

Electrical Performance

Parameter	Min.	Typ.	Max.	Units	Notes
Output frequency	38.88		212.50	MHz	As specified
Supply voltage	2.97	3.3	3.63	V	
Supply current		55	85	mA	≤ 50 MHz (enabled)
Supply current			0.03	mA	≤ 50 MHz (disabled)
Supply current		50	60	mA	> 50 MHz (enabled)
Supply current			15	mA	> 50 MHz (disabled)
Frequency stability			±25 to ±50	ppm	See Note 1 below
Operating temperature	-40		+85	°C	As specified
Output logic 0, V _{OL}			V _{CC} – 1.620	V	0 to +85°C
Output logic 0, V _{OL}			V _{CC} – 1.555	V	-40 to 0°C
Output logic 1, V _{OH}	V _{CC} – 1.025			V	0 to +85°C
Output logic 1, V _{OH}	V _{CC} – 1.085			V	-40 to 0°C
Output load	50Ω to V _{CC} – 2V				output requires termination
Duty cycle	45		55	%	measured 50% of waveform
Rise and fall time		500	850	ps	measured 20/80% of waveform
Jitter, phase			1	ps RMS (1-σ)	12kHz to 40MHz frequency band
Jitter, total			40	ps pk-pk	100,000 random periods

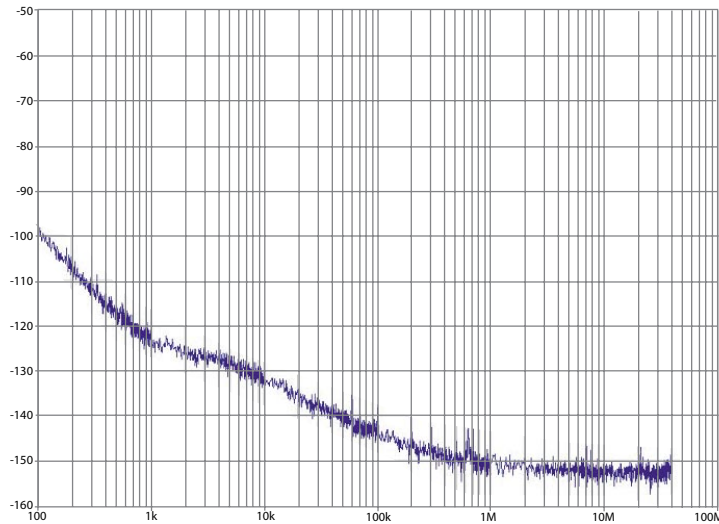
Notes:

- As specified. Stability includes all combinations of operating temperature, load changes, rated input (supply) voltage changes, initial calibration tolerance (25°C), aging (5 years at 40°C average effective ambient temperature), shock and vibration.

