

## RF Passive Devices Designer Kit

### The Easier, Faster Way to Design Quality RF Solutions

Skyworks Solutions is committed to making your RF designs easier than ever. This sample kit has 20 pieces of some of our most popular products and some of our newest products. Also included is a CD of our data sheets and application notes.

We have a long history of providing high-quality RF components for a diversified set of wireless communications applications. We build GaAs and Si discrete devices including amplifiers, switches, attenuators, diodes, power dividers, filters, and more.

We've made it easy to order our parts, too. Once you find the right products for your design, simply go to our online store to purchase your prototype volumes.



**Buy Now** Innovation to Go™ Select products are now available for purchase online.

To keep up with all of the newest products, visit the Skyworks website at [www.skyworksinc.com](http://www.skyworksinc.com).

For more information on higher volumes, large volume quotes, or technical questions, contact your local sales representative or email us at [sales@skyworksinc.com](mailto:sales@skyworksinc.com).

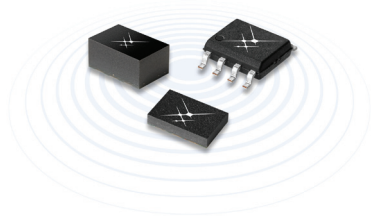




## Voltage Variable Attenuators

### Features

- Attenuation ranges up to 25 dB
- Either broadband performance or high IP3
- High IP3 with 1.5 dB min. insertion loss
- All available lead (Pb)-free, RoHS-compliant



Skyworks offers over 10 attenuators for varied RF applications. These products are fabricated in our Silicon facility and packaged in industry-standard plastic surface mount packages.

## Attenuators

Part Number	Frequency (GHz)	Description	Insertion Loss at Min. Control (dB) Max.	Attenuation Range at Max. Control (dB) Typ.	Input IP3 (dBm) Min.	Control Input Range	Package (mm)
<b>SKY12143-315</b>	0.869–0.894 0.925–0.960	HIP3™ Variable Attenuator	1.5	23	43	0–12 V	LGA Surface Mount
<b>SKY12144-315</b>	1.805–1.870 1.930–1.990	HIP3™ Variable Attenuator	1.5	23	43	0–12 V	LGA Surface Mount
<b>SKY12145-315</b>	2.110–2.170	HIP3™ Variable Attenuator	1.5	23	43	0–12 V	LGA Surface Mount

## Passives

### Features

- Directional couplers
  - Low loss
  - Good isolation and input/output matching
  - Exceptional repeatability
- Directional detectors
  - Detects input signal amplitude
  - Includes temperature compensation diode
- 90° Hybrids
  - Low loss
  - High isolation
  - Exceptional phase/amplitude balance
- Power dividers/combiners
  - 2-way and 4-way in-phase dividers/combiners
  - Low loss
  - High isolation
  - Exceptional phase/amplitude balance
- Phase Shifters
  - 100 degree phase shift
  - High IP3
  - Low loss



Skyworks offers more than 25 plastic-packaged passive components for all RF applications.

All products are available in RoHS-compliant packages. These products are also used in combination with our active components to create integrated devices.

## Directional Couplers

Part Number	Frequency (GHz)	Insertion Loss (dB) Typ.	Isolation (dB) Typ.	Input VSWR Typ.	Output VSWR Typ.	Coupling (dB) Typ.	Coupled Port VSWR Typ.	Package
DC09-73LF	0.81–0.96	0.20	30	1.1:1	1.1:1	19.8	1.1:1	SOT-6
DC15-73LF	1.42–1.66	0.20	34	1.1:1	1.1:1	18.4	1.1:1	SOT-6
DC18-73LF	1.71–1.99	0.20	38	1.1:1	1.1:1	18.8	1.2:1	SOT-6
DC25-73LF	2.30–2.60	0.20	33	1.1:1	1.1:1	17.2	1.3:1	SOT-6

## Directional Detector

Part Number	Frequency (GHz)	Insertion Loss (dB) Typ.	Directivity (dB)	Input VSWR Typ.	Output VSWR Typ.	Directed Output Voltage (dBm)	Package
DD02-999LF	0.65–3.0	0.2	2	1.1:1	1.1:1	80 mV @ 900 MHz 160 mV @ 1800 MHz	SC-88

## 90-Degree Hybrid Couplers

Part Number	Frequency (GHz)	Insertion Loss (dB) Typ.	Isolation (dB) Typ.	Input VSWR Typ.	Output VSWR Typ.	Amplitude Balance (Degrees) Typ.	Phase Balance (dB) Typ.	Package
HY92-12LF	0.88–0.96	0.40	25	1.1:1	1.1:1	±0.5	±1	SOIC-8
HY19-12LF	1.85–1.99	0.50	20	1.3:1	1.3:1	±0.5	±1	SOIC-8
HY17-12LF	1.71–1.88	0.50	20	1.2:1	1.2:1	±0.5	±1	SOIC-8

## Power Dividers—2 Way

Part Number	Frequency (GHz)	Insertion Loss Less 3 dB Split Typ.	Isolation (dB) Typ.	Input VSWR Typ.	Output VSWR Typ.	Amplitude Balance (dB)	Phase Balance (Deg.) Typ.	Total Max. Power w/2.0:1 All Ports	Package
PD09-73LF	0.81–0.96	0.40	25	1.2:1	1.3:1	±0.1	±1.0	1.5 W	SOT-6
PD18-73LF	1.71–1.99	0.40	23	1.3:1	1.2:1	±0.1	±1.0	1.5 W	SOT-6
PD22-73LF	2.10–2.30	0.55	18	1.5:1	1.1:1	±0.1	±1.0	1.5 W	SOT-6

## Power Dividers—4 Way

Part Number	Frequency (GHz)	Insertion Loss Less 6 dB Split Typ.	Isolation (dB) Typ.	Input VSWR Typ.	Output VSWR Typ.	Amplitude Balance (dB)	Phase Balance (Deg.) Typ.	Total Max. Power w/2.0:1 All Ports	Package
PD4W18-12LF	1.71–1.99	0.7	25	1.6:1	1.2:1	±0.3	±5	1.5 W	SOIC-8
PD4W18-59LF	1.71–1.99	0.7	25	1.3:1	1.3:1	±0.3	±5	1.5 W	MSOP-8

## Phase Shifters

Part Number	Frequency (MHz)	Description	Insertion Loss (dB) Max.	Phase Shift (Deg.) Min.	IP3 (dBm) Min.	Control Voltage Range (V)	Package (mm)
PS088-315	700–1100	Voltage Controlled Phase Shifter	2.3	100	33.0	0–12	LGA
PS094-315	700–1250	Voltage Controlled Phase Shifter	2.3	100	33.0	0–12	LGA
PS196-315	1800–3000	Voltage Controlled Phase Shifter	2.3	100	33.0	0–12	LGA
PS214-315	1700–2800	Voltage Controlled Phase Shifter	2.3	100	33.0	0–12	LGA

