



7.5x5.0mm Low Current SMD Oscillators - Type 471

Pb-Free & RoHS Compliant

Model Designator Key & Specifications

Base Model	Input Voltage	Freq Stability	Operating Temp. Range
471 (7.5x5.0mm & Tristate)	33 = 3.3V	A = ± 25 PPM	S = -10°C to +70°C I = -40°C to +85°C
	28 = 2.8V	B = ± 50 PPM	
	25 = 2.5V	C = ± 100 PPM	

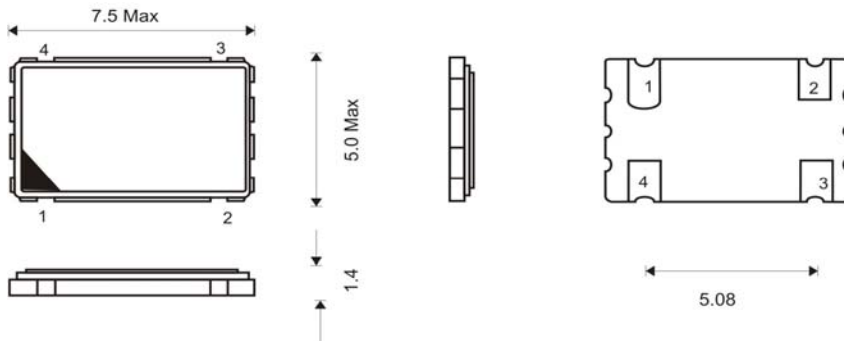
Operating Conditions

Storage Temp Range	-55°C to +125°C
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Electrical Characteristics (Ta = -20°C to +70°C, V_{DD} = 3.3V, 2.8V, & 1.8V, CL = 15pF, V_{CONT} = 1.65V, 1.4V & 0.9V)

Parameter	Condition	Frequency Range (MHz)	Specifications		
			471-33	471-28	471-25
Input Current (I _{DD})	15pF Load	1.800 to 32.000 30.001 to 52.000	3.5mA Max. 4.5mA Max.	4.0mA Max. 5.0mA Max.	4.5mA Max. 6.0mA Max.
Symmetry	@ 50% V _{DD}	1.80 ~ 50.00	45/55%		
Output Voltage	(V _{OL}) "0" Level		10% V _{DD} Max.		
	(V _{OH}) "1" Level		90% V _{DD} Min		
Rise Time	(T _R) 10% to 90% V _{DD}		12nS Max.		
Fall Time	(T _F) 90% to 10% V _{DD}		12nS Max.		
Stand-By Current	at "0"-Level		1µA Max.		
Load	Cmos		15pF		
Start-Up Time	0V to V _{DD}		5mS Max.		

Dimensions (mm)



Enable/Disable Function	
Control (Pin #1)	OUTPUT (Pin #3)
Open	Active
"1" (V _{IH} ≥ 70%V _{DD})	Active
"0" (V _{IL} ≤ 30%V _{DD})	High Z

Pin Connections	
#1	E/D
#2	VSS
#3	OUT
#4	VDD