

Typical Applications

Base Stations
 Test Equipment
 Telecom & Wireless Infrastructure
 Digital Switching

Features

5X7 Surface Mount Package
 Reflow Process Compatible Optional
 AC MOS, TTL and LVPECL

Previous Corning Model Numbers

MC025, MC031, MC034, and MC035

Frequency range

1.0 to 800.0 MHz (ACMOS/TTL available up to 125 MHz. LVPECL frequencies above 220 MHz are achieved through use of PLL multiplier)

Standard frequencies

19.44, 32.768, 44.736, 51.84, 77.76, 155.52, 622.08 MHz

Frequency stabilities¹

Parameter	Min	Typ	Max.	Units	Condition	Ordering Code ⁵
vs. operating temperature range (Referenced to +25°C)	0		+70	°C		C-xxx F-xxx
	-45		+85	°C		
Supply voltage change	-2		+2	ppm	V _s ± 5% Load ± 5%	
vs. load change	-1		+1	ppm		
vs. aging /1 Year	-5	±3	+5	ppm		
vs. aging / year (following Years)	-1		+1	ppm		

Supply voltage (Vs)

Parameter	Min	Typ	Max.	Units	Condition	Ordering Code ⁵
Supply voltage	4.75	5	5.25	VDC		SV050
Current consumption			15	mA	ACMOS/TTL 1.0 to 23.9 MHz	
			20	mA	ACMOS/TTL 24 to 49.9 MHz	
			40	mA	ACMOS/TTL 50 to 80.0 MHz	
			100	mA	LVPECL No load	
Supply voltage	3.135	3.3	3.465	VDC		SV033
Current consumption			6	mA	ACMOS 1.0 to 14.90 MHz	
			8	mA	ACMOS 15.0 TO 39.9 MHz	
			12	mA	ACMOS 40.0 TO 59.9 MHz	
			16	mA	ACMOS 60.0 TO 79.9 MHz	
			60	mA	ACMOS 80.0 to 125.0 MHz	
			100	mA	LVPECL No load	

RF output

Parameter	Min	Typ	Max.	Units	Condition	Ordering Code ⁵
Signal	ACMOS					RFA
Load		15	50	pF		
Signal Level (Vol)			0.5	VDC	Vs= 5.0V and 15pF load Vs=3.3V and 15pF load	
Signal Level (Voh)	4.5		0.3	VDC		
	3.0			VDC	Vs= 5.0V and 15pF load Vs=3.3V and 15pF load	
Rise and fall times for ACMOS (measured 10% to 90%)			10	ns	1.0 to 23.9 MHz	
			5	ns	24.0 to 79.9 MHz	
			3	ns	80.0 to 125.0MHz	
Duty cycle	45		55	%	@ 50% Vs < 15 MHz	
	40		60	%	@ 50% Vs ≥ 15 MHz	

Signal	TTL					RFT
Load			10		Vs= 5.0V and 15pF load	
Signal Level (Vol)			0.5	VDC		

Signal Level (Voh)	4.5			VDC	Vs= 5.0V and 15pF load 1.0 to 23.9 MHz 24 to 125 MHz @ 1.4V < 15 MHz @ 1.4V ≥ 15 MHz
Rise and fall times for TTL (measured 0.8V to 2.0V)			5 3	ns ns	
Duty Cycle	45 40		55 60	% %	
Signal	PECL/LVPECL			RFP	
Load			50	Ω	Into Vs-2V or Thevenin Equivalent
Signal Level (Vol)			Vs -1.62	VDC	
Signal Level (Voh)	Vs- 1.025			VDC	
Start-up Time			10	mS	
Rise and fall times (measured @ 20% to 80%)			1000 600	ps ps	<100 MHz ≥ 100 MHz
Duty cycle LVPECL	45 40		55 60	% %	@ 50% Vdd @ 50% Vdd
Jitter (rms)			5 1	ps ps	BW = 10Hz to 20 MHz BW = 12 kHz to 20 MHz
Period Jitter (pk-pk)			40	ps	10,000 samples- Rising edge

Frequency Tuning (EFC)

Parameter	Min	Typ	Max.	Units	Condition	Ordering Code
Absolute Pull Range		±30		ppm		AP033
		±50		ppm		AP050
Linearity		10	15	%		
Tuning Slope	Positive					
Control Voltage Range	0.5 0.3	2.5 1.65	4.5 3.0	VDC VDC	with Vs=5.0VDC with Vs=3.3VDC	

