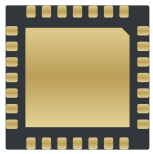
900–1400 MHz Digital Phase Shifter IC — 6-bit; RMS 1.5° (typical)

LCI-PS-900-1400-6B-C · 900–1400 MHz · Digital Phase Shifter IC.



The RF table specifies: 64-state RMS phase error 1.5 ° (typical); Phase-induced amplitude variation ±0.4 dB (typical); Input VSWR 1.5 (typical); Output VSWR 1.4 (typical). RF test conditions: TA = +25 °C.

QFN28 6 × 6 mm

The RF ports require external DC-blocking capacitors.

TTL: H = 5 V; L = 0 V; φref: P1–P6 = L

P1 = H → Δφ = 5.625°

P2 = H → Δφ = 11.25°

P3 = H → Δφ = 22.5°

P4 = H → Δφ = 45°

P5 = H → Δφ = 90°

P6 = H → Δφ = 180°

T_peak ≤ 260 °C

RF: 4, 18

VEE: 8, 15

P1: 9

P2: 10

P3: 11

P4: 12

P5: 13

P6: 14

Package outline dimensions: 6 × 6 × 0.75 mm.

RF characteristics TA = +25 °C

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Operating frequency	f	900	-	1400	MHz
Phase shift range	-	5.625	-	354.375	°
Insertion loss	-	-	-5.4	-	dB
64-state RMS phase error	-	-	1.5	-	°
Phase-induced amplitude variation	-	-	±0.4	-	dB

RF characteristics TA = +25 °C

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Input VSWR	-	-	1.5	-	-
Output VSWR	-	-	1.4	-	-

DC bias and current TA = +25 °C

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Negative supply voltage	-	-5.3	-5	-4.7	V
Negative-supply quiescent current	-	-	0.003	-	A
Input drive current [1]	-	-	0.0002	-	A
High-level input voltage	-	4	-	5	V
Low-level input voltage	-	0	-	0.4	V

[1] VIH = 5 V; TTL

Package outline dimensions

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

Pin assignments

Symbol	Pins	Function
GND	3,5,17,19	Ground
NC	1,2,6,7,16,20,21,22,23,24,25,26,27,28	Not connected

Control truth table

State	P1	P2	P3	P4	P5	P6
Reference state	L	L	L	L	L	L
5.625°	H	L	L	L	L	L
11.25°	L	H	L	L	L	L
22.5°	L	L	H	L	L	L
45°	L	L	L	H	L	L
90°	L	L	L	L	H	L
180°	L	L	L	L	L	H

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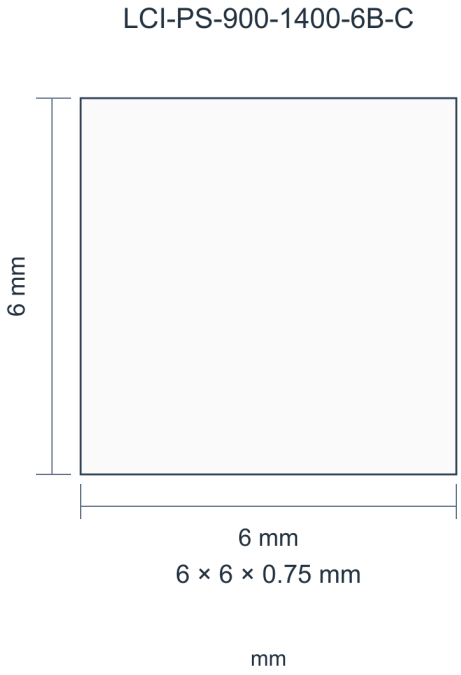
Integration notes

QFN28 6 × 6 mm The RF ports require external DC-blocking capacitors. TTL: H = 5 V; L = 0 V; φref: P1–P6 = L P1 = H → Δφ = 5.625° P2 = H → Δφ = 11.25° P3 = H → Δφ = 22.5° P4 = H → Δφ = 45° P5 = H → Δφ = 90° P6 = H → Δφ = 180° T_peak ≤ 260 °C RF: 4, 18 VEE: 8, 15 P1: 9 P2: 10 P3: 11 P4: 12 P5: 13 P6: 14

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.