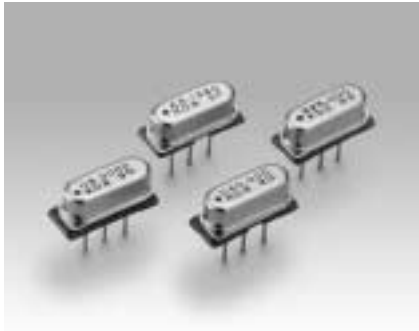


Miniature Crystal Oscillator



DOC-49S SERIES



FEATURES

- A very high precision compact crystal oscillator combining a C-MOS oscillating circuit in crystal resonator (AT-49) case.
- DOC-49S1 is a low current consumption and a low harmonic type DOC-49S2 for high frequencies and DOC-49S3 is a high power drive capable type.
- High reliability is assured by using a completely sealed metal case with case ground.

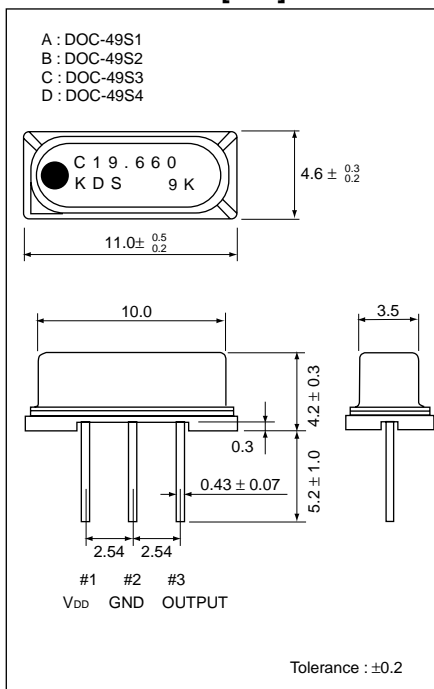
GENERIC SPECIFICATION

ITEM	TYPE	DOC-49S1	DOC-49S2	DOC-49S3	DOC-49S4
Output Frequency		156.25kHz ~ 20.0MHz	20.1 ~ 70MHz	1.25 ~ 20MHz	1.25 ~ 50MHz
Frequency Stability		±100ppm, (op. ±50ppm)			
Operating Temperature Range		-10 ~ +70°C			
Storage Temperature Range		-20 ~ +80°C			
Output		C-MOS			TTL
Output Characteristics	"0" level (VOL)	10% VDD max.			0.5V max.
	"1" level (VOH)	90% VDD min.			2.4V max.
	Symmetry	40 ~ 60% (F ≥ 10MHz) 45 ~ 55% (F < 10MHz)	40 ~ 60%	40 ~ 60% (F ≥ 10MHz) 45 ~ 55% (F < 10MHz)	40 ~ 60% (1.4VDC)
	Rise, Fall Time (Tr, Tf)	50ns max. (F < 2MHz) 20ns max. (F ≥ 2MHz)	10ns max. (F ≤ 50MHz) 8ns max. (F ≤ 70MHz)	15ns max.	8ns max. (F < 29MHz) 5ns max. (29 ≤ F ≤ 50MHz)
Power Supply Voltage (VDD)		+5.0VDC ±10%			
Current Consumption		5mA max. (No Load)	20mA max. (F ≤ 50MHz No Load) 45mA max. (F ≤ 70MHz No Load)	10mA max. (No Load)	10mA max. (F ≤ 20MHz No Load) 35mA max. (20 ≤ F ≤ 50MHz No Load)
Output Load		CL=15pF or 2LS-TTL	CL=15pF or 2LS-TTL	CL= 50pF or 10LS-TTL	10TTL

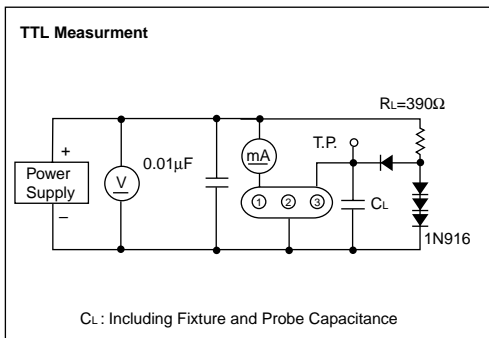
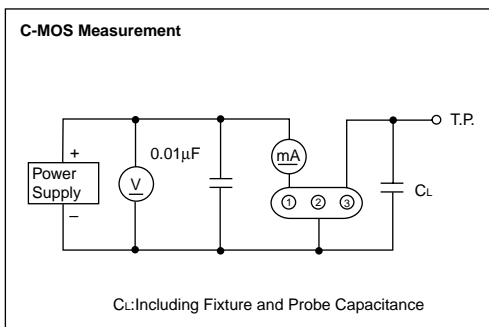
※ Take the same precautions for static electricity and impressed as with a normal C-MOS device.
 ※ When using insert a pass capacitor of about 0.01 μF between power (VDD) and ground.

Please contact your KDS sales representative to discuss particular spec requirements.

DIMENSIONS [mm]



MEASUREMENT CIRCUIT



OUTPUT WAVE FORM

