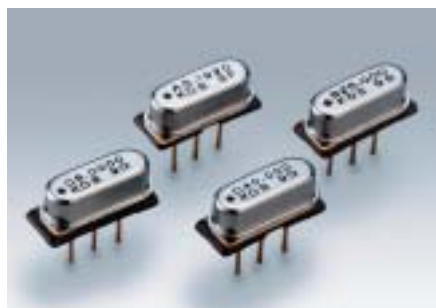


# Miniature Type Crystal Oscillators

## DOC-49S SERIES



### ■ Features

- High precision miniature crystal oscillator with C-MOS oscillation circuit built in to the package of AT-49 crystal resonator.
- S1 type offer low current consumption and low harmonic type. S2 type covers higher frequencies. S3 type offers high output load (CL=50pF).
- Achieved highest reliability with hermetic seal that is grounded.

### ■ Generic Specification

Item	Type	DOC-49S1	DOC-49S2	DOC-49S3	DOC-49S4
Output Frequency Range		156.25kHz~20.0MHz	20.1~70MHz	1.25~20MHz	1.25~50MHz
Frequency Stability		$\pm 50 \times 10^{-6}$ , $\pm 100 \times 10^{-6}$			
Operating Temperature Range		-10~+70°C			
Storage Temperature Range		-20~+80°C			
Output Characteristics	"0"Level	10%VDD max.			+0.5V max.
	"1"Level	90%VDD max.			+2.4V max.
	Symmetry of Wave Form	40~60% (F $\geq$ 10MHz) 45~55% (F<10MHz)	40~60%	40~60% (F $\geq$ 10MHz) 45~55% (F<10MHz)	40~60% (+1.4VDC)
	Rise and Fall Time	50nsec. max. (F<2MHz) 20nsec. max. (F $\geq$ 2MHz)	10nsec. max. (F $\leq$ 50MHz) 8nsec. max. (F $\leq$ 70MHz)	15nsec. max.	8nsec. max. (F<29MHz) 5nsec. max. (29 $\leq$ F $\leq$ 50MHz)
Supply Voltage		+5.0V $\pm$ 10%			
Current Consumption		5mA max. (No Load)	20mA max. (F $\leq$ 50MHz No Load) 45mA max. (F $\leq$ 70MHz No Load)	10mA max. (No Load)	10mA max. (F $\leq$ 20MHz No Load) 35mA max. (20 $\leq$ F $\leq$ 50MHz No Load)
Output Load		CL=15pF or 2LS-TTL	CL=15pF or 2LS-TTL	CL=50pF or 10LS-TTL	10TTL

Consult our sales representative for other specifications or special specifications.

### ■ Dimensions[mm]

