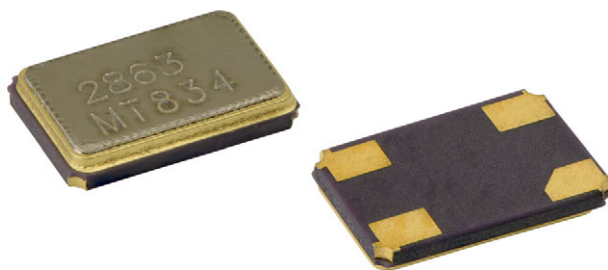


Quartz Crystals



FEATURES

- Ultra-miniature size: 5.0 x 3.2 x 0.8 (mm)
- Wide frequency range
- Seam sealing
- Emboss tapping
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912


RoHS
COMPLIANT

The XT35 is a miniature SMD crystal with 5.0 x 3.2 (mm) ceramic package and a height of 0.8 mm. 12 MHz to 39 MHz frequency makes it widely applied in PDA, GPS, MP3, and portable instruments.

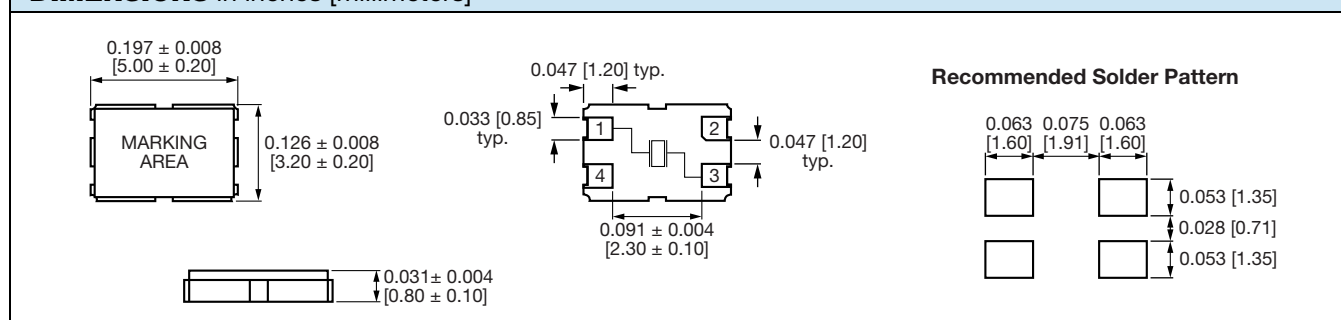
STANDARD ELECTRICAL SPECIFICATIONS

PARAMETER	SYMBOL	CONDITION	UNIT	MIN.	TYP.	MAX.
Frequency range	F _O		MHz	12.000	-	39.000
Frequency tolerance	ΔF/F _O	At 25 °C	ppm	-	± 10, ± 15, ± 20, ± 25, ± 30	-
Temperature stability	T _C	Ref. to 25 °C	ppm	-	± 20, ± 25, ± 30, ± 35, ± 50, ± 100	-
Operating temperature range	T _{OPR}		°C	0	-	+70
Storage temperature range	T _{STG}		°C	-55	-	+125
Shunt capacitance	C ₀		pF	-	-	7
Load capacitance	C _L	Customer specified	pF	10	-	series
Insulation resistance	I _R	100 V _{DC}	MΩ	500	-	-
Drive level	D _L		μW	10	50	100
Aging	Fa	At 25 °C, per year	ppm	-5	-	+5

EQUIVALENT SERIES RESISTANCE (ESR) AND MODE OF VIBRATION (MODE)

FREQUENCY RANGE (MHz)	MAX. ESR (Ω)	MODE
12.000 to 19.999	80	Fundamental
20.000 to 25.000	70	Fundamental
25.100 to 39.000	40	Fundamental

DIMENSIONS in inches [millimeters]



Note

- Pins 2 and 4 are connected to the metal lid

**PART NUMBER CONFIGURATIONS** (to be used on all New Designs)

X	T	3	5	2	0	H	J	R	G	X	8	M	1	9	2	E
Crystal		Package / Size		Load Cap.		Pack Code	Freq. Tolerance	Operating Temp.	Temp. Stability	Options		Frequency				Lead (PB)-free
		35		20 = std. SE = series		H = tape and reel	G = ± 30 ppm E = ± 25 ppm H = ± 20 ppm I = ± 15 ppm J = ± 10 ppm	S = -10 °C to +70 °C R = -40 °C to +85 °C	C = ± 100 ppm D = ± 50 ppm F = ± 35 ppm G = ± 30 ppm E = ± 25 ppm H = ± 20 ppm I = ± 15 ppm ⁽¹⁾	X = no options Contact factory for available options		Use "M" as decimal place holder Frequency must be five digits - complete with "0" at the end				E = lead (Pb)-free

Note

(1) Contact factory for availability

Previous / legacy part number information: still valid for existing designs;

all New Designs should use the new part configuration above**PREVIOUS / LEGACY GLOBAL PART NUMBERING**

X	T	3	5	2	0	A	N	A	4	0	M
MODEL NUMBER				LOAD CAPACITANCE		PACKAGE CODE	OPTIONS		FREQUENCY		
XT35 = XT35				18 = 18 pF 20 = 20 pF NL = series to be specified by customer		Tape and reel H = RF7 (XT9M) Bulk A = B04 (all models)	NA = no additional options RR = extended temperature of -40 °C to +85 °C Contact factory for all other options		4M = 4 MHz 40M = 40 MHz 100M = 100 MHz 12M288 = 12.288 MHz M is used as decimal place holder in frequency		
XT35 MODEL				-20 LOAD blank = series -16 = 16 pF -20 = 20 pF standard -32 = 32 pF		25M FREQUENCY/MHz		e4 JEDEC® LEAD (Pb)-FREE STANDARD			



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