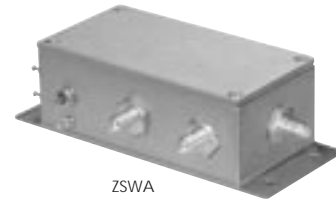


SP4T WITH TTL Drivers DC to 3 GHz



GSWA



ZSWA

| MODEL NO. | FREQ. (GHz) $f_L - f_U$ | TTL DRIVER | ABSORPTIVE | REFLECTIVE | INSERTION LOSS (dB) | | | | | | 1 dB COMPRESSION (dBm) | | | | | | IN-OUT ISOLATION (dB) | | | | | | CASE STYLE | CONNECTION | PRICE \$ Qty. (1-9) |
|---------------|----------------------------|------------|------------|------------|---------------------|-----|-----|-----|------|-----|------------------------|---|----|---|----|---|-----------------------|----|----|----|----|----|------------|------------|------------------------|
| | | | | | frequency band | | | | | | frequency band | | | | | | frequency band | | | | | | | | |
| | | | | | A | B | C | A | B | C | A | B | C | A | B | C | A | B | C | | | | | | |
| ◆ GSWA-4-30DR | DC-3 | ● | ● | | 1.25 | 1.8 | 2.0 | 3.0 | 2.75 | 3.9 | 22 | — | 28 | — | 28 | — | 50 | 40 | 37 | 32 | 31 | 26 | AN213 | hb | 19.95 |
| ZSWA-4-30DR | DC-3 | ● | ● | | 1.0 | 1.8 | 1.5 | 3.0 | 2.0 | 3.9 | 22 | — | 28 | — | 28 | — | 50 | 40 | 37 | 32 | 31 | 26 | CV665 | mn | 119.95 |

A = DC to 500MHz

B = 500MHz to 2000MHz

C = 2000MHz to 3000MHz

features

- excellent repeatability, specification limits
4.5σ typical from mean
- high isolation
- low video break thru, 30 mVP-P typical
- low DC power consumption, 120mW typical

control logic, all models

| Model Series | Control Ports | | | | RF outputs | | | |
|--------------|---------------|------|------|------|------------|-----|-----|-----|
| | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
| GSWA, ZSWA | Low | High | High | High | On | Off | Off | Off |
| | High | Low | High | High | Off | On | Off | Off |
| | High | High | Low | High | Off | Off | On | Off |
| | High | High | High | Low | Off | Off | Off | On |
| ZFSW, ZFSWA | -v | 0 | — | — | On | Off | — | — |
| | 0 | -v | — | — | Off | On | — | — |
| ZYSW, ZYSWA | Low | — | — | — | On | Off | — | — |
| | High | — | — | — | Off | On | — | — |

NOTES:

- ◆ Aqueous washable.
- ▲ Available with SMA connectors
Moisture Resistance of models on this page is not guaranteed.
- Non-hermetic
- ★ 1.8 dB max. up to 3 GHz, 2.8 dB max. 3-4.6 GHz.
- A. Environmental specifications and re-flow soldering information available in General Information Section.
- B. Connector types and case mounted options, case finishes are given in section 0, see "Case styles & outline drawings".
- C. Prices and Specifications subject to change without notice.
- 1. Absolute maximum RF power input ratings.

| Models | Power, dBm | | | | |
|-----------------------|------------|---------|----------|-----------|-----------|
| | DC-100 | 100-500 | 500-2000 | 2000-3000 | 3000-5000 |
| ZSWA/GSWA-4-30DR | | | | | |
| Steady state control: | +20 | +24 | +30 | +30 | — |
| As modulator: | +8 | +14 | +20 | +20 | — |
| ZFSW-2-46 | +24 | +27 | +30 | +30 | +30 |
| ZFSWA-2-46 | +24 | +24 | +27 | +27 | +27 |
| ZYSW-2-50DR | +22 | +22 | +22 | +24 | +24 |
| ZYSWA-2-50DR | +20 | +20 | +20 | +20 | +20 |
- 2. For reflective switches ZFSW, ZYSW models, OFF state of RF output is low impedance.
- 3. Below 100MHz, 1 dB compression gradually decreases to 10 dBm at 1 MHz.

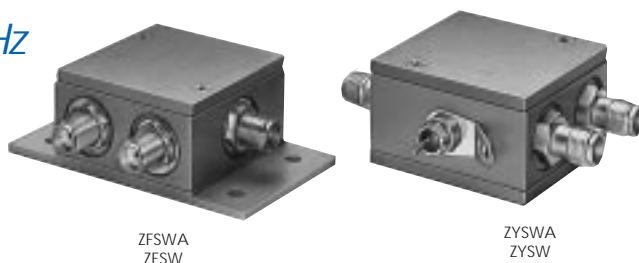
pin and coaxial connections

see case style outline drawings for pin locations

| PORT | eg | ej | hb | mn |
|-----------|--------|----|----------------|----|
| RF IN | 3 | 5 | 1 | 1 |
| RF OUT 1 | 2 | 3 | 25 | 2 |
| RF OUT 2 | 1 | 2 | 21 | 3 |
| RF OUT 3 | — | — | 9 | 4 |
| RF OUT 4 | — | — | 5 | 5 |
| CONTROL 1 | — | 4 | 15 | C5 |
| CONTROL 2 | — | 1 | 16 | C3 |
| CONTROL 3 | — | — | 13 | C4 |
| CONTROL 4 | — | — | 14 | C6 |
| TTL-1 | 4 | — | — | — |
| TTL-2 | — | — | — | — |
| +5V | +5 VDC | — | 12 | C2 |
| -5V | -5 VDC | — | 18 | C1 |
| NOT USED | — | — | — | — |
| GND EXT. | — | — | all other pins | — |

