 to 1500MHz	±10ppm	−40 to 85°C	Low jitter (0.9ps)	✓
IQXO-944	2.5, 3.3V	7 x 5	CMOS, LVPECL, LVDS	1 to 640MHz	±10ppm	−40 to 85°C	Ultra low Jitter (0.05 to 0.3ps)	✓
IQXO-942	2.5, 3.3V	7 x 5	CMOS, LVPECL, LVDS	8 to 1500MHz	±10ppm	−40 to 85°C	Low jitter (0.5ps)	✓
IQXO-943	2.5, 3.3V	7 x 5	CMOS, LVPECL, LVDS	8 to 1500MHz	±10ppm	−40 to 85°C	Low jitter (0.9ps)	✓
IQXO-446	3.0V	2.5 x 2	CMOS	4 to 54MHz	±10ppm	−40 to 85°C	Tight stability	✓
CFPS-114	3.0V	2.5 x 2	CMOS	26 to 44MHz	±30ppm	−40 to 85°C	Low phase noise	✓
IQXO-431	3.0V	3.2 x 2.5	CMOS	4 to 54MHz	±10ppm	−40 to 85°C	Tight stability	✓
IQXO-984	3.3V	1.6 x 1.2	CMOS	32.768kHz	±30ppm	−40 to 85°C	Low power	✓
IQXO-640	3.3V	1.6 x 1.2	CMOS	1 to 80MHz	±30ppm	−40 to 85°C	Low current	✓
IQXO-540	3.3V	2 x 1.6	CMOS	1 to 80MHz	±30ppm	−40 to 85°C	Low current	✓
CFPS-109	3.3V	2.5 x 2	CMOS	32.768kHz	±20ppm	−40 to 85°C	Low current	✓
IQXO-445	3.3V	2.5 x 2	CMOS	4 to 54MHz	±10ppm	−40 to 85°C	Tight stability	✓
CFPS-115	3.3V	2.5 x 2	CMOS	26 to 44MHz	±30ppm	−40 to 85°C	Low phase noise	✓
IQXO-791	3.3V	2.5 x 2	HCMOS	1 to 66MHz	±20ppm	−40 to 85°C	Industry standard	✓
CFPS-104	3.3V	3.2 x 2.5	CMOS	32.768kHz	±20ppm	−40 to 85°C	Low current	✓
IQMS-135	3.3V	3.2 x 2.5	CMOS	1 to 80MHz	±10ppm	−40 to 85°C	MEMS technology	✓
IQMS-133	3.3V	3.2 x 2.5	CMOS	1 to 110MHz	±20ppm	−40 to 85°C	MEMS technology	✓
IQMS-137	3.3V	3.2 x 2.5	CMOS	1 to 110MHz	±20ppm	−40 to 125°C	MEMS technology	✓
CFPS-39	3.3V	3.2 x 2.5	CMOS	2 to 50MHz	±25ppm	−40 to 85°C	Industry standard	✓
IQMS-136	3.3V	3.2 x 2.5	CMOS	80.000001 to 220MHz	±10ppm	−40 to 85°C	MEMS technology	✓

