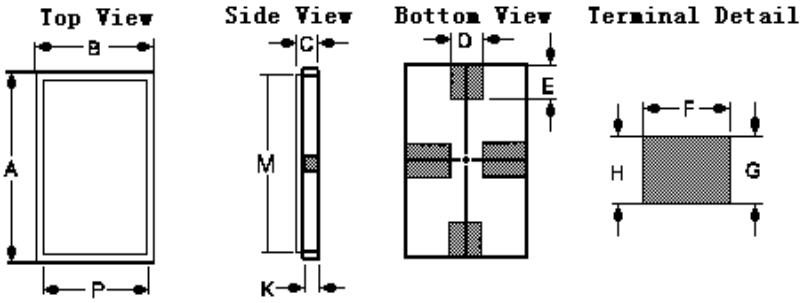
1.Package Dimension

(SM-2)



	Millimeters	
		Max
A		6.30
B		4.44
C		2.08
D	0.94	1.10
E	0.83	1.20
F	1.16	1.53
G	0.94	1.10
H	0.43	0.59
K	1.96	2.00
M		4.8
P		2.9

2.Marking

NDR433.42S2

2-1.Colour: Black

2-2.Center Frequency(MHz):433.42

3.Performance

3-1.Maximum Rating

DC Voltage V_{DC}	30V
AC Voltage V_{PP}	10V(50Hz/60Hz)
Operation Temperature	-40℃to +85℃
Storage Temperature	-40℃to +85℃
RF Power Dissipation	0 dBm

3-2Electronic Characteristics

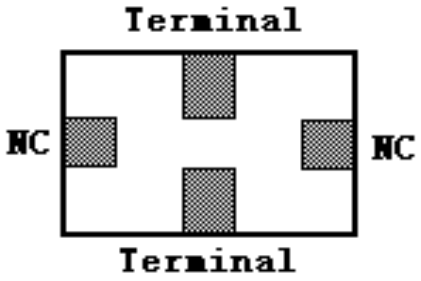
Characteristic		Sym	Minimum	Typical	Maximum	Units
Center Frequency (+25℃)	Absolute Frequency	fc	433.345		433.495	MHz
	Tolerance from 433.42 MHz	Δfc		±75		kHz
Insertion Loss				1.3	2.0	dB
Quality Factor	Unloaded Q	Q_U		12,600		
	50 Ω Loaded Q	Q_L		2,000		
Temperature Stability	Turnover Temperature	T_0	24	39	54	℃
	Turnover Frequency	f_0		fc+2.7		kHz
	Frequency Temperature	FTC		0.037		ppm/℃
Frequency Aging	Absolute Value during the First Year	|fA|		≤10		ppm/yr
DC Insulation Resistance between Any Two Pins			1.0			MΩ
RF Equivalent RLC Model	Motional Resistance	R_M		12	26	Ω
	Motional Inductance	L_M		79.1546		μH
	Motional Capacitance	C_M		1.6854		fF
	Pin 1 to Pin 2 Static	C_O		2.3		pF

☺ CAUTION: Electrostatic Sensitive Device. Observe precautions for handling

NOTES:

1. Frequency aging is the change in f_c with time and is specified at +65℃or less. Aging may exceed the specification for prolonged temperatures above +65℃. Typically, aging is greatest the first year after manufacture, decreasing in subsequent years.
2. The frequency f_c is the frequency of minimum IL with the resonator in the specified test fixture in a 50 Ω test system with VSWR ≤ 1.2 : 1. Typically, $f_{oscillator}$ or $f_{transmitter}$ is less than the resonator f_c.
3. Typically, equipment utilizing this device requires emissions testing and government approval, which is the responsibility of the equipment manufacturer.
4. Unless noted otherwise , case temperature T_c=+25℃±2℃.
5. The design, manufacturing process, and specifications of this device are subject to change without notice.
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_0.
7. Turnover temperature, T_O, is the temperature of maximum (or turnover) frequency, f_O, The nominal center frequency at any case temperature , TC, may be calculated from :$f = f_O [1\text{-}FTC (T_O\text{-}T_C)^2]$ .Typically, oscillator $T_0$is 20° less than the specified resonator T_o.
8. This equivalent RLC model approximates resonator performance near the resonant frequency and is provided for reference only . The capacitance C_0 is the measured static (nonmotional) capacitance between either pin 1 and ground or pin 2 and ground .The measurement includes case parasitic capacitance

4. Electrical Connections



5. Typical Test Circuit