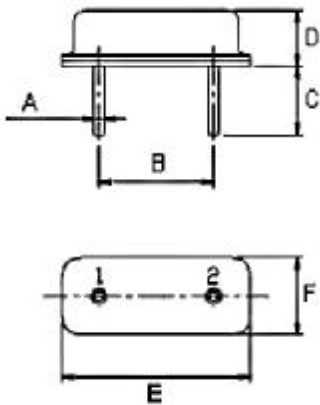


APPLICATION

Wireless Remote Control & Alarm
Consumer Electronics
Communication

The SJK433A is a true one- port, surface- acoustic- wave(SAW) resonator in a low- profile HC-49S case. It provides reliable, fundamental- mode, quartz frequency stabilization of fixed- frequency transmitters operating at 433.920 MHz.

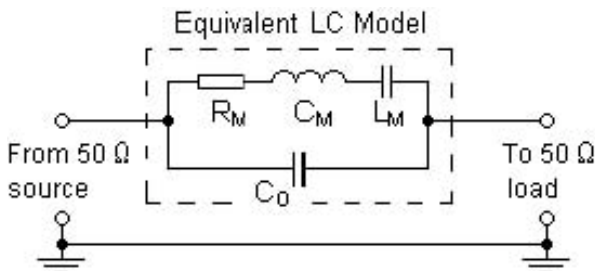
1. Package Dimension (HC-49S)



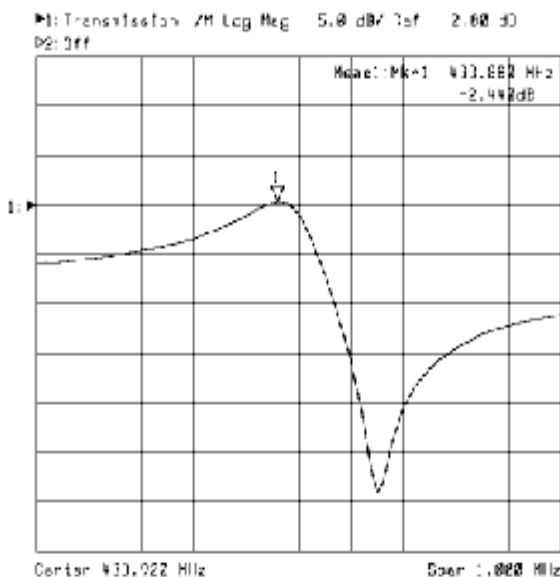
Pin	Connection
1	Input
2	Output

Dimension	Data (unit: mm)
A	0.45±0.05
B	4.88±0.20
C	13.0±0.20
D	2.6 max
E	11.90 max
F	4.60 max

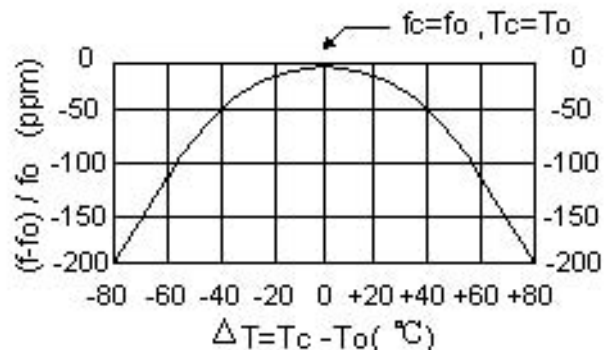
2. Equivalent LC Model and Test Circuit



3. Typical Frequency Response



4. Temperature Characteristics



The curve shown above accounts for resonator contribution only and does not include oscillator temperature characteristics.

5. Performance

5-1. Maximum Rating

Rating	Value	Units
CW RF Power Dissipation	+10	dBm
DC Voltage Between Any Two Pins	$\pm 30V$	VDC
Case Temperature	-40 to +85	$^{\circ}C$

5-2. Electronic Characteristics

Characteristic		Sym	Minimum	Typical	Maximum	Units
Center Frequency (+25 $^{\circ}C$)	Absolute Frequency	f_c	433.845		433.995	MHz
	Tolerance from 433.920 MHz	Δf_c		± 75		kHz
Insertion Loss		IL		2.5	2.8	dB
Quality Factor	Unloaded Q	Q_U		9270		
	50 Ω Loaded Q	Q_L		2300		
Temperature Stability	Turnover Temperature	T_o	25	40	55	$^{\circ}C$
	Turnover Frequency	f_o		f_c		kHz
	Frequency Temperature Coefficient	FTC		0.037		ppm/ $^{\circ}C^2$
Frequency Aging Absolute Value during the First Year		$ f_A $			≤ 10	
DC Insulation Resistance Between Any Two Pins			1.0	1.0		
RF Equivalent RLC Model	Motional Resistance	R_M		33	38	Ω
	Motional Inductance	L_M		121.119		μH
	Motional Capacitance	C_M		1.19904		fF
	Static Capacitance	C_o		2.1		pF



CAUTION: Electrostatic Sensitive Device. Observe precautions for handling!

NOTES:

1. The center frequency, f_c , is measured at the minimum IL point with the resonator in the 50 Ω test system.
2. Unless noted otherwise, case temperature $T_C = +25^{\circ}C \pm 2^{\circ}C$.
3. Frequency aging is the change in f_c with time and is specified at +65 $^{\circ}C$ or less. Aging may exceed the specification for prolonged temperatures above +65 $^{\circ}C$. Typically, aging is greatest the first year after manufacture, decreasing in subsequent years.
4. Turnover temperature, T_o , is the temperature of maximum (or turnover) frequency, f_o . The nominal frequency at any case temperature, T_C , may be calculated from: $f = f_o [1 - FTC (T_o - T_C)^2]$.
5. This equivalent RLC model approximates resonator performance near the resonant frequency and is provided for reference only. The capacitance C_o is the measured static (nonmotional) capacitance between the two terminals. The measurement includes case parasitic capacitance.
6. Derived mathematically from one or more of the following directly measured parameters: f_c , IL, 3 dB bandwidth, f_c versus T_C , and C_o .
7. The specifications of this device are based on the test circuit shown above and subject to change or obsolescence without notice.
8. Typically, equipment utilizing this device requires emissions testing and government approval, which is the responsibility of the equipment manufacturer.
9. Our liability is only assumed for the Surface Acoustic Wave (SAW) component(s) per se, not for applications, processes and circuits implemented within components or assemblies.
10. For questions on technology, prices and delivery please contact our sales offices or E-mail.