

ECS-76.8-20-4 Datasheet



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DiGi Electronics Part Number	ECS-76.8-20-4-DG
Manufacturer	ECS Inc.
Manufacturer Product Number	ECS-76.8-20-4
Description	CRYSTAL 7.6800MHZ 20PF TH
Detailed Description	7.68 MHz \pm 30ppm Crystal 20pF 80 Ohms HC-49/US

This model ECS-76.8-20-4 is available at DiGi Electronics.

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Purchase and inquiry

Manufacturer Product Number:

ECS-76.8-20-4

Series:

HC-49US

Type:

MHz Crystal

Frequency Stability:

±50ppm

Load Capacitance:

20pF

Operating Mode:

Fundamental

Ratings:

-

Package / Case:

HC-49/US

Height - Seated (Max):

0.138" (3.50mm)

Manufacturer:

ECS Inc.

Product Status:

Active

Frequency:

7.68 MHz

Frequency Tolerance:

±30ppm

ESR (Equivalent Series Resistance):

80 Ohms

Operating Temperature:

-10°C ~ 70°C

Mounting Type:

Through Hole

Size / Dimension:

0.447" L x 0.183" W (11.35mm x 4.65mm)

Environmental & Export classification

RoHS Status:

RoHS non-compliant

REACH Status:

REACH Unaffected

HTSUS:

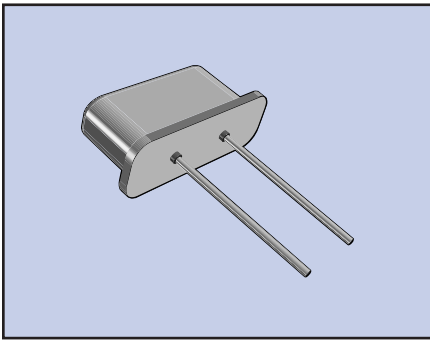
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Moisture Sensitivity Level (MSL):

1 (Unlimited)

ECCN:

EAR99



This product represents our selection of low profile resistance weld type quartz crystals.

- OPTIONS:**
- extended temperature range
 - tighter tolerances
 - mylar spacer
 - 3rd in line lead base
 - radial tape and reel (1,000 pcs)

FEATURES

- Cost effective
- Excellent aging
- Wide frequency range
- Low profile
- Excellent reliability
- "AT strip" blank technology

PART NUMBERING GUIDE "EXAMPLE"

ECS	FREQUENCY (16.0000 MHz)	LOAD CAPACITANCE*	PACKAGE TYPE**
ECS	- 160 -	20	- 4

* Load capacitance (xx=xx pF, S= series resonance), ** Package Type examples (4= 3.5mm max. height, 4L= 2.5mm max. height)
 For extended temp range of -40 to +85°C ad -DN suffix for example ECS-160-20-4-DN
 Note: See Product Selection Guide for additional options.

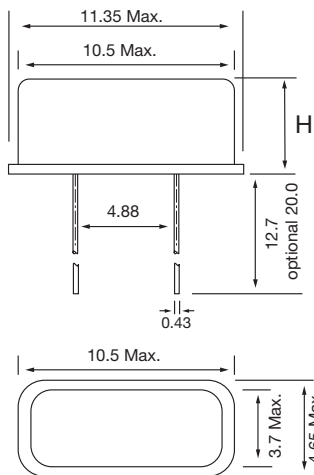
OPERATING CONDITIONS/ELECTRICAL CHARACTERISTICS

PARAMETERS	CONDITIONS	MINIMUM	MAXIMUM	UNITS
FREQUENCY RANGE	f_0	3.57	70.000	MHz
FREQUENCY TOLERANCE	@ +25°C		±30	PPM
FREQUENCY STABILITY, ref @ 25°C	Standard -10 ~ +70°C		±50	PPM
	"DN" Option -40 ~ +85°C		±100	PPM
OPERATING TEMPERATURE	Standard	-10	+70	°C
	DN option	-40	+85	°C
STORAGE TEMPERATURE		-40	+105	°C
SHUNT CAPACITANCE	C_0		7.0	pF
LOAD CAPACITANCE	C_L (Customer Specified)	10.0	Series	pF
DRIVE LEVEL	3.57 ~ 70.000MHz		0.5	mW
AGING (FIRST YEAR)	@ +25°C		±5.0	PPM

EQUIVALENT SERIES RESISTANCE / MODE OF OSCILLATION

FREQUENCY RANGE (MHz)	MODE	MAX ESR Ω	FREQUENCY RANGE (MHz)	MODE	MAX ESR Ω
3.570 ~ 3.999	Fundamental	200	9.000 ~ 12.999	Fundamental	60
4.000 ~ 4.999	Fundamental	150	13.000 ~ 19.999	Fundamental	40
5.000 ~ 5.999	Fundamental	120	20.000 ~ 30.000	Fundamental	30
6.000 ~ 6.999	Fundamental	100	27.000 ~ 70.000	3rd O/T	100
7.000 ~ 8.999	Fundamental	80			

PACKAGE DIMENSIONS (mm)



Height "H" (max.)	
-4	3.5 mm
-4L	2.5 mm

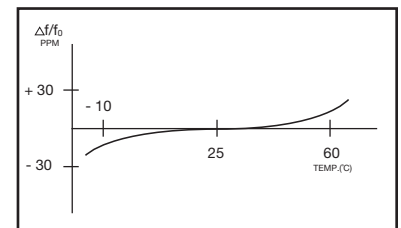
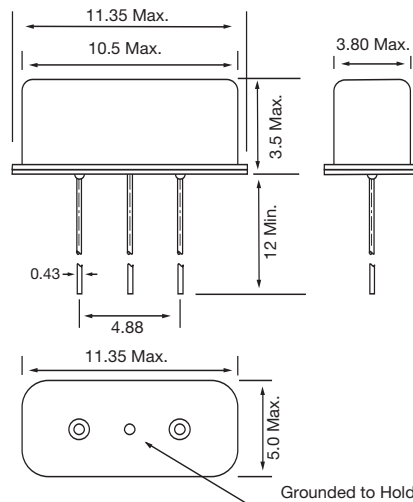


Figure 3) Frequency vs Temperature Curve

Figure 1) HC-49US - Top and Side views

Figure 2) HC-49US - 3rd In Line Lead Base - Side & Bottom View

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