start ::= qreg(n)

qreg(n) ::= creg(n)

for each i in qreg(n):

qubit_i ::= 1_q_op | 2_q_op | 3_q_op | general_op

1_q_op ::= HGATE | IGATE | PHASEGATE | RXGATE | RYGATE | RZGATE | SGATE | SDGGATE | SXGATE | SXDGGATE | TGATE | TDGGATE | UGATE | U1GATE | U2GATE | XGATE | YGATE | ZGATE | NOGATE

2_q_op ::= CHGATE | CPHASEGATE | CRXGATE | CRYGATE | CRZGATE | CSGATE | CSDGGATE | CSXGATE | CUGATE | CXGATE | CYGATE | CZGATE | DCXGATE | ISWAPGATE | RXXGATE | RYYGATE | RZZGATE | SWAPGATE

3_q_op ::= CCZ | …

general_op ::= diagonal | permutation | …

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*Validity determined by OpenQASM 2.0 intermediary for ZX-Calculus application

Unsupported operations:

- RGATE
- ECRGATE
- RYYGATE
- RZXGATE
- RYYGATE
- XXMinusYYGate
- XXPlusYYGate

Unapplicable operations:

- U3GATE was replaced by UGATE
- CU1GATE was replaced by CPHASEGATE
- CU3GATE was replaced by CUGATE