

RoHS

COMPLIANT

Vishay Dale

## Half Size Clock Oscillator Enable/Disable



The XO-523 series oscillator is half size, has tri-state enable/disable controlled function, and is with a 3.3 V power supply voltage. The metal package with pin 4 case ground acts as shielding to minimize EMI radiation.

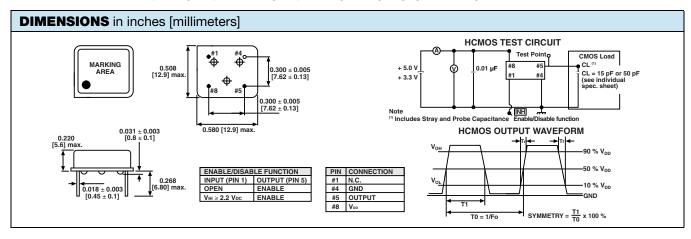
## FEATURES

- Size: 8 pin half size
- Industry standard
- Tri-state enable/disable
- Wide frequency range
- Low cost
- Resistance weld package
- 3.3 V
- Compliant to RoHS Directive 2002/95/EC

PARAMETER	SYMBOL	CONDITION	VALUE
Frequency range	Fo	-	1.000 MHz to 100.000 MHz
Frequency stability (1)		all conditions	± 25 ppm, ± 50 ppm, ± 100 ppm
	-		0 °C to 70 °C
Operating temperature range	ng temperature range T <sub>OPR</sub> -		- 40 °C to + 85 °C (option)
Storage temperature range	T <sub>STG</sub>	-	- 55 °C to + 125 °C
Power supply voltage	V <sub>DD</sub>	-	3.3 V ± 10 %
Aging (first year)		25 °C ± 3 °C	± 5 ppm
Supply current		1.000 MHz to 23.999 MHz	15 mA max.
		24.000 MHz to 49.999 MHz	20 mA max.
	I <sub>DD</sub>	50.000 MHz to 69.999 MHz	30 mA max.
		70.000 MHz to 100.000 MHz	45 mA max.
Output symmetry	Sym	at <sup>1</sup> / <sub>2</sub> V <sub>DD</sub>	40 %/60 % (45 %/55 % option)
Rise time	t <sub>r</sub>	20 % V <sub>DD</sub> to 80 % V <sub>DD</sub>	8 ns max.
Fall time	t <sub>f</sub>	80 % V <sub>DD</sub> to 20 % V <sub>DD</sub>	8 ns max.
	V <sub>OH</sub>	-	90 % V <sub>DD</sub> min.
Output voltage	V <sub>OL</sub>	1.000 MHz to 23.999 MHz   24.000 MHz to 49.999 MHz   50.000 MHz to 69.999 MHz   70.000 MHz to 100.000 MHz   at <sup>1</sup> / <sub>2</sub> V <sub>DD</sub> 20 % V <sub>DD</sub> to 80 % V <sub>DD</sub>	10 % V <sub>DD</sub> max.
	TTL load	-	1 TTL to 5 TTL
Output load	HCMOS load	-	$\begin{array}{c} 0 \ ^{\circ}\text{C to } 70 \ ^{\circ}\text{C} \\ \hline - 40 \ ^{\circ}\text{C to } + 85 \ ^{\circ}\text{C (option)} \\ \hline - 55 \ ^{\circ}\text{C to } + 125 \ ^{\circ}\text{C} \\ \hline 3.3 \ V \pm 10 \ ^{\circ}\text{M} \\ \hline \pm 5 \ ^{\circ}\text{pm} \\ \hline 15 \ ^{\circ}\text{M max.} \\ \hline 20 \ ^{\circ}\text{M max.} \\ \hline 20 \ ^{\circ}\text{M max.} \\ \hline 20 \ ^{\circ}\text{M max.} \\ \hline 30 \ ^{\circ}\text{M max.} \\ \hline 30 \ ^{\circ}\text{M max.} \\ \hline 45 \ ^{\circ}\text{M max.} \\ \hline 40 \ ^{\circ}\ensuremath{/60\ \%} \ (45 \ ^{\circ}\ensuremath{/55\ \%} \ ^{\circ}\text{option)} \\ \hline 8 \ ^{\circ}\text{ns max.} \\ \hline 40 \ ^{\circ}\ensuremath{/60\ \%} \ (45 \ ^{\circ}\ensuremath{/55\ \%} \ ^{\circ}\text{option)} \\ \hline 8 \ ^{\circ}\text{ns max.} \\ \hline 90 \ ^{\circ}\text{V}_{\text{DD}} \ ^{\circ}\text{min.} \\ \hline 10 \ ^{\circ}\text{V}_{\text{DD}} \ ^{\circ}\text{max.} \\ \hline 11 \ ^{\circ}\text{TL to } 5 \ ^{\circ}\text{TL} \\ \hline to \ 50\text{M: 30 pF} \\ \hline to \ 125\text{M: 15 pF} \\ \hline 10 \ ^{\circ}\text{ns max.} \\ \end{array}$
		-	to 125M: 15 pF
Start-up time	ts	-	10 ms max.
•			pin 1 = H or open (output active at pin 5)
Pin 1, tri-state function		-	pin 1 = L (high impedance at pin 5)

Note

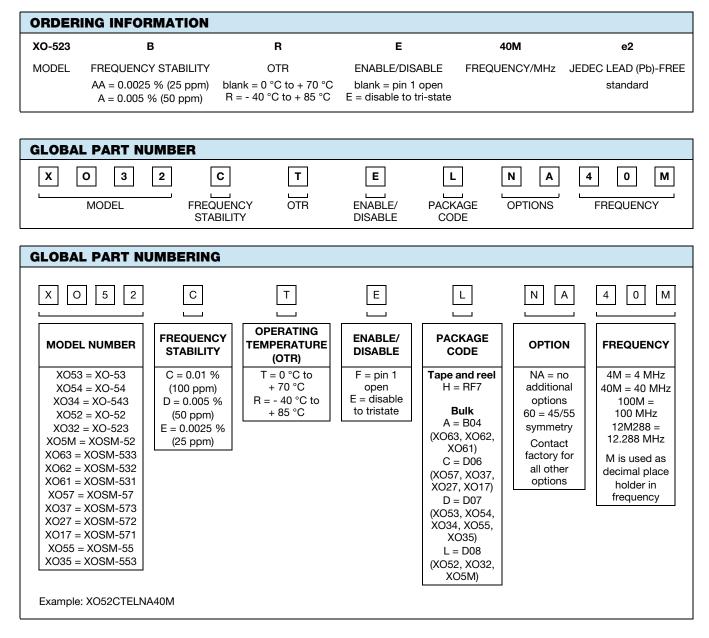
<sup>(1)</sup> Include: 25 °C tolerance, operating temperature range, input voltage change, aging, load change, shock vibration



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PART MARKING		
Line 1:	M2801XXXXX (part number)	
Line 2:	XX.XXXXM (frequency)	
Line 3:	yywwvv (date/factory code)	



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