

# PS729 Series 50-500 MHz. 1 BIT Digital Attenuator

**PHOENIX**  
MICROWAVE Corp.



## Features: (typical values)

- High Accuracy .....  $\pm 0.6$  dB.
- Low Insertion Loss ..... 0.8 dB.
- Fast Switching Speed ..... 0.8  $\mu$ sec.
- High Reliability
- Step 32 dB.

## Electrical Specifications (Referenced to a 50 $\Omega$ system)

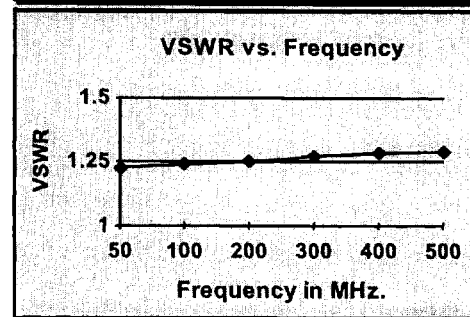
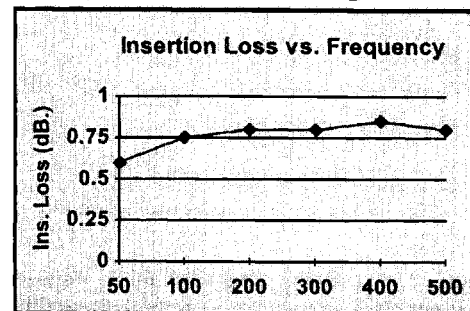
| Parameter and Condition                        | Typical | Min. | Max.    |
|------------------------------------------------|---------|------|---------|
| Frequency Range in MHz.                        |         | 50   | 500     |
| Insertion Loss (THRU) in dB.                   | 0.8     |      | 1.0     |
| Attenuation Range in dB.                       |         |      | 32      |
| Switching Speed (50%CTI - 90%RF) in $\mu$ sec. | 0.8     |      | 2.0     |
| Transition Time (10%RF - 90%RF) in $\mu$ sec   | 0.5     |      |         |
| VSWR (All states)                              | 1.3:1   |      | 1.5:1   |
| 3IP in dBm. (Two +10 dBm. signals)             | +25     |      |         |
| Vcc (v/mA.)                                    | 5/10    |      | 5/10    |
| Control IN/OUT (TTL)                           |         |      | "1"/"0" |
| Pin Operating @ 1dB. comp. in dBm.             | +15     |      |         |

Min. and Max. values from -55°C to +85°C

## Maximum Ratings

Operating temperature ..... -55°C to +85°C  
Storage temperature ..... -62°C to +125°C  
DC voltage ..... +5.5 volts  
RF input power ..... (without damage) +20.0 dBm.

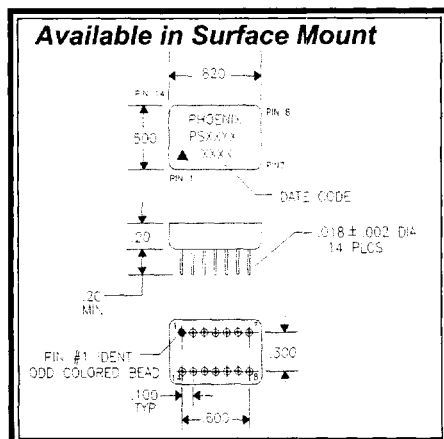
## Typical Curves @ +25° C



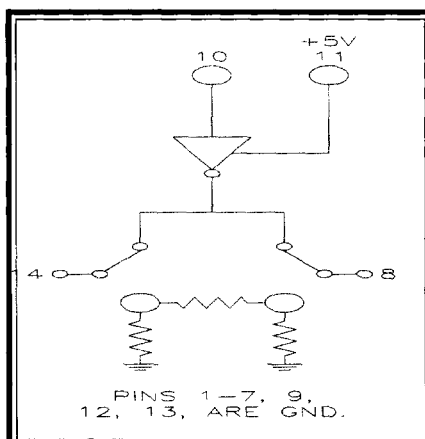
## Accuracy

32.0 dB.  $\pm 0.6$  dB.

## Outline Drawing



## Schematic



## Truth Table

PIN 10 = "0" THRU  
PIN 10 = "1" 32.0 dB.