

Bi-Directional Coupler

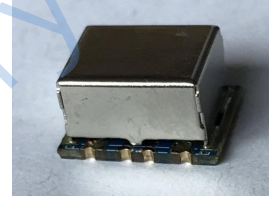
HT-SYDC-20-62HP

Features

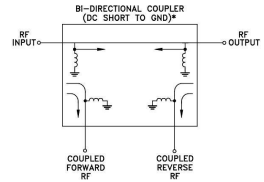
- wideband, 10 to 540 MHz
- low mainline loss, 0.2 dB typ.
- good return loss, 26 dB typ.
- high power handling, 25 Watt max.

Applications

- military mobile



50Ω 20 dB Coupling



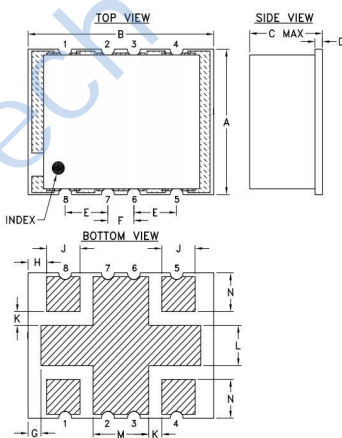
Transformer Electrical Specifications

| Freq. range (MHz) | Mainline Loss | | Nominal Coupling | Directivity | | Return Loss |
|-------------------|---------------|-----|------------------|-------------|-----|-------------|
| | Typ | max | | Typ | max | |
| 10-540 | 0.2 | 0.6 | 19.8±0.5 | 16 | 26 | 26 |

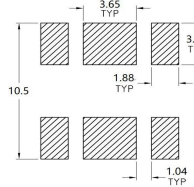
Typical Performance Data

| Freq. (MHz) | Mainline Loss (dB) In-Out | Coupling(dB) | | Directivity(dB) | | Return Loss(dB) | | | |
|-------------|---------------------------|--------------|---------|-----------------|--------|-----------------|-------|---------|---------|
| | | in-cpl | out-cpl | out-cpl | in-cpl | In | Out | Cpl-Fwd | Cpl-Rev |
| 10.0 | 0.08 | 20.20 | 20.14 | 27.39 | 27.16 | 24.12 | 24.24 | 23.90 | 23.97 |
| 50.0 | 0.15 | 20.26 | 20.16 | 47.58 | 47.12 | 35.06 | 35.95 | 33.45 | 33.81 |
| 100.0 | 0.16 | 20.28 | 20.19 | 34.70 | 43.72 | 35.11 | 35.24 | 32.06 | 31.68 |
| 150.0 | 0.17 | 20.26 | 20.20 | 30.36 | 36.64 | 34.22 | 34.18 | 30.65 | 29.81 |
| 200.0 | 0.18 | 20.21 | 20.20 | 27.57 | 33.63 | 33.40 | 32.58 | 29.07 | 28.15 |
| 250.0 | 0.19 | 20.15 | 20.18 | 25.43 | 31.10 | 32.59 | 31.71 | 27.53 | 26.81 |
| 350.0 | 0.21 | 19.95 | 20.10 | 22.53 | 26.74 | 30.67 | 29.41 | 25.30 | 24.70 |
| 400.0 | 0.23 | 19.83 | 20.04 | 21.54 | 25.36 | 30.25 | 28.81 | 24.24 | 23.73 |
| 500.0 | 0.25 | 19.49 | 19.87 | 19.74 | 21.71 | 28.06 | 26.60 | 22.44 | 22.13 |
| 540.0 | 0.27 | 19.34 | 19.75 | 18.90 | 20.49 | 27.68 | 26.47 | 21.81 | 21.46 |

Outline Drawing



PCB Land Pattern



Suggested L ayout, Tolerance to be within ±0.05mm

| Pin Connections | |
|-----------------|---------|
| Input | 8 |
| Output | 1 |
| Forward | 5 |
| Reverse | 4 |
| Ground | 2,3,6,7 |

Maximum Ratings

| | |
|-----------------------------|----------------|
| Operating Temperature | -20°C to 85°C |
| Storage Temperature | -55°C to 100°C |
| Power Input (as a splitter) | 25W max. |

Case temperature is defined as temperature on ground leads.
Permanent damage may occur if any of these limits are exceeded.

Outline Dimensions: Unit (mm)

| | | | |
|---|-------|---|------|
| A | 9.65 | H | 1.27 |
| B | 12.70 | N | 2.41 |
| C | 6.93 | M | 3.56 |
| D | 1.00 | J | 2.29 |
| E | 2.92 | K | 1.02 |
| F | 1.78 | L | 2.67 |
| G | 0.89 | P | |