Coaxial

SPDT With/ Without TTL Drivers DC to 5 GHz



| MODEL NO. | FREQ. (GHz) $f_L - f_U$ | TTL DRIVER | ABSORPTIVE | REFLECTIVE | INSERTION LOSS (dB) | | | | | | 1 dB COMPRESSION (dBm) | | | | | | IN-OUT ISOLATION (dB) | | | | | | CASE STYLE | CONNECTION | PRICE \$ |
|----------------|----------------------------|------------|------------|------------|---------------------|-----|-----|-----|-----|------|------------------------|----|----|----|------|----|-----------------------|----|----|--------|------------|----|------------|------------|----------|
| | | | | | frequency band | | | | | | frequency band | | | | | | frequency band | | | | | | | | |
| | | | | | A | B | C | A | B | C | A | B | C | A | B | C | A | B | C | Note B | Qty. (1-9) | | | | |
| ▲ ZFSW-2-46 | DC-4.6 | | | ● | 0.9 | 1.1 | 1.0 | 1.3 | 1.3 | 1.8★ | 10 | — | 17 | — | 27 | — | 60 | 50 | 50 | 40 | 40 | 28 | G144 | ej | 79.95 |
| ▲ ZFSWA-2-46 | DC-4.6 | | ● | ● | 0.8 | 1.1 | 0.9 | 1.3 | 1.5 | 2.6 | 10 | — | 17 | — | 27 | — | 60 | 45 | 50 | 40 | 30 | 25 | G144 | ej | 89.95 |
| ▲ ZYSW-2-50DR | DC-5 | ● | | ● | 0.9 | 1.5 | 1.3 | 1.7 | 2.1 | — | 20 | 15 | 23 | 19 | 21.0 | 18 | 44 | 38 | 38 | 28 | 20 | — | ZZ121 | eg | 59.95 |
| ▲ ZYSWA-2-50DR | DC-5 | ● | ● | ● | 1.1 | 1.5 | 1.4 | 1.9 | 1.9 | — | 18 | 13 | 20 | 17 | 22.5 | 20 | 42 | 38 | 31 | 27 | 20 | 19 | ZZ121 | eg | 69.95 |

ZFSW, ZFSWA:
ZYSW, ZYSWA:

A = DC to 200MHz
A = DC to 500MHz

B = 200MHz to 1000MHz
B = 500MHz to 2000MHz

C = 1000MHz to 4600MHz
C = 2000MHz to 5000MHz

additional specifications, all models

| Model Series | ZFSW, ZFSWA | ZYSW, ZYSWA | GSWA/ZSWA |
|--------------------------------------------------------|--------------------------------------------------------------|-------------------------------------------------------|--------------------------------------------|
| Control Voltage | -8/0 for compression spec, -8 to -5/0 for all other specs | 0/5.5, max. | 0/ 5.5 |
| Low Threshold, max. | | 0.8 | 0.8 |
| High Threshold, min. | | 3.5 | 3.5 |
| Control Current, mA | 2.5 typ. at -8V | High V: 2 typ., 5 max. Low V: 0.2 max. | High V: 0.2 max Low V: 0.02 max |
| Positive Supply V. | none | +5 +0.5/-0.1 | +5±0.5 |
| Negative Supply V. | none | -5 -0.5/+0.1 | -5±0.25 |
| Positive Supply Current, mA | n/a | 20 max. | 4 max. |
| Negative Supply Current, mA | n/a | 20 max. | 20 max. |
| VSWR(:1) | 1.3 typ. | 1.4 typ., 2.0 max. DC to 3 GHz 2.5 max. 3 to 5 GHz | 1.28 typ., ON 1.24 typ., OFF DC-2GHz |
| Rise/ Fall time (10% - 90%), ns | 2 typ. | 6 typ., 12 max. | 25 typ. |
| Switching time, 50% of Control to 90% RF (Turn-on), ns | | 20 typ., 40 max. | 45 typ. |
| 10% RF (Turn-off), ns | | | |
| **Video Leakage, mVp-p 0/-5V Control | 30 typ. | 30 typ. | 30 typ. |
| Temperature, °C | operating storage | -55 to 100 -55 to 150 | -20 to 85 -55 to 100 |
| MTBF, hrs @85°C case | | | 30X10 ⁶ |

** Video leakage or break through is defined as leakage of TTL switching signal to RF output ports.

NSN GUIDE

MCL NO.

ZYSW-2-50DR
ZYSWA-2-50DR

NSN

5895-01-464-8969
5895-01-467-3232



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