

Part Number:

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Approved Manufacturers List for Web Parts

REVISION HISTORY

Rev	ECO#	Description of Change	Date	Apvd By

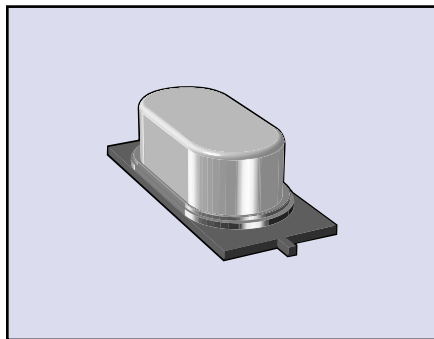
Approved Manufacturers:

NOTE: In some cases, components under the same part number may originate from various manufacturers, but are essentially equivalent. Prior to using the parts in your design, please review the datasheets of all the manufacturers to ensure that your design will accomodate any minor differences between parts.

Click here
to view
Data Sheet

- 1) Manufacturer: _____ ☐
MFGR P/N: _____
Comments: _____
- 2) Manufacturer: _____ ☐
MFGR P/N: _____
Comments: _____
- 3) Manufacturer: _____ ☐
MFGR P/N: _____
Comments: _____
- 4) Manufacturer: _____ ☐
MFGR P/N: _____
Comments: _____
- 5) Manufacturer: _____ ☐
MFGR P/N: _____
Comments: _____

Drawing Content		Title:		Rabbit Semiconductor 2932 Spafford St. Davis, CA 95616 530 - 757 - 8400	
Created By:		Size: A Document No.			
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Approvals: Initial Release					
Project Engineer:					
Engineering Manager:					
Signatures	Date	Scale: None	Release Date:	Sheet	of



The CSM-7 is an excellent choice for the SMD version of the HC-49US leaded crystal. The CSM-7 has a case height of 5mm maximum in a resistance weld metal package.

FEATURES

- Cost effective
- Space saving design
- Low profile
- 4.3 mm & 3.2 mm package heights available
- Tape & Reel (1,000 pcs)

PART NUMBERING GUIDE "EXAMPLE"

MANUFACTURER	FREQUENCY (16.0000 MHz)	LOAD CAPACITANCE*	PACKAGE TYPE**
ECS	160	20	5P

* Load capacitance (xx=xx pF, S= series resonance), ** Package Type examples (5P= 5mm max. height, 5PM= 4.3mm max. height, 5PL=3.2mm max. height)

Note: See Product Selection Guide for additional options.

OPERATING CONDITIONS/ELECTRICAL CHARACTERISTICS

PARAMETERS	CONDITIONS	MINIMUM	TYPICAL	MAXIMUM	UNITS
FREQUENCY RANGE	f_0	3.570		70.000	MHz
FREQUENCY TOLERANCE	@ +25°C	-50		+50	PPM
FREQUENCY STABILITY	Ta = -10 +70°C	-50		+50	PPM
OPERATING TEMPERATURE (T _{OPR})	T _{OPR}	-10		+70	°C
STORAGE TEMPERATURE (T _{STG})	T _{STG}	-30		+85	°C
SHUNT CAPACITANCE (C ₀)	C ₀			7.0	pF
LOAD CAPACITANCE (C _L)	C _L (Customer Specified)	12	20.0 standard	Series	pF
DRIVE LEVEL	3.570 - 70.000 MHz			0.5	mW
AGING (FIRST YEAR)	@ +25°C	-5.0		+5.0	PPM

EQUIVALENT SERIES RESISTANCE

FREQUENCY RANGE (MHz)	MODE	MAX ESR Ω	FREQUENCY RANGE (MHz)	MODE	MAX ESR Ω
3.570 ~ 4.999	Fundamental	150	13.000 ~ 19.000	Fundamental	40
5.000 ~ 5.999	Fundamental	80	20.000 ~ 29.000	Fundamental	30
6.000 ~ 6.999	Fundamental	70	26.000 ~ 39.999	3rd O/T	100
7.000 ~ 8.999	Fundamental	60	40.000 ~ 70.000	3rd O/T	80
9.000 ~ 12.999	Fundamental	50			

PACKAGE DIMENSIONS (mm)

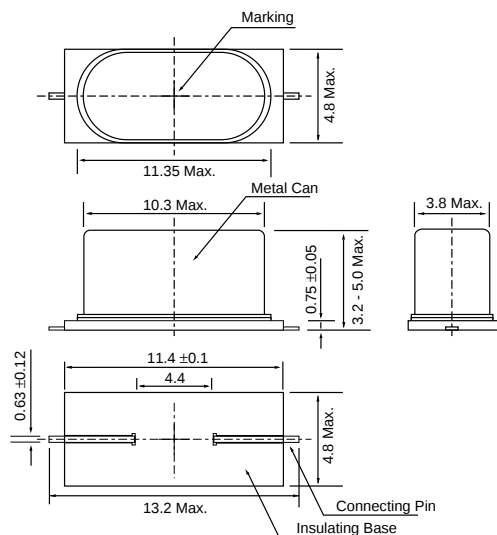


Figure 1) CSM-7 - Top, Side, Bottom and End views

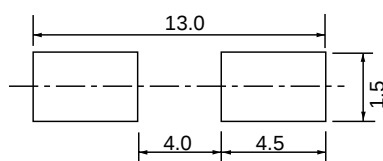


Figure 2) CSM-7 Land Pattern - Bottom view

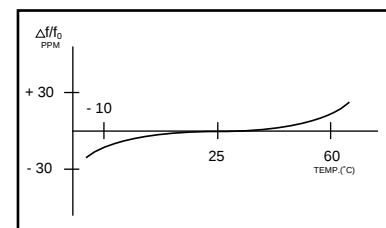


Figure 3) Frequency vs Temperature Curve