Clock Oscillators continued

Model	Supply Voltage	Package (mm)	Output Compatibility	Frequency Range	Frequency Stability (Tightest)	Operating Temperature Range (Widest)	Key Feature	SMD
IQMS-134	3.3V	3.2 x 2.5	CMOS	115 to 137MHz	±20ppm	−40 to 85°C	MEMS technology	✓
IQMS-138	3.3V	3.2 x 2.5	CMOS	115.194001 to 137MHz	±20ppm	−40 to 125°C	MEMS technology	✓
IQXO-801	3.3V	3.2 x 2.5	HCMOS	4 to 110MHz	±50ppm	−40 to 85°C	AEC-Q200 qualified	✓
IQMS-146	3.3V	3.2 x 2.5	LVDS	1 to 220MHz	±10ppm	−40 to 85°C	MEMS technology	✓
IQMS-147	3.3V	3.2 x 2.5	LVDS	220 to 625MHz	±10ppm	−40 to 85°C	MEMS technology	✓
IQMS-144	3.3V	3.2 x 2.5	LVPECL	1 to 220MHz	±10ppm	−40 to 85°C	MEMS technology	✓
IQMS-145	3.3V	3.2 x 2.5	LVPECL	220 to 625MHz	±10ppm	−40 to 85°C	MEMS technology	✓
CFPS-69	3.3V	5 x 3.2	CMOS	1.8 to 50MHz	±25ppm	−40 to 85°C	Low current	✓
CFPS-9	3.3V	5 x 3.2	HCMOS	0.5 to 160MHz	±25ppm	−40 to 85°C	Industry standard	✓
IQXO-740	3.3V	5 x 3.2	LVDS	80 to 160MHz	±20ppm	−40 to 85°C	Industry standard	✓
CXO3M	3.3V	6.5 x 5	CMOS/TTL	200kHz to 200MHz	±50ppm	−55 to 125°C	Extended temperature range	✓
LFXO	3.3V	6.5 x 5	CMOS	32.768kHz	±10ppm	−55 to 125°C	Extended temperature range	✓
CFPS-73	3.3V	7 x 5	HCMOS/TTL	0.5 to 156MHz	±20ppm	−40 to 85°C	Industry standard	✓
IQXO-620	3.3V	7 x 5	LVPECL	25 to 212.5MHz	±25ppm	−40 to 85°C	Industry standard	✓
IQXO-660	3.3V	7 x 5	LVDS	15 to 160MHz	±25ppm	−40 to 85°C	Industry standard	✓
CXOMKHT	3.3, 5.0V	6.5 x 5.0	CMOS	0 to 70MHz	±100ppm	0 to 200°C	High operating temperature	✓
HGXO	3.3, 5.0V	7 x 5	CMOS	460kHz to 50MHz	±10ppm	−55 to 125°C	Ultra high shock 100000G	✓
IQXO-800	5.0V	3.2 x 2.5	HCMOS	4 to 110MHz	±50ppm	−40 to 85°C	AEC-Q200 qualified	✓
CFPS-12	5.0V	5 x 3.2	CMOS	0.5 to 100MHz	±25ppm	−40 to 85°C	Industry standard	✓
CXOM	5.0V	6.5 x 5	CMOS	200kHz to 160MHz	±50ppm	−55 to 125°C	Full military testing available	✓
CFPS-72	5.0V	7 x 5	HCMOS/TTL	0.5 to 100MHz	±25ppm	−40 to 85°C	Industry standard	✓
IQXO-825	5.0V	8-pin DIL	HCMOS	1 to 100MHz	±25ppm	−40 to 85°C	Industry standard	
IQXO-820	5.0V	14-pin DIL	HCMOS	1 to 100MHz	±25ppm	−40 to 85°C	Industry standard	

