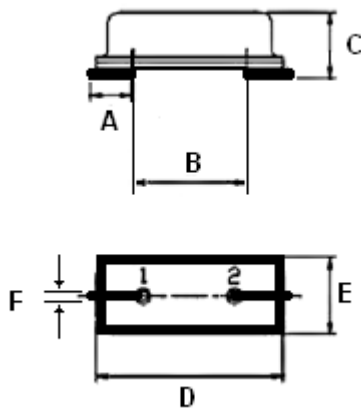


APPLICATION

Wireless Remote Control & Alarm
Consumer Electronics
Communication

The SJK433AS is a true one- port, surface- acoustic- wave(SAW) resonator in a low-profile SMD HC-49S case. It provides reliable, fundamental- mode, quartz frequency stabilization of fixed- frequency transmitters operating at 433.920 MHz.

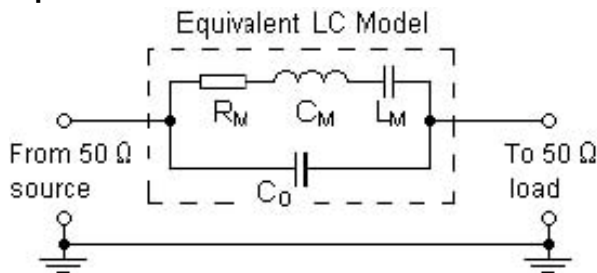
1. Package Dimension (SMD HC-49S)



Pin	Connection
1	Input
2	Output

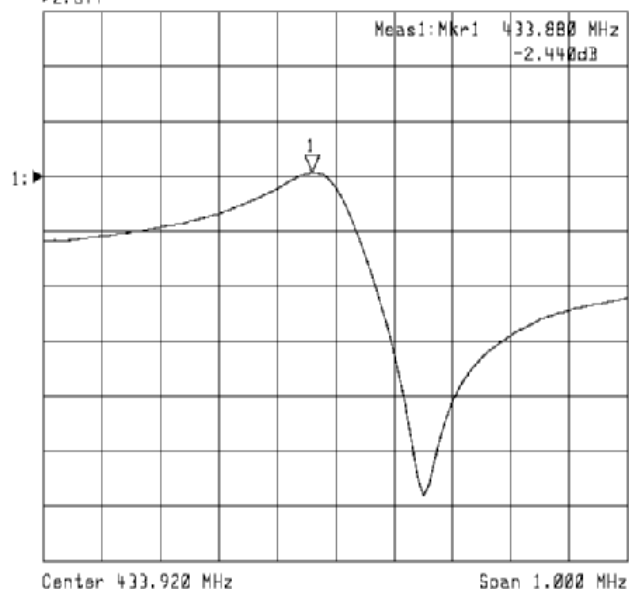
Dimension	Data (unit: mm)
A	3.70±0.20
B	4.88±0.20
C	3.20 max
D	11.50 max
E	4.70 max
F	0.70±0.20

2. Equivalent LC Model and Test Circuit

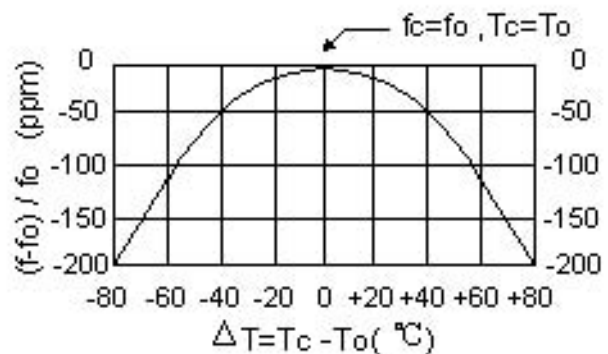


3. Typical Frequency Response

►1: Transmission /M Log Mag 5.0 dB/ Ref -2.80 dB
P2: Off



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:

- The center frequency, f_c , is measured at the minimum IL point with the resonator in the 50 Ω test system.
- Unless noted otherwise, case temperature $T_C = +25^{\circ}C \pm 2^{\circ}C$.
- 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.
- 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: $f = f_o [1 - FTC (T_o - T_C)^2]$.
- 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.
- Derived mathematically from one or more of the following directly measured parameters: f_c , I_L , 3 dB bandwidth, f_c versus T_C , and C_o .
- The specifications of this device are based on the test circuit shown above and subject to change or obsolescence without notice.
- Typically, equipment utilizing this device requires emissions testing and government approval, which is the responsibility of the equipment manufacturer.
- 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.
- For questions on technology, prices and delivery please contact our sales offices or E-mail.