



HKC

Hong Kong X'tals Ltd

Hong Kong Automotive X'tals Ltd

RELIABLE QUARTZ CRYSTAL & OSCILLATOR specially for DRONE & UAVS

Crystal resonators and oscillators are critical for timing, synchronization, and communication in Drones and UAVs (Unmanned Aerial Vehicles). They ensure precise operation of flight controllers, sensors, navigation systems, and RF modules. HKC will guide you through the core specifications, common frequencies, and design best practices for crystal/oscillator selection in Drone applications, helping you build more efficient and stable flight products.

COMMON FREQUENCIES IN UAV SYSTEMS

SUBSYSTEM	COMMON FREQUENCIES	APPLICATION
Flight Controller	16 / 24 / 32 / 40 / 48 (MHz)	MCU
GPS Module	26(MHz)	Satellite signal synchronization
RF Communication	25 / 26 / 32 / 38.4 / 40 / 48/ 52 (MHz)	Wi-Fi, Bluetooth, LTE
Camera/Gimbal	24 / 27.12 (MHz)	Image sensor clocking, video transmission
Controller	32.768(kHz)	RTC



FLY SMARTER FLY STEADY CRYSTAL OSCILLATOR FOR ALL-WEATHER DRONE OPERATIONS

HKC crystal resonators and oscillators are designed for the most demanding environments—from extreme temperature swings to intense vibration and electromagnetic interference. That's why our products are engineered to meet and exceed the stringent reliability requirements.

HKC'S COMMITMENT:

ENVIRONMENTAL CONDITIONS

Our components are tested to withstand industrial temperature ranges (-40°C to +125°C) and high shock/vibration loads (up to 5,000 G), ensuring stable performance even in aggressive flight maneuvers or rough landings.

TIMING ACCURACY

Our crystals and oscillators are designed to maintain long-term accuracy-critical for navigation, autopilot systems, and secure communications.

RELIABLE COMMUNICATION

Fast startup time and low jitter performance of the oscillators can prevent timing gaps during power cycling, which also keep RF and GPS signals reliable.

QUALITY YOU CAN TRUST

Every component undergoes stress testing, including accelerated life testing (ALT) and full environmental validation. our products meet AEC-Q200 automotive standards and MIL-STD-883 for defense-grade reliability.

FOR ADDITIONAL TECHNICAL SUPPORT OR PRODUCT SELECTION GUIDANCE, PLEASE CONTACT OUR SALES TEAM:

AEC Q-200 Compliance



ISO/TS 16949:2009
Certificate IATF 01677/34
Certificate SGS HK04/0101/17.01



ISO 14001:2004
Certificate HK 11/00059



ISO 9001:2008
Certificate HK 10/00316




OHSAS 18001:2007
Certificate CN 12/00611






RELIABLE QUARTZ CRYSTAL & OSCILLATOR SPECIALLY FOR DRONE & UAVS

PRODUCT TYPE AND PACKAGE SELECTION - CRYSTAL RESONATORS:

Package size	Series	Model		Frequencies (MHz)	CL (pF)	Ordering Code
1612 SMD-4	1612SX	CT		32	8	1612S43200BMKACCGNF
				40	8	1612S44000BMKACCGJF
				48	8	1612S44800BMKACCGJF
				52	8	1612S45200BMKACCGJF
2016 SMD-4	2016SX	CQ		24	8	2016S42400BMKACCGSF
				25	8	2016S42500BMKACBFNF
				27.12	8	2016S42712BMKACCGJF
				32	8	2016S43200BMKACCGJF
				38.4	8	2016S43840BMKACCGJF
				44	8	2016S44000BMKACCGFF
				48	8	2016S44800BMKACCGFF
52	8	2016S45200BMKACCGFF				

Package size	Series	Model		Frequencies (MHz)	CL (pF)	Operating Temperature	Ordering Code
2012 SMD-2	2012SX	MQ		32.768	12.5	-40 +125	2012S23276BMKANCGWF

PRODUCT TYPE AND PACKAGE SELECTION - CRYSTAL OSCILLATORS (XO):

Package size	Series	Model		Frequencies (MHz)	Supply Voltage (V)	(V) Freq Stability (±ppm)	Ordering Code
2016 SMD-4	2016XO	CX		24	3.3	50	2016XOM2400BMH13CGE
				25	3.3	50	2016XOM2500BMH13CGE
				27.12	3.3	50	2016XOM2712BMH13CGE
				32	3.3	50	2016XOM3200BMH13CGE
				38.4	3.3	50	2016XOM3840BMH13CGE
				40	3.3	50	2016XOM4000BMH13CGE
				48	3.3	50	2016XOM4800BMH13CGE
				52	3.3	50	2016XOM5200BMH13CGE
2520 SMD-4	2520XO	CM		24	3.3	50	2520XOM2400BMH13CGE
				25	3.3	50	2520XOM2500BMH13CGE
				27.12	3.3	50	2520XOM2712BMH13CGE
				32	3.3	50	2520XOM3200BMH13CGE
				38.4	3.3	50	2520XOM3840BMH13CGE
				40	3.3	50	2520XOM4000BMH13CGE
				48	3.3	50	2520XOM4800BMH13CGE
				52	3.3	50	2520XOM5200BMH13CGE
3225 SMD-4	3225XO	C8		24	3.3	50	3225XOM2400BMH13CGE
				25	3.3	50	3225XOM2500BMH13CGE
				27.12	3.3	50	3225XOM2712BMH13CGE
				32	3.3	50	3225XOM3200BMH13CGE
				38.4	3.3	50	3225XOM3840BMH13CGE
				40	3.3	50	3225XOM4000BMH13CGE
				48	3.3	50	3225XOM4800BMH13CGE
				52	3.3	50	3225XOM5200BMH13CGE

For other package size, please contact our sales team:

Distributor / Sales Representative

Unit C, 24/F., Shield Industrial Centre, 84-92 Chai Wan Kok Street, Tsuen Wan, N.T. Hong Kong.
Tel: +852-3511 2388 Fax: +852-3511 2420 Email: iotcrystals@hongkongcrystal.com

www.hongkongcrystal.com