Automotive Clock Oscillators to AEC-Q200 & TS16949

Model	Supply Voltage	Package (mm)	Output Compatibility	Frequency Range	Frequency Stability (Tightest)	Operating Temperature Range (Widest)	SMD
IQXO-542 AUTO	1.8V	2 x 1.6	CMOS	4 to 50MHz	±50ppm	−40 to 125°C	✓
CFPS-53 AUTO	1.8V	2.5 x 2	CMOS	2 to 50MHz	±25ppm	−40 to 125°C	✓
CFPS-41 AUTO	1.8V	3.2 x 2.5	CMOS	2 to 50MHz	±25ppm	−40 to 125°C	✓
IQXO-583 AUTO	1.8V	5 x 3.2	CMOS	1 to 50MHz	±25ppm	−40 to 125°C	✓
CFPS-31 AUTO	1.8V	7 x 5	CMOS	1 to 40MHz	±25ppm	−40 to 125°C	✓
IQXO-541 AUTO	2.5V	2 x 1.6	CMOS	4 to 50MHz	±50ppm	−40 to 125°C	✓
CFPS-54 AUTO	2.5V	2.5 x 2	CMOS	2 to 50MHz	±25ppm	−40 to 125°C	✓
CFPS-40 AUTO	2.5V	3.2 x 2.5	CMOS	2 to 50MHz	±25ppm	−40 to 125°C	✓
IQXO-582 AUTO	2.5V	5 x 3.2	CMOS	1 to 75MHz	±25ppm	−40 to 125°C	✓
CFPS-32 AUTO	2.5V	7 x 5	CMOS	1 to 75MHz	±25ppm	−40 to 125°C	✓
IQXO-540 AUTO	3.3V	2 x 1.6	CMOS	4 to 50MHz	±50ppm	−40 to 125°C	✓
CFPS-56 AUTO	3.3V	2.5 x 2	CMOS	2 to 50MHz	±25ppm	−40 to 125°C	✓
CFPS-39 AUTO	3.3V	3.2 x 2.5	CMOS	2 to 50MHz	±25ppm	−40 to 125°C	✓
IQXO-581 AUTO	3.3V	5 x 3.2	CMOS	1 to 135MHz	±25ppm	−40 to 125°C	✓
CFPS-73 AUTO	3.3V	7 x 5	CMOS	1 to 135MHz	±25ppm	−40 to 125°C	✓

VCXOs

Model	Supply Voltage	Package (mm)	Output Compatibility	Frequency Range	Pulling	Operating Temperature Range (Widest)	Key Feature	SMD
IQXV-43	1.8V	3.2 x 2.5	HCMOS	4 to 54MHz	±50ppm min	−40 to 85°C	Industry standard	✓
IQXV-42	2.5V	3.2 x 2.5	HCMOS	4 to 54MHz	±50ppm min	−40 to 85°C	Industry standard	✓
IQXV-63	2.5V	5 x 3.2	HCMOS	1 to 77.76MHz	±50ppm	−40 to 85°C	Industry standard	✓
IQXV-52	2.5V	7 x 5	HCMOS/TTL	1 to 60MHz	±100ppm min	−40 to 85°C	Industry standard	✓
IQXV-57	2.5V	7 x 5	HCMOS	1 to 79MHz	±150ppm min	−40 to 85°C	Wide pulling range	✓
IQXV-83	2.5, 3.3V	2.5 x 2	CMOS, LVPECL, LVDS	8 to 1500MHz	±35ppm min APR	−40 to 85°C	Low jitter (0.5ps)	✓
IQXV-84	2.5, 3.3V	5 x 3.2	CMOS, LVPECL, LVDS	8 to 1500MHz	±50ppm min APR	−40 to 85°C	Low jitter (0.9ps)	✓
IQXV-85	2.5, 3.3V	5 x 3.2	CMOS, LVPECL, LVDS	8 to 1500MHz	±50ppm min APR	−40 to 85°C	Low jitter (0.5ps)	✓

