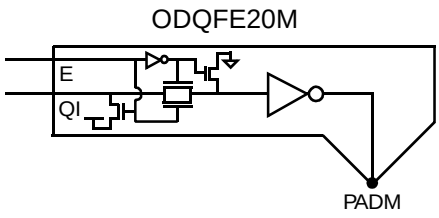
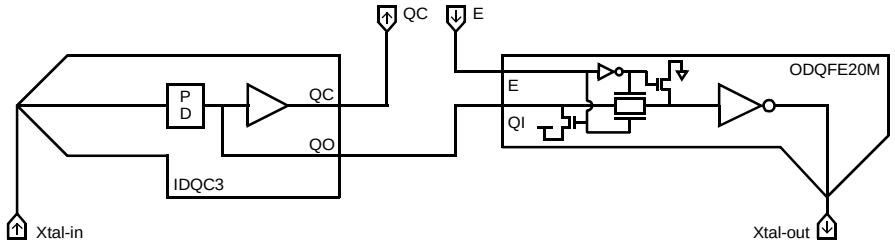
Description

ODQFE20M is a fundamental mode, enabled crystal oscillator, output buffer pad piece that runs over a frequency range of 1 MHz - 20 MHz. QI is the input from IDQC3. E is the oscillator high input enable. PADM is the bond pad to the Xtal-out.

Logic Symbol



Logic Schematic



Truth Table

PADM	E	QI
H	L	X
H	H	L
L	H	H

Pin Loading

	Load
E	6.5 eql
QI	5.5 eql

Pad Logic

HDL Syntax

Verilog ..... ODQFE20M *inst_name* (PADM, E, QI);

VHDL..... *inst_name*: ODQFE20M port map (PADM, E, QI);

Power Characteristics

Parameter	Value	Units
Static I_{DD} (T_J = 85°C)	TBD	nA
EQL_{pd}	165.4	Eq-load

See page 2-15 for power equation.

AMI5HG 0.5 micron CMOS Gate Array

Propagation Delays

Conditions: T_J = 25°C, V_{DD} = 5.0V, Typical Process

Delay (ns) From	To	Parameter	Capacitive Load (pF) 15	50	75	100	150 (max)
E	PADM	t_{PLH} t_{PHL}	3.40 2.46	7.03 6.17	9.59 8.85	12.18 11.53	17.46 16.78
QI	PADM	t_{PLH} t_{PHL}	2.40 2.51	6.00 6.18	8.60 8.81	11.21 11.46	16.40 16.80

Delay will vary with input conditions. See page 2-17 for interconnect estimates.

Design Notes:

The ODQFE20M is the output cell of a two cell oscillator circuit. The QI pin is to be connected the QO pin of the IDQC3 oscillator input receiver piece. Two package pins are required to create a complete oscillator.