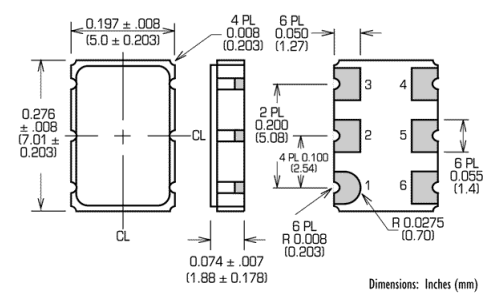
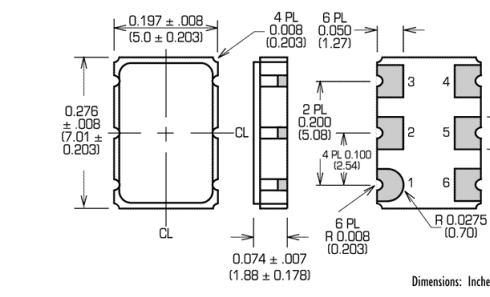
Additional parameters

Parameter	Min	Typ	Max.	Units	Condition	
Phase Noise ³			-60	dBc/Hz	10 Hz	Measured @ 52.00 MHz
			-90	dBc/Hz	100 Hz	
			-120	dBc/Hz	1 kHz	
			-140	dBc/Hz	10 kHz	
			-145	dBc/Hz	100 kHz	
			-50	dBc/Hz	10 Hz	
		-80	dBc/Hz	100 Hz		
		-110	dBc/Hz	1 kHz		
		-133	dBc/Hz	10 kHz		
			-145	dBc/Hz	100 kHz	
Weight				g		
Processing & Packing	Handling & processing note					
Output Enable ⁶	Logic "0" input = Outputs disabled (Tri-state) Logic "1" or floating input = Outputs enabled)				ACMOS/TTL Output	
	Logic "0" or floating input = Outputs enabled Logic "1" input = Outputs disabled (Tri-state)				PECL/LVPECL Output	
Weight			<2	g		
Processing & Packing	Handling & processing note					

Absolute Maximum Ratings

Parameter	Min	Typ	Max.	Units	Condition
Supply voltage (Vs)			7.0	V	Vs=5.0VDC
			7.0	V	Vs=3.3VDC
Operable temperature range	-55		+85	°C	
Storage temperature range	-55		+125	°C	

Enclosures

Type A - AC MOS/TTL			Type B - PECL/ LVPECL		
Package Codes:					
Code A1 E2 = Enable/Disable pin 2 X = N/C pin 2	Height "H" 1.88±0.178	Pin Length "L" N/A	Code B1 E2 = Enable/Disable pin 2 X = N/C pin 2	Height "H" 1.88±0.178	Pin Length "L" N/A
 <p>Dimensions: Inches (mm)</p>			 <p>Dimensions: Inches (mm)</p>		
<p>Pin Connections</p> <ol style="list-style-type: none"> Control Voltage Enable/Disable or N/C Ground (Case) RF Output N/C Supply Voltage 			<p>Pin Connections</p> <ol style="list-style-type: none"> Control Voltage Enable/Disable or N/C Ground (Case) RF Output Complementary Output Supply Voltage 		

How to Order this Product:

Step 1	Use this worksheet to forward the following information to your factory representative:				
Model	Supply Voltage Code	Output Code	APR Code	Package Code	Enable/Disable
C5250					

Example: C5250 SV050 RFA AP050 A1 E1

Step 2	The factory representative will then respond with a Corning Model Number in the following Configuration:		
Model	Package Code	Dash	Dash Number
C5250	[Customer Specified Package Code]	-	[Factory Generated 4 digit number]

Typical P/N C5250A1-001

Notes:

- 1 Contact factory for improved stabilities or additional product options. Not all options and codes are available at all frequencies.
- 2 Unless otherwise stated all values are valid after warm-up time and refer to typical conditions for supply voltage, frequency control voltage, load, temperature (25°C)
- 3 Phase noise degrades increasing output frequency.
- 4 Subject to technical modification.
- 5 Contact factory for availability.
- 6 Contact factory for other options.