VXOs continued

Model	Supply Voltage	Package (mm)	Output Compatibility	Frequency Range	Pulling	Operating Temperature Range (Widest)	Key Feature	SMD
IQXV-89	2.5, 3.3V	7 x 5	CMOS, LVPECL, LVDS	1 to 800MHz	±50ppm min APR	–40 to 85°C	Ultra low Jitter (0.05 to 0.3ps)	✓
IQXV-87	2.5, 3.3V	7 x 5	CMOS, LVPECL, LVDS	8 to 1500MHz	±50ppm min APR	–40 to 85°C	Low jitter (0.9ps)	✓
IQXV-88	2.5, 3.3V	7 x 5	CMOS, LVPECL, LVDS	8 to 1500MHz	±50ppm min APR	–40 to 85°C	Low jitter (0.5ps)	✓
IQXV-90	2.5, 3.3V	7 x 5	CMOS, LVPECL, LVDS	8 to 1500MHz	±50ppm min APR	–40 to 85°C	Dual output	✓
IQXV-41	3.3V	3.2 x 2.5	HCMOS	1.25 to 54MHz	±50ppm min	–40 to 85°C	Industry standard	✓
IQXV-80	3.3V	3.2 x 2.5	LVPECL	40 to 170MHz	±100ppm min	–40 to 85°C	Tight stability ±25ppm	✓
IQXV-81	3.3V	3.2 x 2.5	LVDS	40 to 170MHz	±80ppm min	–40 to 85°C	Tight stability ±25ppm	✓
IQXV-61	3.3V	5 x 3.2	HCMOS	1 to 77.76MHz	±100ppm	–40 to 85°C	Industry standard	✓
IQXV-86	3.3V	5 x 3.2	CMOS, LVPECL, LVDS	1 to 800MHz	±50ppm min APR	–40 to 85°C	Ultra low Jitter (0.05 to 0.3ps)	✓
IQXV-51	3.3V	7 x 5	HCMOS	1 to 60MHz	±100ppm min	–40 to 85°C	Industry standard	✓
IQXV-56	3.3V	7 x 5	HCMOS	1 to 79MHz	±150ppm min	–40 to 85°C	Wide pulling range	✓
CFPV-45	3.3V	7 x 5	HCMOS	1.5 to 80MHz	±100ppm min APR	0 to 70°C	Industry standard	✓
IQXV-32	3.3V	7 x 5	LVPECL	80 to 622.08MHz	±100ppm min	–40 to 85°C	Industry standard	✓
IQXV-60	5.0V	5 x 3.2	HCMOS	1 to 77.76MHz	±100ppm	–40 to 85°C	Industry standard	✓
IQXV-50	5.0V	7 x 5	HCMOS	1 to 60MHz	±100ppm min	–40 to 85°C	Industry standard	✓
IQXV-55	5.0V	7 x 5	HCMOS	1 to 79MHz	±150ppm min	–40 to 85°C	Wide pulling range	✓

