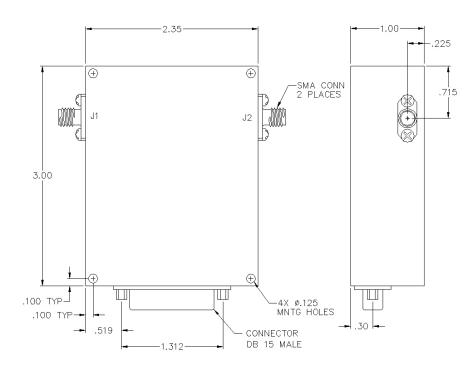
# DAT-25-482/1S

# **DIGITAL STEP ATTENUATOR**



### **SPECIFICATIONS**

| Name:                  | DAT-25-482/1S  |
|------------------------|----------------|
| Frequency Range:       | 6-18 GHz       |
| Attenuation Range:     | 64 dB          |
| Number of Bits:        | 8              |
| Insertion Loss:        | 6.5 dB max.    |
| VSWR:                  | 2.00:1 dB max. |
| Least Significant Bit: | 0.250 LSB      |
| Connector Type:        | SMA            |

Resolution of 8 bit is standard, up to 12 bits available.

| Operating Power: <= 0 dBm             |                                     |  |  |  |
|---------------------------------------|-------------------------------------|--|--|--|
| Power Handling:                       | +27 dBm max.                        |  |  |  |
| Switching Time:                       | 600 nsec typical.                   |  |  |  |
| Control Logic:                        | TTL                                 |  |  |  |
| Power supply:                         | +12 to +15 Volts @ +100 mA, Typical |  |  |  |
| -12 to -15 Volts @ -50 mA, Typical    |                                     |  |  |  |
| Operating Temperature: -25°C to +80°C |                                     |  |  |  |

RF Connectors: SMA Female Bi-directional: Either SMA connector can be used as input.

#### This is a commercial off the shelf (COTS) product. For an equivalent product that meets DFARS materials compliance, contact sales. All specifications are subject to change without notice at any time. Rev: 190722



## ATTENUATOR ACCURACY VS. Frequency

| Bandw            | idth (2:1)          | Bandwidth (4:1)  |                     |  |
|------------------|---------------------|------------------|---------------------|--|
| Flatness<br>(dB) | Attenuation<br>(dB) | Flatness<br>(dB) | Attenuation<br>(dB) |  |
| ±0.5             | 0-10                | ±0.6             | 0-10                |  |
| ±0.8             | 0-20                | ±1.2             | 0-20                |  |
| ±1.2             | 0-30                | ±1.8             | 0-30                |  |
| ±1.5             | 0-40                | ±2.2             | 0-40                |  |
| ±2.2             | 0-64                | ±3.5             | 0-64                |  |

#### Logic Table

| State | Pin 1 | Pin 2 | Pin 3 | Pin 4 | Pin 5 | Pin 6 | Pin 7 | Pin 8 | Att.<br>64 dB |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------------|
| -     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0 dB          |
| 1     | 1     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0.25 dB       |
| 2     | 0     | 1     | 0     | 0     | 0     | 0     | 0     | 0     | 0.50 dB       |
| 3     | 0     | 0     | 1     | 0     | 0     | 0     | 0     | 0     | 1.0 dB        |
| 4     | 0     | 0     | 0     | 1     | 0     | 0     | 0     | 0     | 2.0 dB        |
| 5     | 0     | 0     | 0     | 0     | 1     | 0     | 0     | 0     | 4.0 dB        |
| 6     | 0     | 0     | 0     | 0     | 0     | 1     | 0     | 0     | 8.0 dB        |
| 7     | 0     | 0     | 0     | 0     | 0     | 0     | 1     | 0     | 16.0 dB       |
| 8     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 1     | 32.0 dB       |

A combination of the above states will provide an attenuation equal to the sum of the selected states.

#### Pin-Out

|   | 00  | 0 0 | 0 0 | °  |
|---|-----|-----|-----|----|
| S | 0 0 | 0 0 | 0   | 15 |

| Pin 01 = Bit 1 (LSB) | Pin 09 = N/C            |
|----------------------|-------------------------|
| Pin 02 = Bit 2       | Pin 10 = N/C            |
| Pin 03 = Bit 3       | Pin 11 = N/C            |
| Pin 04 = Bit 4       | Pin 12 = N/C            |
| Pin 05 = Bit 5       | Pin 13 = +12 to +15 Vdc |
| Pin 06 = Bit 6       | Pin 14 = -12 to -15 Vdc |
| Pin 07 = Bit 7       | Pin 15 = Ground         |
| Pin 08 = Bit 8       |                         |



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