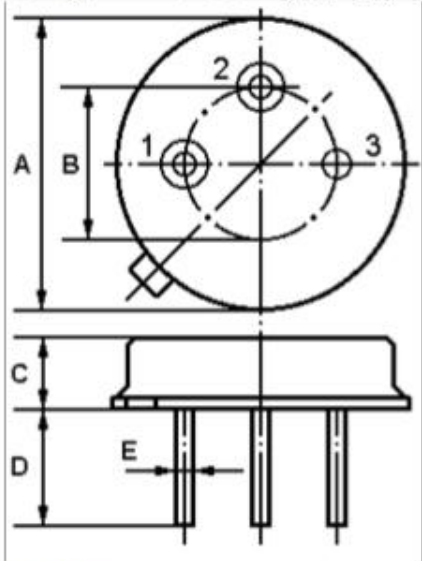


The **JDR315A** is a true one-port, surface-acoustic-wave (**SAW**) resonator in a low-profile metal **TO-39** case. It provides reliable, fundamental-mode, quartz frequency stabilization i.e. in transmitters or local oscillators operating at **315.000** MHz.

1. Package Dimension (TO-39)



Pin	Configuration
1	Input / Output
2	Output / Input
3	Case Ground

Dimension	Data (unit: mm)
A	9.15±0.20
B	5.08±0.20
C	3.30±0.20
D	3±0.20/5±0.20
E	0.45±0.10

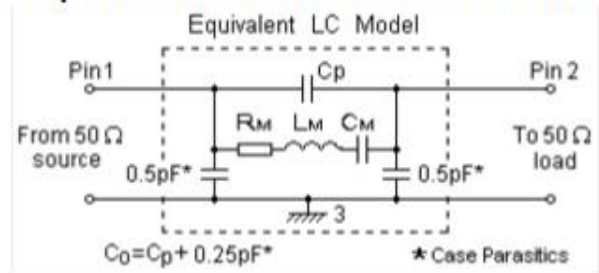
2. Marking

JDR315A

Ink Marking

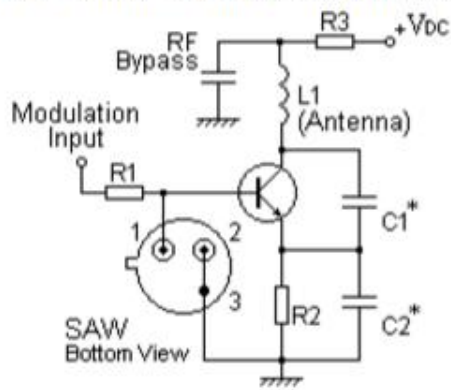
Color: Black or Blue

3. Equivalent LC Model and Test Circuit

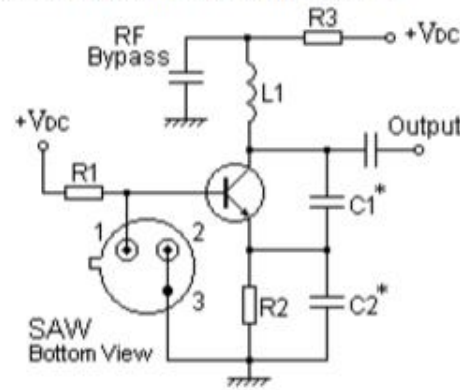


4. Typical Application Circuits

1) Low-Power Transmitter Application



2) Local Oscillator Application

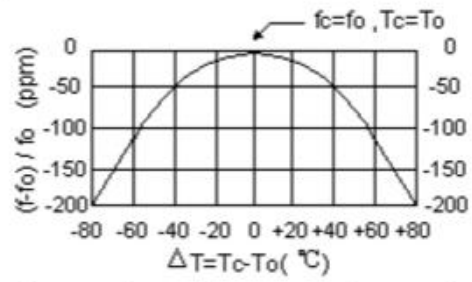
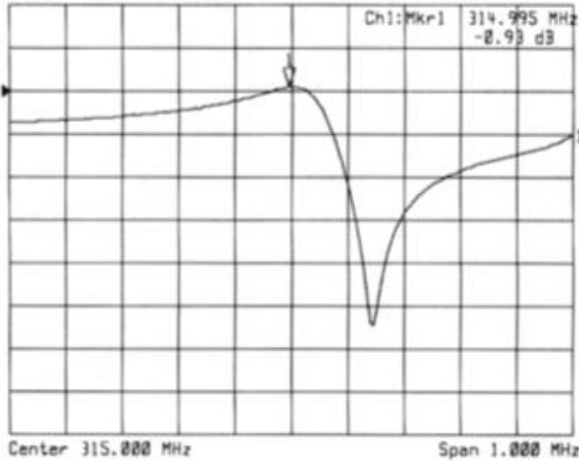


5. Typical Frequency Response

6. Temperature Characteristics



►1: Transmission /M Log Mag 5.0 dB/ Ref -1.50 dB
►2: Off



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

7. Performance

7-1. Maximum Ratings

Rating		Value	Unit
CW RF Power Dissipation	P	0	dBm
DC Voltage Between Any two Pins	V_{DC}	± 30	V
Storage Temperature Range	T_{stg}	-40 to +85	$^{\circ}C$
Operating Temperature Range	T_A	-10 to +60	$^{\circ}C$

7-2. Electronic Characteristics

Characteristic		Sym	Minimum	Typical	Maximum	Unit
Center Frequency (+25 $^{\circ}C$)	Absolute Frequency	f_c	314.925		315.075	MHz
	Tolerance from 315.000 MHz	Δf_c		± 75		kHz
Insertion Loss		IL		1.5	2.0	dB
Quality Factor	Unloaded Q	Q_U		12,500		
	50 Ω Loaded Q	Q_L		2,000		
Temperature Stability	Turnover Temperature	T_0	10	25	40	$^{\circ}C$
	Turnover Frequency	f_0		f_c		kHz
	Frequency Temperature Coefficient	FTC		0.032		ppm/ $^{\circ}C^2$
Frequency Aging	Absolute Value during the First Year	$ f_A $		≤ 10		ppm/yr
DC Insulation Resistance Between Any Two Pins			1.0			M Ω
RF Equivalent RLC Model	Motional Resistance	R_M		19	26	Ω
	Motional Inductance	L_M		120.3114		μH
	Motional Capacitance	C_M		2.1240		fF
	Pin 1 to Pin 2 Static Capacitance	C_0	2.3	2.6	2.9	pF

⚠ CAUTION: Electrostatic Sensitive Device. Observe precautions for handling!