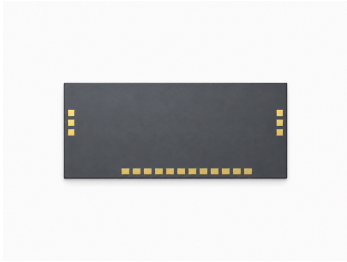


1200–1400 MHz 6-Bit GaAs MMIC Digital Phase Shifter Die

RMS phase error: 0.5 ° (minimum) / 0.7 ° (typical) / 1 ° (maximum); Phase shift range: 5.625 ° (minimum) / 354.375 ° (maximum); Insertion loss: ≈5 dB. Die dimensions: 4 × 1.7 × 0.1 mm.



RF characteristics · TA = +25 °C

Parameter	Symbol	Minimum	Typical	Maximum	Value	Unit
Operating frequency	-	1200	-	1400	1200–1400	MHz
Phase shift range	-	5.625	-	354.375	-	°
RMS phase error	-	0.5	0.7	1	-	°
Phase-induced amplitude variation	-	-	±0.5	-	-	dB
Input VSWR	-	-	1.4	-	-	-
Output VSWR	-	-	1.4	-	-	-
Insertion loss	-	-	-	-	≈5	dB

DC bias and current

Parameter	Symbol	Minimum	Typical	Maximum	Value	Unit
Control voltage	-	-	-	-	0 / -5	V
Phase step	-	-	-	-	5.625	°

Absolute limits

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Maximum input power	-	-	-	20	dBm

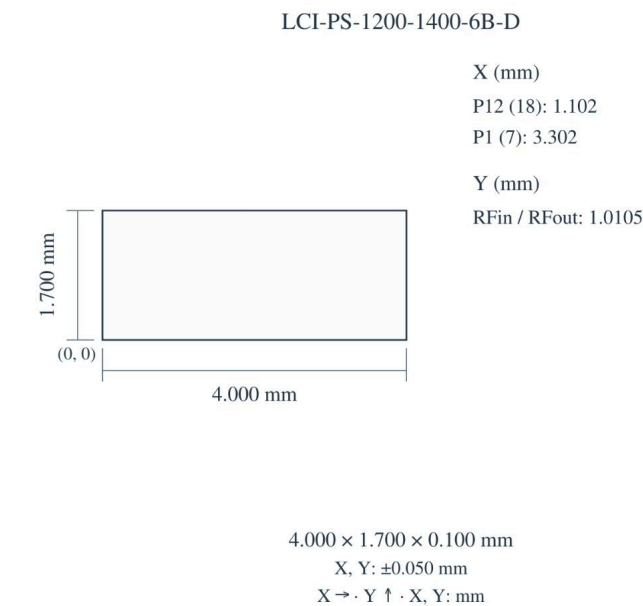
Environmental specifications

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Storage temperature	-	-65	-	150	°C
Operating temperature	-	-55	-	85	°C

Die dimensions

Parameter	Value	Unit
Die dimensions	$4 \times 1.7 \times 0.1$	mm

Mechanical Outline



All dimensions are in mm [in].

Bond-pad assignments

Pins	Symbol	Function	Notes
1, 3, 4, 6	GND	Ground; no wire bond required	-
2	RF_in	RF input	-
5	RF_out	RF output	-
7	P1	Phase control	5.625°; 0 / -5 V
8	P2	Phase control	5.625°; 0 / -5 V
9	P3	Phase control	11.25°; 0 / -5 V
10	P4	Phase control	11.25°; 0 / -5 V
11	P5	Phase control	22.5°; 0 / -5 V
12	P6	Phase control	22.5°; 0 / -5 V
13	P7	Phase control	45°; 0 / -5 V
14	P8	Phase control	45°; 0 / -5 V
15	P9	Phase control	90°; 0 / -5 V
16	P10	Phase control	90°; 0 / -5 V
17	P11	Phase control	180°; 0 / -5 V

Bond-pad assignments

Pins	Symbol	Function	Notes
18	P12	Phase control	180°; 0 / -5 V

Control truth table

State	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12
Reference state	-5 V	0 V	-5 V	0 V	-5 V	0 V	-5 V	0 V	-5 V	0 V	-5 V	0 V
5.625°	0 V	-5 V	-5 V	0 V	-5 V	0 V	-5 V	0 V	-5 V	0 V	-5 V	0 V
11.25°	-5 V	0 V	0 V	-5 V	-5 V	0 V	-5 V	0 V	-5 V	0 V	-5 V	0 V
22.5°	-5 V	0 V	-5 V	0 V	0 V	-5 V	-5 V	0 V	-5 V	0 V	-5 V	0 V
45°	-5 V	0 V	-5 V	0 V	-5 V	0 V	0 V	-5 V	-5 V	0 V	-5 V	0 V
90°	-5 V	0 V	-5 V	0 V	-5 V	0 V	-5 V	0 V	0 V	-5 V	-5 V	0 V
180°	-5 V	0 V	-5 V	0 V	-5 V	0 V	-5 V	0 V	-5 V	0 V	0 V	-5 V

