



Dynamic Engineers Inc.

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FXO5300BM-7 A @

5.0x3.2mm SMD Crystal Oscillator

Features and Benefits

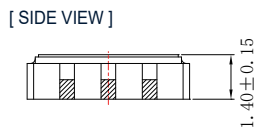
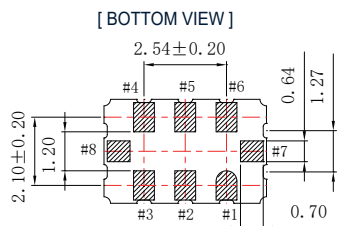
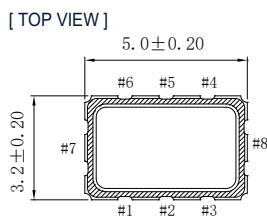
- Low Power Supply Voltage: 3.3, 2.5, 1.8V supply options
- Clock Output: CML
- Output frequency support from 15MHz to 2.1GHz
- Ultra Low Noise, Phase Jitter < 300 fs
(Typical: 150 fs at 12kHz to 20MHz frequency offsets)
- Tri-state enable / disable mode.
- Temperature Range: -40°C to +85°C
- Pb-free/RoHS Compliant

Typical Applications

- SONET/SDH, Gigabit Ethernet.
- Storage Area Networking (SAN)
- SD/HD video
- FPGA clock generation

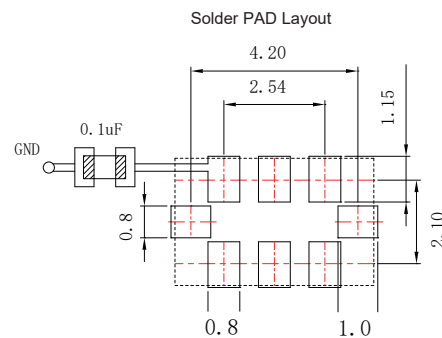
Mechanical Drawing & Pin Connections

Drawing No: MD200027-1



PIN#	FUNCTION
1	LVPECL/LVDS/CML/HCSL
2	OE
3	GND
4	Output
5	Comp. Output
6	VDD
7	NC
8	NC

Unit in mm
1mm = 0.0394 inches





Specifications

Specification	Condition	3.3V		2.5V		1.8V		Unit
		Min.	Max.	Min.	Max.	Min.	Max.	
Supply Voltage Variation	V _{DD} ±5%	-	-	-	-	1.71	1.89	V
Supply Voltage Variation	V _{DD} ±10%	3.63	2.97	2.25	2.75	-	-	V
Frequency Range		15	2100	15	2100	15	2100	MHz
Standard Frequency		100, 106.25, 125, 156.25, 187.5, 200, 212.5, 266, 300, 312.5, 400, 491.52, 622.08, 644.531250						MHz
Supply Current		-	90	-	80	-	70	mA
Duty Cycle		45	55	45	55	45	55	%
Output Level	Output High	V _{DD} -0.085	V _{DD}	V _{DD} -0.085	V _{DD}	V _{DD} -0.085	V _{DD}	V
	Output Low	V _{DD} -0.6	V _{DD} -0.32	V _{DD} -0.6	V _{DD} -0.32	V _{DD} -0.6	V _{DD} -0.32	
Transition Rise/Fall Time	20%-80%	-	0.35	-	0.35	-	0.35	nSec
Start Time		-	8	-	8	-	8	mSec
Tri-State(Input to Pin2)	Enable	0.7xV _{DD}	-	0.7xV _{DD}	-	0.7xV _{DD}	-	V
	Disable	-	0.3x V _{DD}	-	0.3xV _{DD}	-	0.3xV _{DD}	
Standby Current		-	90	-	80	-	70	mA
RMS Phase Jitter (12KHz to 20MHz)		150	300	150	300	150	300	fs
Period Jitter		-	50	-	50	-	50	ps
Phase Noise, At V _{DD} =3.3V, f _{out} =805.664MHz		TYP	MAX	TYP	MAX	TYP	MAX	
	1KHz offset	-107	-	-107	-	-107	-	dBc/Hz
	10KHz offset	-117	-	-117	-	-117	-	dBc/Hz
	100KHz offset	-125	-	-125	-	-125	-	dBc/Hz
	1MHz offset	-135	-	-135	-	-135	-	dBc/Hz
	20MHz offset	-150	-	-150	-	-150	-	dBc/Hz

Frequency Stability vs. Temperature

	±20PPM	±25PPM	±30PPM	±50PPM
-20°C to +70°C	Conditional	Available	Available	Available
-40°C to +85°C	Not Available	Conditional	Available	Available

Note: Inclusive of calibration @25°C, operating temperature range, input voltage variation, load variation, aging (1st year), shock and vibration.