

DATA SHEET

# HY22-73, HY22-73LF: 90-Degree Hybrid 2.1–2.3 GHz

## Features

- Low cost
- Low profile
- Small SOT-6 package
- Available on tape and reel
- Available lead (Pb)-free and RoHS-compliant MSL-1 @ 260 °C per JEDEC J-STD-020

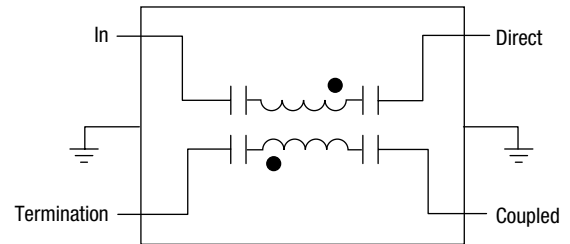
## Description

The HY22-73 is a 50 Ω, 90-degree hybrid tuned for the 2.1–2.3 GHz band. The monolithic circuitry is 100% passive and offers low loss, high isolation and exceptional phase/amplitude balance. It is available in the SOT-6 surface mount package. HY22-73LF is packaged in a lead (Pb)-free, fully RoHS-compliant SOT-6 package and is electrically identical to HY22-73.

**NEW** Skyworks offers lead (Pb)-free, RoHS (Restriction of Hazardous Substances)-compliant packaging.



## Block Diagram

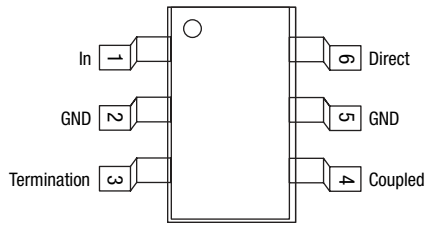


## Electrical Specifications at 25 °C

**Z<sub>0</sub> = 50 Ω, unless otherwise noted**

Parameter	Frequency	Min.	Typ.	Max.	Unit
Frequency		2.1		2.3	GHz
Insertion loss less 3 dB split			0.55	0.7	dB
Isolation		20	23		dB
Input VSWR			1.2:1	1.5:1	
Output VSWR			1.2:1	1.5:1	
Amplitude balance			±0.4	±1.1	dB
Phase balance			±2	±4	Deg.

### Pin Out

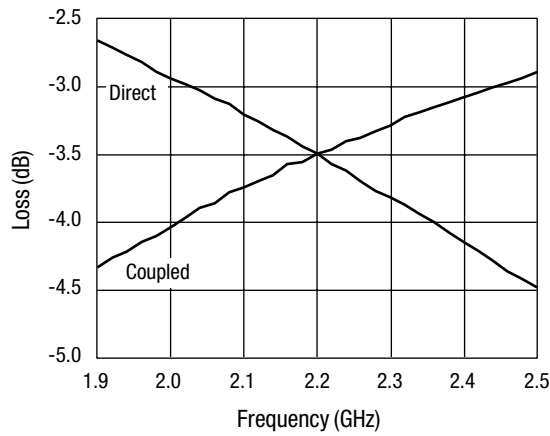


The Pin Out diagram shows the HY22-73 configured for a divider/coupler with Pin 1 as the input port and a 50 Ω termination to be placed at Pin 3. Since the HY22-73 is symmetric, any nonground pin may be used as the input port. The following table shows the possible pin connection combinations for the HY22-73 used as a divider/coupler:

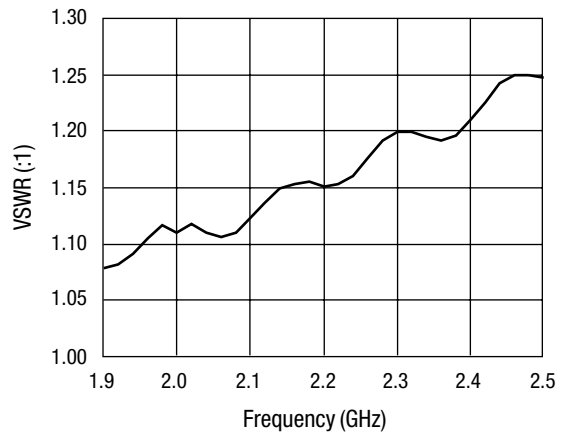
Input	Termination	Direct	Coupled
Pin 1	Pin 3	Pin 6	Pin 4
Pin 3	Pin 1	Pin 4	Pin 6
Pin 4	Pin 6	Pin 3	Pin 1
Pin 6	Pin 4	Pin 1	Pin 3

### Typical Performance Data

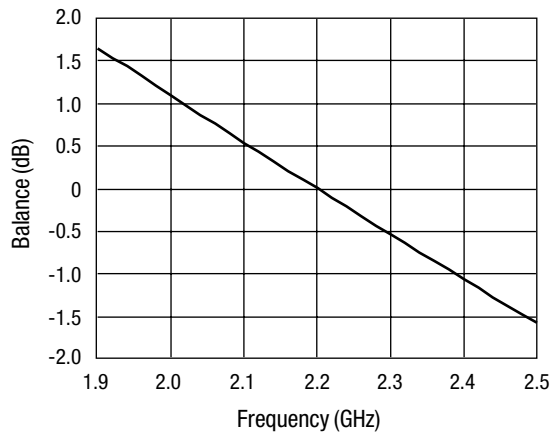
$Z_0 = 50 \Omega$ , unless otherwise noted



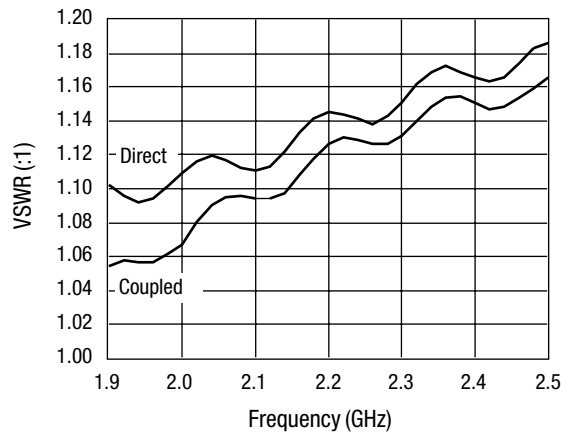
Path Losses vs. Frequency



Input VSWR vs. Frequency



Amplitude Balance vs. Frequency



Output VSWR vs. Frequency



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