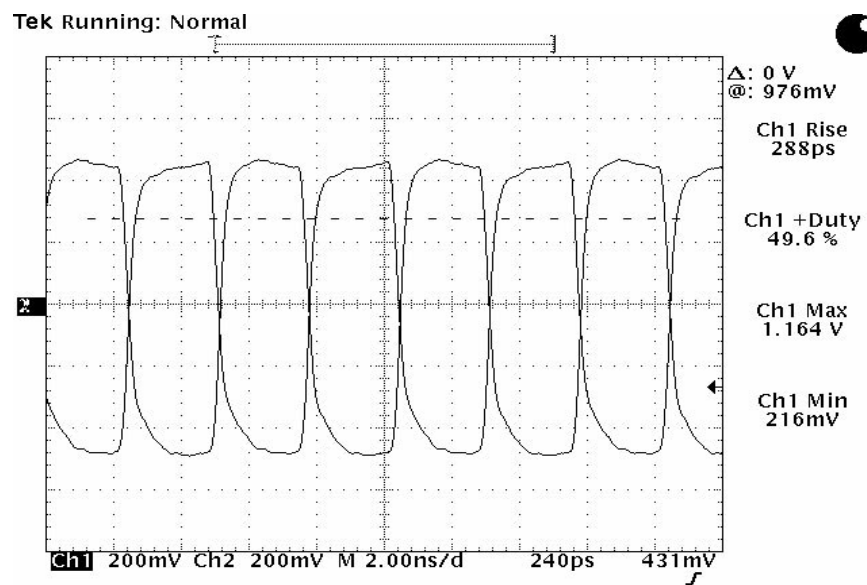
Output Enable / Disable Function

Parameter	Min.	Typ.	Max.	Units	Notes
Input Voltage (OE pin), Output Enable	2.2			V	or open
Input voltage (OE pin), Output Disable			0.8	V	Outputs disabled to Hi-Z
Internal Pull-up Resistance	50			kΩ	
Output disable delay			200	ns	
Output enable delay			10	ms	

Typical Phase Noise



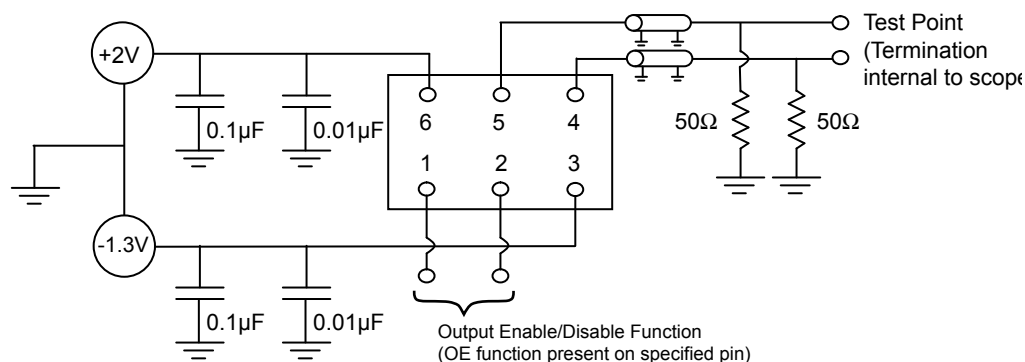
Typical Output Waveform



Absolute Maximum Ratings

Parameter	Min.	Typ.	Max.	Units	Notes
Storage temperature	-55		+125	°C	

Test Circuit

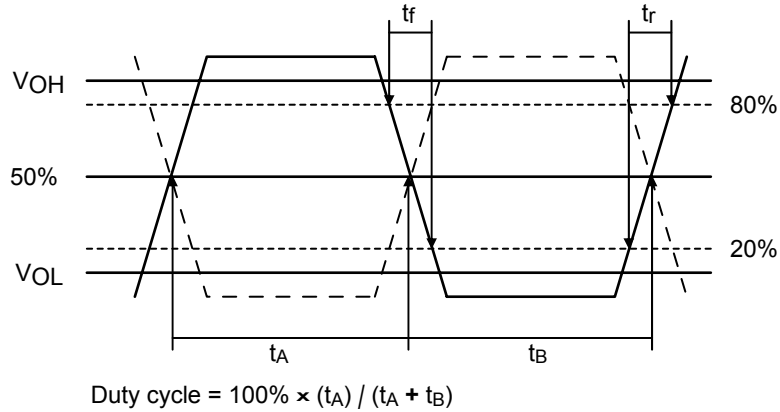


Reliability Test Ratings

This product is rated to meet the following test conditions:

