

# Voltage Controlled Attenuators

- 1-3000 MHz Frequency Range
- Single Control Voltage
- Low Signal Distortion
- Low Insertion Loss
- Wide Attenuation Range
- Surface Mount, PC-Mount, Connectorized

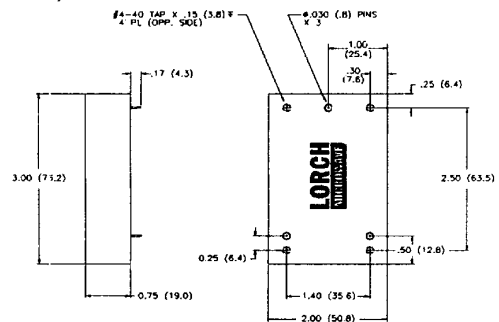
## Applications

The voltage controlled attenuators have an extremely large range of applications wherever precise control of RF levels or stage gains is required. These applications include the following:

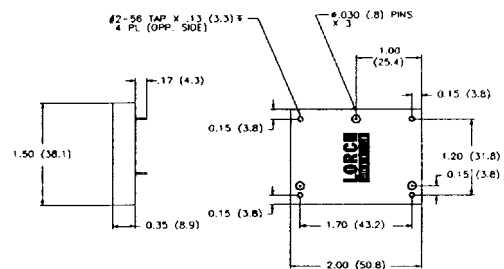
- **Radio Direction Finder (RDF) Systems:** In RDF systems, to provide precise gain tracking of independent channels with extremely small phase change as a function of attenuation.
- **Low Distortion Systems:** To control signal levels in wideband, critical systems where intermodulation distortion must be minimized.
- **Signal Leveling:** Where tight, linear leveling control is required with excellent phase characteristics.
- **Receiver Gain Control:** To provide overall receiver gain control, AGC and manual, with a few variable attenuators at RF, IF or both; permits other critical receiver stages to be operated at optimized fixed gain.

Lorch Microwave's VA-Series, Attenuators, are miniature components designed to attenuate the levels of RF signals by means of a single positive control voltage.

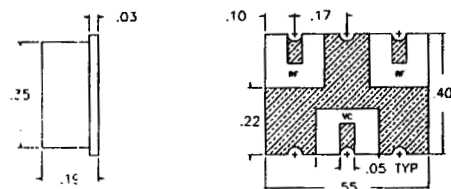
PC MOUNT, STYLE P1



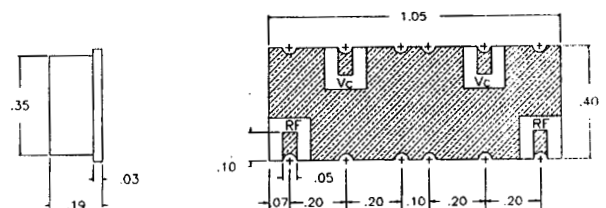
PC MOUNT, STYLE P2



SURFACE MOUNT, STYLE 3

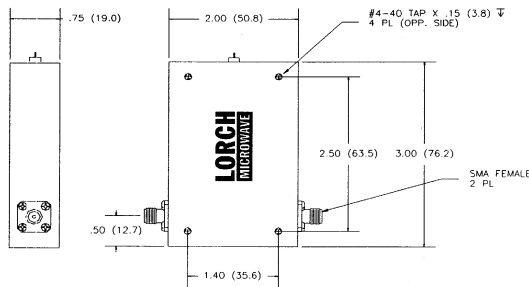


SURFACE MOUNT, STYLE 4A

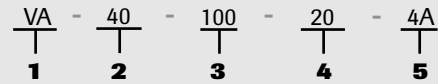


# Voltage Controlled Attenuators

## SMA CONNECTOR



## Part Number Description



- 1 VA** Series, Voltage Controlled Attenuator
- 2 40** Attenuation in dB
- 3 100** Center Frequency in MHz
- 4 20** Bandwidth in MHz
- 5 4A** Package Style, See Outlines

## Creating a Part Number

Lorch Microwave's VA-Series, Voltage Controlled Attenuators, have descriptive part numbers indicating the important electrical characteristics that define the unit. A list of "standard" Attenuators is given in the following section. For specifications outside these operating parameters, please contact the factory.

## TYPICAL PERFORMANCE SPECIFICATIONS

Center Frequency (MHz)	% Bandwidth	Attenuation Range (dB)	Insertion Loss (dB) @ Vc = OVDC	VSWR @ Vc = OVDC	Max Input Power (dBm)	Control Voltage, Vc: @ 10 mA max. (VDC)	Package (See note below)
0.5-500	10	0-20	0.6	1.4:1	+15	0-5	S, P2, 3
0.5-500	10	0-40	1.2	1.4:1	+15	0-5	S, P2, 4A
0.5-500	20, 30	0-20	0.8	1.4:1	+15	0-5	S, P2, 3
0.5-500	20, 30	0-40	1.6	1.4:1	+15	0-5	S, P2, 4A
500-1000	10	0-18	0.8	1.5:1	+20	0-5	S, P2, 3
500-1000	10	0-35	1.6	1.5:1	+20	0-5	S, P2, 4A
500-1000	20, 30	0-18	0.9	1.6:1	+20	0-5	S, P2, 3
500-1000	20, 30	0-35	1.8	1.6:1	+20	0-5	S, P2, 4A
1000-2000	10	0-18	1.2	1.6:1	+20	0-5	S, P2, 4A
1000-2000	10	0-35	2.4	1.6:1	+20	0-5	S, P2
1000-2000	20, 30	0-18	1.5	1.8:1	+20	0-5	S, P2, 4A
1000-2000	20, 30	0-35	3.0	1.8:1	+20	0-5	S, P2
2000-3000	10	0-15	1.5	1.8:1	+20	0-5	S, P2, 4A
2000-3000	10	0-30	3.0	2.0:1	+20	0-5	S, P2
2000-3000	20, 30	0-15	1.7	2.0:1	+20	0-5	S, P2, 4A
2000-3000	20, 30	0-30	3.5	2.0:1	+20	0-5	S, P2

### Notes:

1) Packages: S-SMA Connectorized, P1-PC Mount, P2-PC Mount, 3-Surface Mount, 4A-Surface Mount.

The units listed are designed to provide optimum performance over the full frequency range listed. If the band of interest is narrower than listed, it should be indicated when ordering (See "Creating a Part Number"). Performance will be optimized over the band of interest and improved performance may be offered.

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