TCXOs & VCTCXOs

Model	Supply Voltage	Package (mm)	Output Compatibility	Frequency Range	Frequency Stability (Tightest)	Operating Temperature Range (Widest)	Key Feature	Voltage Control Option	SMD
IQXT-291	1.8V	2 x 1.6	Clipped Sine	13 to 52MHz	±0.5ppm	–30 to 85°C	Low current		✓
IQXT-192	1.8, 2.5, 2.8, 3.0, 3.3V	3.2 x 2.5	Clipped Sine	8.192 to 52MHz	±1ppm	–30 to 85°C	Low current	✓	✓
IQXT-194	1.8, 2.5, 2.8, 3.0, 3.3V	2.5 x 2	Clipped Sine	16 to 52MHz	±1ppm	–30 to 85°C	Industry standard	✓	✓
IQXT-272	1.8 to 3.0V	2 x 1.6	Clipped Sine	13 to 52MHz	±0.5ppm	–40 to 85°C	Temperature sensor output	✓	✓
IQXT-270	1.8 to 3.0V	2 x 1.6	Clipped Sine	13 to 52MHz	±0.5ppm	–40 to 85°C	Low current	✓	✓
IQXT-275	1.8 to 3.0V	3.2 x 2.5	Clipped Sine	10 to 40MHz	±1ppm	–40 to 85°C	Freq tolerance ±1ppm	✓	✓
IQXT-260	1.8 to 3.3V	2.5 x 2	Clipped Sine	10 to 52MHz	±0.5ppm	–40 to 85°C	0.01µA standby current	✓	✓
IQXT-274	2.4 to 3.7V	3.2 x 2.5	Clipped Sine	10 to 40MHz	±0.5ppm	–40 to 85°C	Tight stability	✓	✓
IQXT-190	2.5, 2.8, 3.0, 3.3V	5 x 3.2	CMOS, Clipped Sine	6.4 to 40MHz	±2.5ppm	–30 to 85°C	Industry standard	✓	✓
IQXT-191	2.5, 2.8, 3.0, 3.3V	3.2 x 2.5	CMOS, Clipped Sine	8.192 to 40MHz	±2.5ppm	–30 to 85°C	Industry standard	✓	✓
IQXT-282	2.8V	2 x 1.6	Clipped Sine	13 to 52MHz	±0.5ppm	–30 to 85°C	Low current		✓
CFPT-9302	3.0V	5 x 3.2	Clipped Sine	12 to 52MHz	±0.2ppm	–40 to 85°C	Tight stability	✓	✓
CFPT-127	3.0V	5 x 3.2	Clipped Sine	16.32 to 33.6MHz	±0.5ppm	–40 to 85°C	Industry standard		✓
CFPT-9301	3.3V	5 x 3.2	HCMOS	1.5 to 52MHz	±0.2ppm	–40 to 85°C	Tight stability	✓	✓
IQXT-210	3.3V	5 x 3.2	HCMOS, Clipped Sine	10 to 50MHz	±0.05ppm	–40 to 85°C	Ultra tight stability	✓	✓
CFPT-125	3.3V	7 x 5	HCMOS	10 to 40MHz	±0.9ppm	–20 to 70°C	Industry standard	✓	✓
CFPT-126	3.3V	7 x 5	HCMOS	10 to 40MHz	±0.5ppm	–40 to 85°C	Tight stability	✓	✓
CFPT-9006	3.3V	7 x 5	HCMOS	1.25 to 40MHz	±0.3ppm	–40 to 85°C	Tight stability	✓	✓
CFPT-9008	3.3V	7 x 5	Clipped Sinewave	10 to 40MHz	±0.3ppm	–40 to 85°C	Tight stability	✓	✓
CFPT-9007	3.3V	7 x 5	Sine	10 to 40MHz	±0.3ppm	–40 to 85°C	Tight stability	✓	✓
IQMT-100	3.3V	7 x 5	HCMOS, Clipped Sine	10 to 50MHz	±50ppb	–40 to 85°C	OCXO performance in TCXO sized package	✓	✓
IQXT-200	3.3V	7 x 5	HCMOS, Clipped Sine	10 to 50MHz	±0.28ppm	–40 to 85°C	Tight stability	✓	✓
CFPT-9005	5.0V	7 x 5	Clipped Sine	10 to 40MHz	±0.3ppm	–40 to 85°C	Tight stability	✓	✓
CFPT-9001	5.0V	7 x 5	HCMOS	1.25 to 40MHz	±0.3ppm	–40 to 85°C	Tight stability	✓	✓
CFPT-9003	5.0V	7 x 5	Sine	10 to 40MHz	±0.3ppm	–40 to 85°C	Tight stability	✓	✓

Rubidium Oscillators

Model	Supply Voltage	Package (mm)	Output Compatibility	Frequency	Short Term Stability @ 100s	Operating Temperature Range (Widest)	Key Feature	SMD
IQRB-1	12.0V	50.8 x 50.8	Sinewave	10MHz	±0.008ppb	–30 to 65°C	Frequency tolerance ±0.05ppb	

GPS Disciplined OCXOs

Model	Package (mm)	Supply Voltage	Holdover Stability/24hrs (Tightest)	Key Feature	SMD
IQCM-200	51 x 51	5.0V	<1.5µs	1PPS output	
IQCM-110	60 x 60	5.0V	<1.5µs	Internal GPS receiver	
IQCM-100	65 x 65	5.0, 12.0V	<1.5µs	1PPS output	
IQCM-300	75 x 75	5.0V	<1.5µs	1588 Clock Module	✓
IQCM-EVboard	Evaluation board for the IQCM-100 and IQCM-110				

OCXOs

IQD offers a range of custom designed OCXOs and the following specifications are examples of the type of products we can design and manufacture. Please contact our sales team with details of your requirements so we can consider a new custom design where necessary.