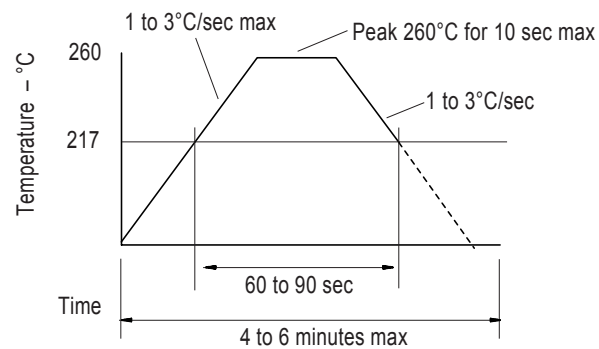
Type	Parameter	Test Condition
Mechanical	Shock	MIL-STD-883, Method 2002, Condition B
Mechanical	Solderability	JESD22-B102-D Method 2 (Preconditioning E)
Mechanical	Terminal strength	MIL-STD-883, Method 2004, Condition D
Mechanical	Gross leak	MIL-STD-883, Method 1014, Condition C
Mechanical	Fine leak	MIL-STD-883, Method 1014, Condition A2 ($R_1 = 2 \times 10^{-8}$ atm cc/s)
Mechanical	Solvent resistance	MIL-STD-202, Method 215
Environmental	Thermal shock	MIL-STD-883, Method 1011, Condition A
Environmental	Moisture resistance	MIL-STD-883, Method 1004
Environmental	Vibration	MIL-STD-883, Method 2007, Condition A
Environmental	Resistance to soldering heat	J-STD-020C Table 5-2 Pb-free devices (2 cycles max)

Output Waveform

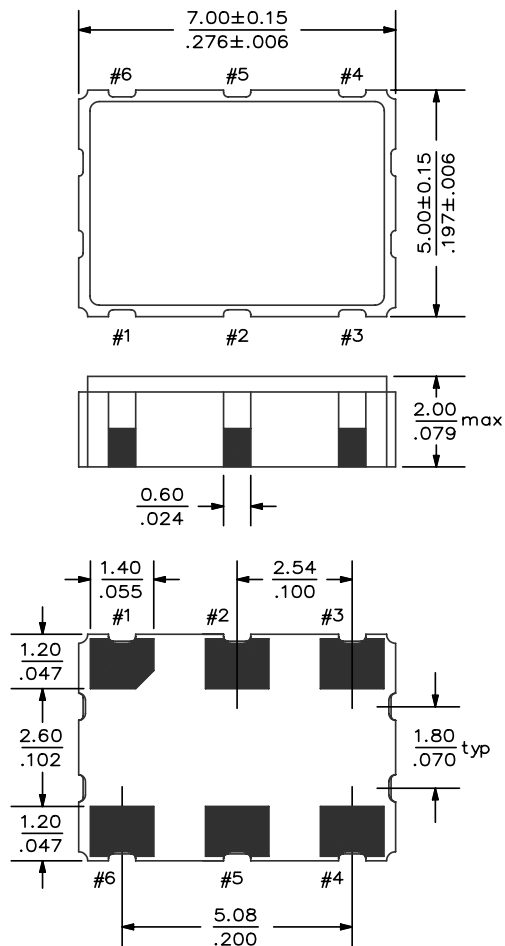


Reflow Soldering Profile

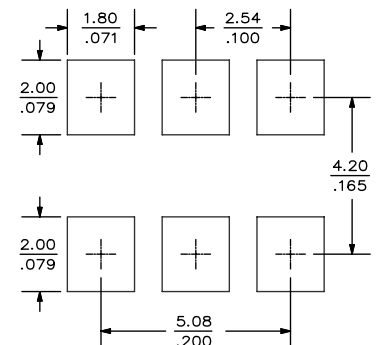
As per IPC/JEDEC J-STD-020C



Mechanical Drawings



Recommended Land Pattern*



*External high-frequency power decoupling is recommended. (see test circuit for minimum recommendation). To ensure optimal performance, do not route traces beneath the package.

Scale: None. Dimensions are in mm/inches.

Marking LINE 1: SEL383 X (SaRonix, Model, Stability code)
Marking LINE 2: Frequency (Frequency code)
Marking LINE 3: ● YY WW X (Pin 1, Year, Week, Origin)

**** Exact location of markings may vary**