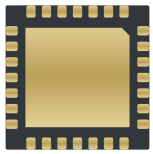
1200–1400 MHz Digital Phase Shifter IC — 6-bit; RMS 0.7° (typical)

LCI-PS-1200-1400-6B-C · 1200–1400 MHz · Digital Phase Shifter IC.



The RF table specifies: 64-state RMS phase error 0.7 ° (typical); Phase-induced amplitude variation ±0.5 dB (typical); Input VSWR 1.4 (typical); Output VSWR 1.4 (typical). RF test conditions: TA = +25 °C.

QFN28 6 × 6 mm

The RF ports require external DC-blocking capacitors.

φref: P1 = -5 V, P2 = 0 V, P3 = -5 V, P4 = 0 V, P5 = -5 V, P6 = 0 V, P7 = -5 V, P8 = 0 V, P9 = -5 V, P10 = 0 V, P11 = -5 V, P12 = 0 V

P1 = 0 V; P2 = -5 V → Δφ = 5.625°

P3 = 0 V; P4 = -5 V → Δφ = 11.25°

P5 = 0 V; P6 = -5 V → Δφ = 22.5°

P7 = 0 V; P8 = -5 V → Δφ = 45°

P9 = 0 V; P10 = -5 V → Δφ = 90°

P11 = 0 V; P12 = -5 V → Δφ = 180°

T_peak ≤ 260 °C

RF: 3, 19

P1: 16

P2: 15

P3: 14

P4: 13

P5: 12

P6: 11

P7: 10

P8: 9

P9: 8

P10: 7

P11: 6

P12: 5

Package outline dimensions: 6 × 6 × 0.75 mm.

RF characteristics TA = +25 °C

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Operating frequency	f	1200	-	1400	MHz
Phase shift range	-	5.625	-	354.375	°
Insertion loss	-	-	-5.4	-	dB
64-state RMS phase error	-	-	0.7	-	°
Phase-induced amplitude variation	-	-	±0.5	-	dB
Input VSWR	-	-	1.4	-	-
Output VSWR	-	-	1.4	-	-

DC bias and current TA = +25 °C

Parameter	Symbol	Minimum	Typical	Maximum	Value	Unit
Control voltages (V < 0)	-	-	-	-	-5	V
Control voltages (0 V)	-	-	-	-	0	V

Package outline dimensions

Parameter	Value	Unit
Package outline dimensions	6 × 6 × 0.75	mm

Pin assignments

Symbol	Pins	Function
GND	2,4,18,20	Ground
NC	1,17,21,22,23,24,25,26,27,28	Not connected

Control truth table — P1–P6

State	P1	P2	P3	P4	P5	P6
Reference state	-5V	0V	-5V	0V	-5V	0V
5.625°	0V	-5V	-5V	0V	-5V	0V
11.25°	-5V	0V	0V	-5V	-5V	0V
22.5°	-5V	0V	-5V	0V	0V	-5V
45°	-5V	0V	-5V	0V	-5V	0V
90°	-5V	0V	-5V	0V	-5V	0V

Control truth table — P1–P6

State	P1	P2	P3	P4	P5	P6
180°	-5V	0V	-5V	0V	-5V	0V

Control truth table — P7–P12

State	P7	P8	P9	P10	P11	P12
Reference state	-5V	0V	-5V	0V	-5V	0V
5.625°	-5V	0V	-5V	0V	-5V	0V
11.25°	-5V	0V	-5V	0V	-5V	0V
22.5°	-5V	0V	-5V	0V	-5V	0V
45°	0V	-5V	-5V	0V	-5V	0V
90°	-5V	0V	0V	-5V	-5V	0V
180°	-5V	0V	-5V	0V	0V	-5V

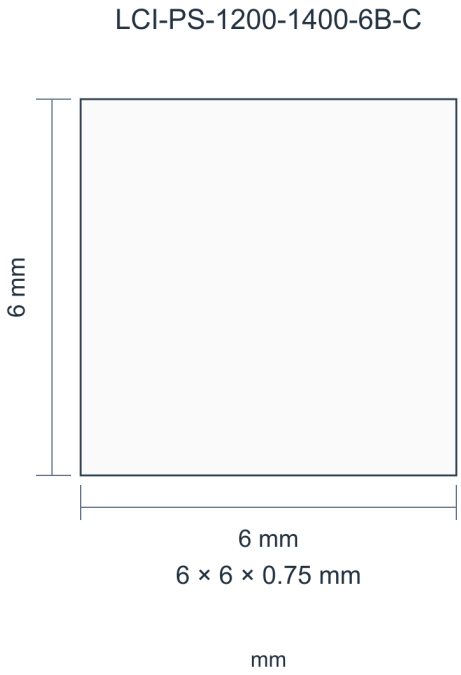
Current publication record · 1.3 · 2026-11-12. Product description or editorial content updated. Replaces revision 1.2.

Integration notes

QFN28 6 × 6 mm The RF ports require external DC-blocking capacitors. φref: P1 = -5 V, P2 = 0 V, P3 = -5 V, P4 = 0 V, P5 = -5 V, P6 = 0 V, P7 = -5 V, P8 = 0 V, P9 = -5 V, P10 = 0 V, P11 = -5 V, P12 = 0 V P1 = 0 V; P2 = -5 V → Δφ = 5.625° P3 = 0 V; P4 = -5 V → Δφ = 11.25° P5 = 0 V; P6 = -5 V → Δφ = 22.5° P7 = 0 V; P8 = -5 V → Δφ = 45° P9 = 0 V; P10 = -5 V → Δφ = 90° P11 = 0 V; P12 = -5 V → Δφ = 180° T_peak ≤ 260 °C RF: 3, 19 P1: 16 P2: 15 P3: 14 P4: 13 P5: 12 P6: 11 P7: 10 P8: 9 P9: 8 P10: 7 P11: 6 P12: 5

Mechanical Outline

Reference drawing showing selected dimensions in mm. Use the complete installation drawing for mounting.



Document notice

Specifications are subject to revision. Before design release, confirm the current document revision and product-specific requirements with LCRF. The approved quotation and order documentation define the supplied configuration.