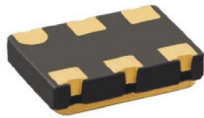


# UVVJ Series

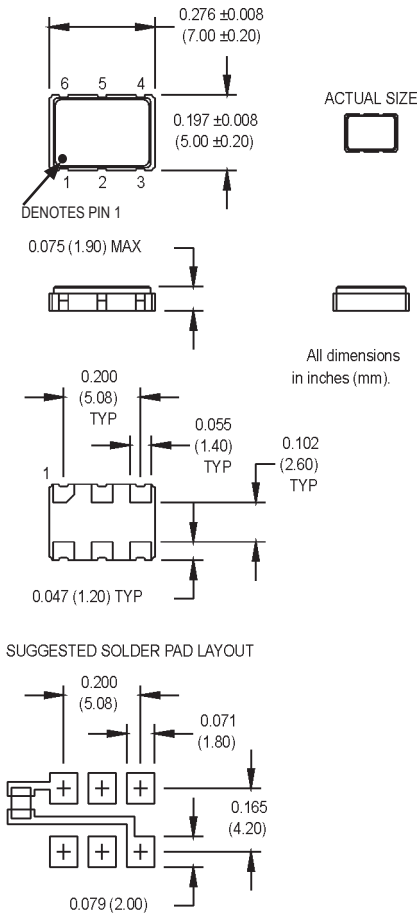
## 5x7 mm, 3.3 Volt, LVPECL/LVDS, VCXO



- Ultra low jitter VCXO approaching SAW jitter performance but with the temperature stability advantage of a crystal based resonator

Ordering Information		UVVJ	1	0	B	1	L	N	00.0000
Product Series									MHz
Temperature Range									
1:	0°C to +70°C								
2:	-40°C to +85°C								
6:	-20°C to +70°C								
8:	0°C to +50°C								
Stability									
0:	Nominal per APR selection								
Output Type									
B:	Complementary, Enable (Enable High)								
S:	Complementary, Enable (Enable Low)								
U:	Complementary Output								
Absolute Pull Range									
1:	±50 ppm (±35 ppm typ. Stability)								
5:	±80 ppm (±25 ppm typ. Stability)								
8:	±25 ppm (±50 ppm typ. Stability)								
Symmetry/Output Logic Type									
L:	45/55% LVDS								
P:	45/55% PECL								
H:	40/60% LVDS								
Q:	40/60% PECL								
Package/Lead Configurations									
N:	Leadless Ceramic (6 pads)								
Frequency (customer specified)									

M3015Sxx - Contact factory for datasheet.



### Pin Connections

PIN	FUNCTION
1	Control Voltage
2	Output Enable
3	Ground
4	Output1/ Q
5	Output2/ $\bar{Q}$
6	+Vdd

PARAMETER	Symbol	Min.	Typ.	Max.	Units	Condition
Frequency Range	F	0.75		800	MHz	
Operating Temperature	TA	(See ordering information)				
Storage Temperature	TS	-55		+125	°C	
Frequency Stability	$\Delta F/F$	(See ordering information)				
Aging						See Note 1
1st Year		-3/-5		+3/+5	ppm	<52 MHz / ≥52 MHz
Thereafter (per year)		-1/-2		+1/+2	ppm	<52 MHz / ≥52 MHz
Pullability/APR		(See ordering information)				
Control Voltage	Vc	0.3	1.65	3	V	Pin 1 Voltage
Linearity			5	15	%	Positive Monotonic Slope
Modulation Bandwidth	fm	10			kHz	-3 dB bandwidth
Input Impedance	Zin	50k			Ohms	
Input Voltage	Vcc	3.135	3.3	3.456	V	
Input Current	Icc					
0.75 MHz to 24 MHz				70/30	mA	PECL/LVDS
24 MHz to 800 MHz				100/60	mA	PECL/LVDS
Output Type						PECL/LVDS
Load						See Note 3 PECL waveform LVDS waveform
Symmetry (Duty Cycle) (Per Symmetry Code)		(See ordering information)				
Output Skew				200	ps	PECL
Differential Voltage	Vo	250	350		mV	Pk-Pk LVDS only
Logic "1" Level	Voh	Vcc - 1.02			V	PECL
Logic "0" Level	Vol			Vcc - 1.63	V	PECL
Rise/Fall Time	Tr/Tf		0.35 0.50	0.55 1.0	ns	@20/80% LVPECL @20/80% LVDS
Enable/Disable Logic		80% Vcc min or N/C: output active 20% Vcc max: output disables to high-Z PECL low, GND, or N/C - enables output PECL high - disables output				
						Output Option B Output Option S
Start up Time			5		ms	
Phase Jitter	$\phi_J$					
20 MHz to 175 MHz			0.35	1.0	ps RMS	Integrated 12 kHz - 20 MHz
175 MHz to 800 MHz			1.0	1.5	ps RMS	Integrated 12 kHz - 20 MHz
Phase Noise (Typical)		10 Hz	100 Hz	1 kHz	10 kHz	100 kHz
@ 19.44 MHz		-50	-80	-112	-140	-150
@ 155.52 MHz		-50	-80	-100	-125	-145
@ 250.00 MHz		-50	-80	-100	-124	-128
@ 622.08 MHz		-50	-80	-100	-118	-121
Offset from carrier						
Mechanical Shock		Per MIL-STD-202, Method 213, Condition C				
Vibration		Per MIL-STD-202, Method 201 & 204				
Max Soldering Conditions		See solder profile, Figure 1				
Hermeticity		Per MIL-STD-202, Method 112 (1 x 10 <sup>-8</sup> atm.cc/s of helium)				
Solderability		Per MIL-STD-883, Method 2003				

- Stability given for deviation over temperature
- APR specification inclusive of initial tolerance, deviation over temperature, shock, vibration, supply current, and aging.
- PECL Load - See load circuit diagram #5. LVDS Load - See load circuit diagram #9

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# MtronPTI Lead Free Solder Profile