Model	Supply Voltage	Package (mm)	Output Compatibility	Frequency Range	Phase Noise @ 100kHz	Frequency Stability (Tightest)	Operating Temperature Range (Widest)	Key Feature	SMD
IQMT-100	3.3V	7 x 5	HCMOS, Clipped Sine	10 to 50MHz	-145dBc/Hz typ	±5ppb	-40 to 85°C	OCXO performance in TCXO sized package	✓
IQOV-162	3.3V	14.4 x 9.5	HCMOS, Sinewave	10 to 100MHz	-155dBc/Hz typ	±10ppb	-40 to 85°C	Short term stability 0.1ppb	✓
IQOV-160	3.3V	14-pin DIL	HCMOS	5 to 100MHz	-160dBc/Hz typ	±5ppb	-40 to 85°C	Tight stability	
IQOV-164	3.3V	36 x 27	HCMOS, Sinewave	5 to 100MHz	-158dBc/Hz typ	±0.2ppb	-40 to 80°C	Ultra tight stability	
IQOV-71	3.3, 5.0V	9.7 x 7.5	CMOS, Clipped Sine	5 to 50MHz	-155dBc/Hz typ	±10ppb	-40 to 85°C	Ultra miniature OCXO	✓
IQOV-72	3.3, 5.0V	14.6 x 9.7	CMOS, Clipped Sine	5 to 50MHz	-155dBc/Hz typ	±10ppb	-40 to 85°C	Low power (0.4W)	✓
IQOV-50	3.3, 5.0V	20.7 x 20.7	HCMOS	4 to 80MHz	-155dBc/Hz typ	±30ppb	-40 to 75°C	Optional ref voltage output	
IQOV-60	3.3, 5.0V	25.4 x 25.4	HCMOS, Sinewave	4 to 20MHz	-150dBc/Hz typ	±3ppb	-40 to 75°C	Low ageing	
IQOV-70	3.3, 5.0, 12.0V	36.2 x 27.2	HCMOS, Sinewave	4 to 80MHz	-150dBc/Hz typ	±3ppb	-40 to 75°C	Tight stability	
IQOV-90	3.3, 5.0, 12.0V	25.4 x 22	HCMOS, Sinewave	10 to 40MHz	-150dBc/Hz typ	±3ppb	-40 to 75°C	Tight stability	✓

World Class Frequency Products

Backed by a pedigree that has been developed over 40 years, IQD Frequency Products is a recognised market leader in the frequency control market. With active customers in over 60 countries, IQD offers one of the most comprehensive frequency product ranges available, from low cost commercial grade product to that used in high reliability military and professional grade applications.

Engineering Support Services

- Application support for new designs & problem resolution
- Sample development for prototypes
- Full electrical testing & screening
- Crystal test data for electrical modelling by customer (i.e. motional parameters)
- Frequency/temperature testing with customer specific ramp-profiles
- Product burn-in, heat-soak & accelerated ageing
- Full circuit characterisation service
- MTIE/TDEV testing

Firmenprofil & Bestellinformation

IQD Frequency Products blickt auf eine 40-jährige Erfahrungsgeschichte zurück und ist als ein führender Anbieter im Markt für Frequenzprodukte anerkannt. IQD bedient Kunden in über 60 Ländern und bietet eine der marktweit umfassendsten Frequenzproduktpaletten an. Das Angebot reicht von preisgünstigen, handelsüblichen Produkten bis hin zu hochzuverlässigen militärischen und professionellen Anwendungen.

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Avec une expérience de plus de 40 ans, IQD Frequency Products est un leader reconnu du marché des produits fréquents. Avec des clients dans plus de 60 pays, notre gamme va du produit commercial à bas coût au produit haut de gamme utilisé dans les applications professionnelles et militaires.

Contact Details

 t: +44 (0)1460 270200
  t: 0800 1808 443
  t: 0800 901 383
  t: +1.760.318.2824

Email: info@iqdfrequencyproducts.com

Web: www.iqdfrequencyproducts.com

Head Office

IQD Frequency Products Ltd, Station Road, Crewkerne, Somerset, TA18 8AR, United Kingdom