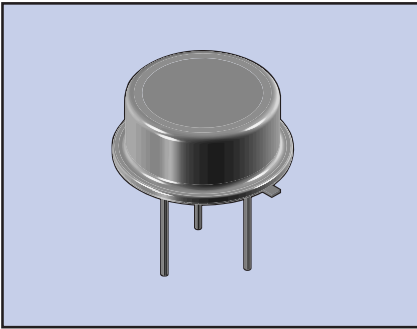


# ECS-DR1 SERIES ONE-PORT SAW RESONATOR



The ECS-DR1 Series are 1-port SAW (Surface Acoustic Wave) resonators in a thru-hole TO39-3A package. They offer a fundamental mode, quartz frequency and are ideal for remote control and wireless security transmitters.

## FEATURES

- Quartz Stability
- Ideal for wireless security and remote control applications

## PART NUMBERING GUIDE

ECS SERIES	FREQUENCY (318.00 MHz)
ECS-DR1	3180

## OPERATING CONDITIONS/ELECTRICAL CHARACTERISTICS

PARAMETERS	SYMBOL/NOTES	DR1-3100	DR1-3150	DR1-3180	DR1-4180	DR1-4339	UNITS
CENTER FREQUENCY	$F_0$	310.0 $\pm$ 0.1	315.0 $\pm$ 0.1	318.0 $\pm$ 0.075	418.0 $\pm$ 0.075	433.92 $\pm$ 0.075	MHz
INSERTION LOSS	IL	2.0	2.0	2.0	2.0	2.0	dB Max.
UNLOADED Q		13,900	13,900	11,000	13,900	13,900	
50 Ohms LOADED Q		2,100	2,100	2,100	2,100	2,100	
TURNOVER TEMPERATURE		10/40	10/40	10/40	5/40	10/40	$^{\circ}$ C
FREQ. TEMP. COEFFICIENT	FTC	0.037	0.037	0.037	0.037	0.037	ppm/ $^{\circ}$ C
FREQUENCY AGING		< $\pm$ 10	< $\pm$ 10	< $\pm$ 10	< $\pm$ 10	< $\pm$ 10	ppm/year
DC INSULATION RESISTANCE	Between any 2 pins	> 1	> 1	> 1	> 1	> 1	M Ohms
MAX. DC VOLTAGE	Between any 2 pins	10	10	10	10	30	VDC
PIN 1-TO-2 STATIC CAPACITANCE		2.5 $\pm$ 0.3	2.5 $\pm$ 0.3	2.3 $\pm$ 0.3	2.3 $\pm$ 0.3	2.0 $\pm$ 0.3	pF
TRANSDUCER STATIC CAPACITANCE		2.2	2.2	2.2	1.7	1.7	pF
OPERATING TEMPERATURE	$T_{OPR}$	-40 to +85	-40 to +85	-40 to +85	-40 to +85	-40 to +85	$^{\circ}$ C
STORAGE TEMPERATURE	$T_{STG}$	-40 to +85	-40 to +85	-40 to +85	-40 to +85	-40 to +85	$^{\circ}$ C
CASE		TO-39-3A	TO-39-3A	TO-39-3A	TO-39-3A	TO-39-3A	

## PACKAGE DIMENSIONS (mm)

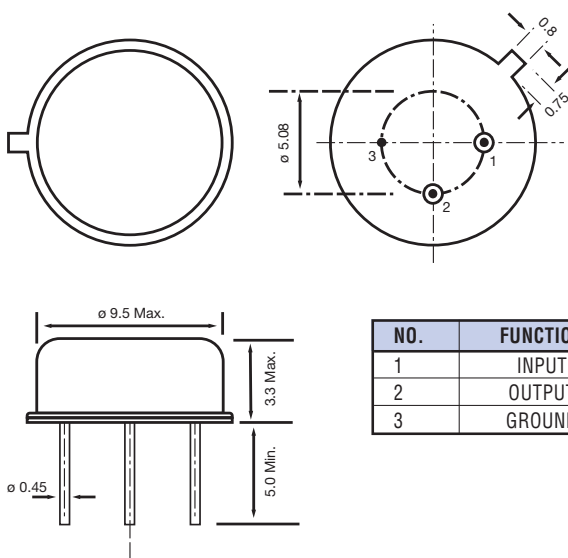


Figure 1) ECS-DR1 - Top, Side and Bottom views

NO.	FUNCTION
1	INPUT
2	OUTPUT
3	GROUND

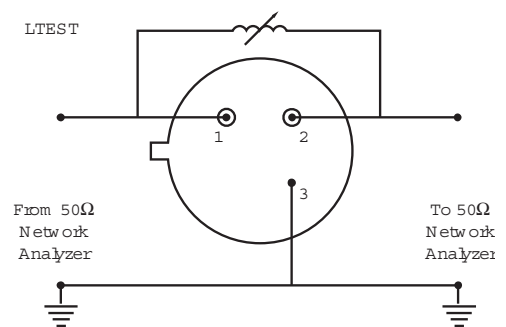


Figure 2) Test Circuit