R433



Features

- · External dimensions: TO-39,F-11,D-11.
- · Frequency range: 433.92MHZ.
- · Ideal for 433.92MHZ Remote-control and Wireless Security Transmitters.
- · Very Low Series Resistance.
- · Quartz Stability.

1. Absolute Maximum Rating

Rating	Value	Units
CW RF Power Dissipation	+0	dbm
DC Voltage between Any Two Pins	0 to 32	V
Case Temperature	-40 to +85	°C

2. Electrical Characteristics

Characteristic			Sym.	Min.	Тур.	Max.	Unit
Center Frequency (25℃)		Absolute Frequency	fc	433.845	433.92	433.995	MHz
		Tolerance from 433.92MHZ	Δ fc		±75		KHz
Insertion Loss			IL		1.2	2.5	dB
Quality Factor	Unloaded Q		Qu		11000		
	50 Ω loaded Q		QL		2000		
Temperature	Turnover Temperature		То	-	39	-	°C
Stability	Turnover Frequency		f _O		fc+8.4		KHz
	Fre	equency Temperature Coefficient	FTC		0.032		ppm/°C ²
Frequency Aging (Value during the First Year)		f _A			10	ppm/yr	
RF Equivalent	Mo	otional Resistance	R _M		18	26	Ω
RLC Model	Mo	otional Inductance	L _M		86		μH
	Mo	otional Capacitance	C _M		1.56		pF
	Pir	11 to Pin2 Static Capacitance	Co	1.7	2.0	2.3	pF
	Tra	ansducer Static Capacitance	CP		1.8		pF
DC Insulation Resistance between Any Two Pins			1.0			MΩ	

NOTES:

- 1) Unless noted otherwise, case temperature $Tc=+25\pm2$ °C.
- 2) The center frequency fc is measured at the minimum insertion loss point, IL_{Min} , with the resonator in the 50 Ω test system (VSWR \leq 1.2:1). The shunt inductance, L_{test} , is tuned for parallel resonance with Co at fc. Typically, $f_{OSCILLATOR}$ or $f_{TRANSMITTER}$ is approximately equal to the resonator fc.
- 3) Turnover temperature, To, is the temperature of maximum (or turnover) frequency, fo. The nominal frequency at any case temperature, Tc, may be calculated from: f = fo(1-FTC(To-Tc)²). Typically oscillator To is 20°C less than the specified resonator To.

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R433

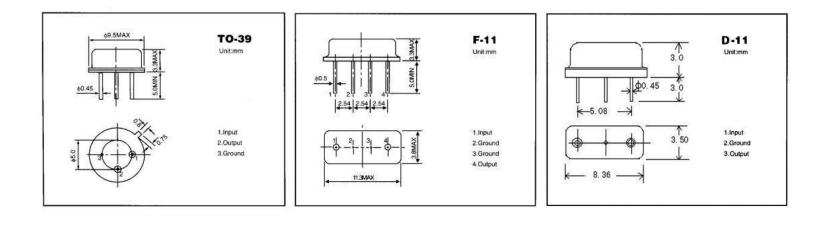


- 4) Frequency aging is the change in fc with time and is specified at +65°C or less. Aging may exceed the specification for prolonged temperatures above +65°C. Typically aging is greatest the first year after manufacture, decreasing in subsequent years.
- 5) This equivalent RLC model approximates resonator performance near the resonant frequency and is provided for reference only. The capacitance Co is the static (nonmotional) capacitance between pin1 and pin2 measured at low frequency (10MHZ) with a capacitance meter. The measurement includes case parasitic capacitance with a floating case. For usual grounded case applications (with ground connected to either pin 1 or pin 2and to the case), add approximately 0.25pF to Co.
- 6) Derived mathematically from one or more of the following directly measured parameters: fc, IL, 3dB bandwidth, fc versus T

3. Others

- 1) Typically, equipment utilizing this device requires emissions testing and government approval, which is the responsibility of the equipment manufacturer.
- 2) Electrostatic Sensitive Device, observe precautions for handing.
- 3) According to the different request of customer, we can supply the different Frequency precision, for example, ±75KHZ, ±150KHZ, ±250KHZ, etc.

Pin No.	Function
1	Input or Output
2	Output or Input
3	Ground



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