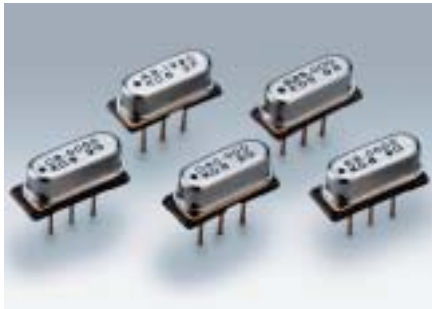


# SMD Type Crystal Oscillators

## DOC-49S SERIES



### ■ Features

- AT-49S Series has C-MOS oscillation circuit built into AT-49 package. The design offers high precision and small size.
- S1: Low power consumption, low harmonic type.
- S2: Covers high frequencies. S3: High operation function (CL=50pF).
- S4: TTL Duty compatible. S5: High speed and high drive operation.
- Hermetically sealed package assures high reliability



### ■ Applications

- PC, peripherals, game equipment and other appliances

### ■ Standard Specification

Item	Type	DOC-49S1	DOC-49S2	DOC-49S3	DOC-49S4	DOC-49S5
Output Frequency Range		156.25kHz~20.0MHz	20.1~70MHz	1.25~20MHz	1.25~50MHz	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		C-MOS			TTL	C-MOS
Output Characteristics	"O" Level	10%V <sub>DD</sub> max.			+0.5V max.	10%V <sub>DD</sub> max.
	"I" Level	90%V <sub>DD</sub> min.			+2.4V min.	90%V <sub>DD</sub> min.
	Symmetry	40~60% (Fo≥10MHz) 45~55% (Fo<10MHz)	40~60%	40~60% (Fo≥10MHz) 45~55% (Fo<10MHz)	40~60% (+1.4VDC)	40~60% (Fo≥20MHz) 45~55% (Fo<20MHz)
	Rise and Fall Time	50nsec. max. (Fo<2MHz) 20nsec. max. (Fo≥2MHz)	10nsec. max. (Fo≤50MHz) 8nsec. max. (Fo≤70MHz)	15nsec. max.	8nsec. max. (Fo<29MHz) 5nsec. max. (29MHz≤Fo≤50MHz)	8nsec. max.
Supply Voltage		+5.0V DC±10%				
Current Consumption		5mA max. (No Load)	20mA max. (Fo≤50MHz, No Load) 45mA max. (Fo≤70MHz, No Load)	10mA max. (No Load)	10mA max. (Fo≤20MHz, No Load) 35mA max. (20MHz<Fo≤50MHz, No Load)	
Output Load		CL=15pF or 2LS-TTL	CL=15pF or 2LS-TTL	CL=50pF or 10LS-TTL	10TTL	CL=50pF or 10TTL

Consult our sales representative for other specifications.

### ■ Dimensions[mm]