Mechanical reference scope

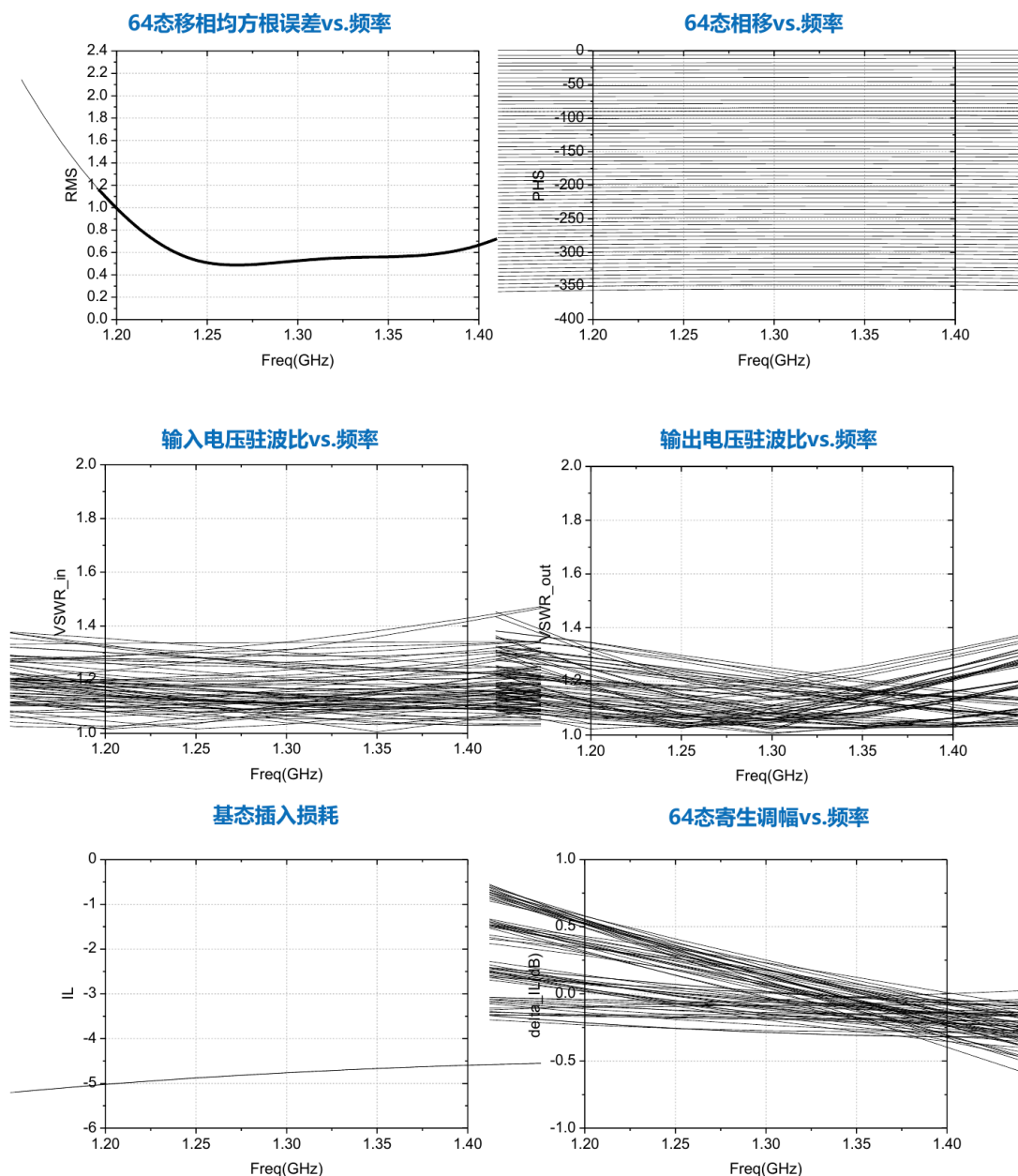
Source-based dimensional guide in mm. Partial information; not a complete fabrication or wire-bonding drawing.

Performance curves

Plots from the source datasheet. Read each figure with its stated operating conditions.

Insertion loss; Input matching; Output matching; Phase shift; RMS phase error; Phase-induced amplitude variation.

典型曲线



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.