



## Pin Diode Switch Single Pole 7 Throw Reflective

AWSP7TR-2-20GA

Your RF & Microwave Components Source

### Features:

- TTL-Compatible Driver
- Broad Operating Bandwidth
- Rugged Construction.
- Customization Is Available

### Specifications

Electrical Specifications, TA = +25° C

| Parameters              | Min. | Typ.                                | Max. | Units |
|-------------------------|------|-------------------------------------|------|-------|
| Frequency Range         | 2    |                                     | 20   | GHz   |
| Insertion Loss          |      |                                     | 3.5  | dB    |
| VSWR                    |      |                                     | 2    |       |
| Isolation               | 60   |                                     |      | dB    |
| Switching Speed         |      |                                     | 100  | nsec  |
| CW RF Power, Operating  |      |                                     | 30   | dBm   |
| Material                |      | Aluminum                            |      |       |
| Finish                  |      | Gold Plating                        |      |       |
| Input /Output Connector |      | SMA-Female / SMA-Female (Removable) |      |       |

※ Switching speed is defined as 50% TTL to 90% RF (t-on) and 50% TTL to 10% RF (t-off).

### Environmental Specifications

DC Bias: +5 V±0.5 V @ 350 mA max  
-5 V±0.5 V @ 50 mA max

|                              |                                   |
|------------------------------|-----------------------------------|
| Operational Temperature (°C) | -45 ~ +85                         |
| Storage Temperature (°C)     | -55 ~ +125                        |
| Vibration                    | 25g rms (15 degree 2KHz)          |
| Humidity                     | 100% RH at 35c, 95%RH at 40 deg c |
| Shock                        | 20G for 11msc                     |

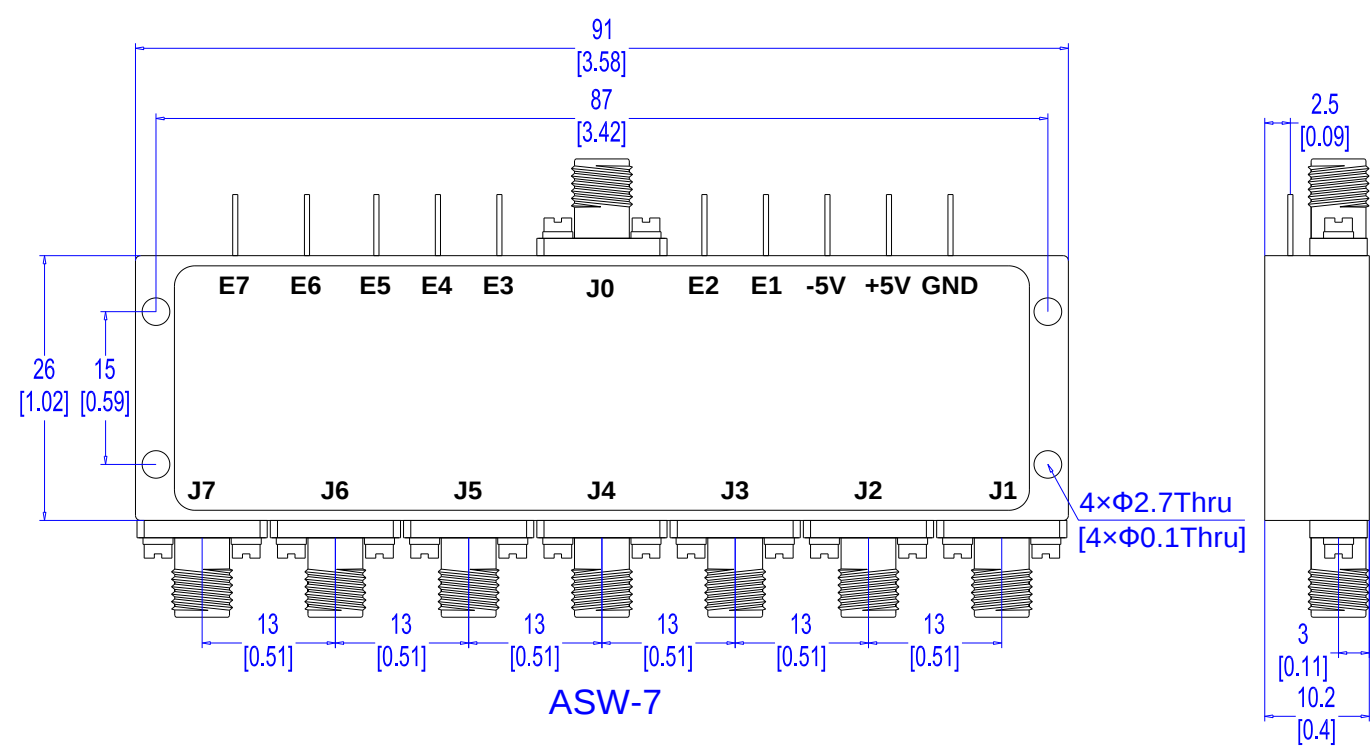
| Absolute Maximum Ratings |            |
|--------------------------|------------|
| Biasing                  | +5 V , -5V |
| TTL Control Voltage      | +5V/0V     |
| Input RF power           | +30dBm     |
| Storage Temperature (°C) | -55 ~ +125 |

The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Amwav reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal.

Truth Table

| Control Input TTL |    |    |    |    |    |    | Signal Path State |
|-------------------|----|----|----|----|----|----|-------------------|
| E7                | E6 | E5 | E4 | E3 | E2 | E1 |                   |
| 1                 | 1  | 1  | 1  | 1  | 1  | 0  | J0-J1             |
| 1                 | 1  | 1  | 1  | 1  | 0  | 1  | J0-J2             |
| 1                 | 1  | 1  | 1  | 0  | 1  | 1  | J0-J3             |
| 1                 | 1  | 1  | 0  | 1  | 1  | 1  | J0-J4             |
| 1                 | 1  | 0  | 1  | 1  | 1  | 1  | J0-J5             |
| 1                 | 0  | 1  | 1  | 1  | 1  | 1  | J0-J6             |
| 0                 | 1  | 1  | 1  | 1  | 1  | 1  | J0-J7             |

Outline Drawing:



Dimensions are in MM [inches].  
Unless otherwise specified, Outline drawing +/-0.1mm; Hole +/-0.1mm.



**AMWAV Technology, Ltd.**  
Website: [www.amwav.com](http://www.amwav.com)  
E-mail: [sales@amwav.com](mailto:sales@amwav.com)  
Tel/Fax: +86 02887492975

**TITLE**  
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|                                                                                      |         |          |
|--------------------------------------------------------------------------------------|---------|----------|
| <b>Notes:</b><br>All SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME |         |          |
| Scale<br>1/1                                                                         | DWG No. | REV<br>A |