

## Series Description

DLI's Gain Equalizers are designed as a small, low cost solution to your gain slope challenges. These equalizer designs employ a monolithic construction with precision thin-film conductor and resistor films with proprietary high dielectric constant ceramics for superior RF performance and repeatability. Components are well suited for use with pick and place equipment.

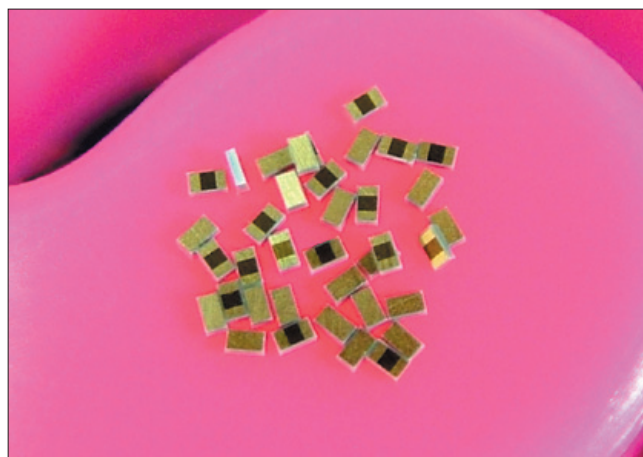
Available in tape and reel packaging for high volume applications.

## Applications

- Broadband Microwave Modules; EW, ECM, ECCM
- Equalizer is utilized as a compensation circuit to correct for a loss slope created by other elements within a circuit such as in amplifier stages

## Benefits

- Low Excess Insertion Loss
- Footprint interchangeable part series, gain slopes from 1 to 3.5 dB
- Superior, repeatable microwave performance
- Ease of assembly; terminations are compatible with solder SMT and conductive epoxy assembly

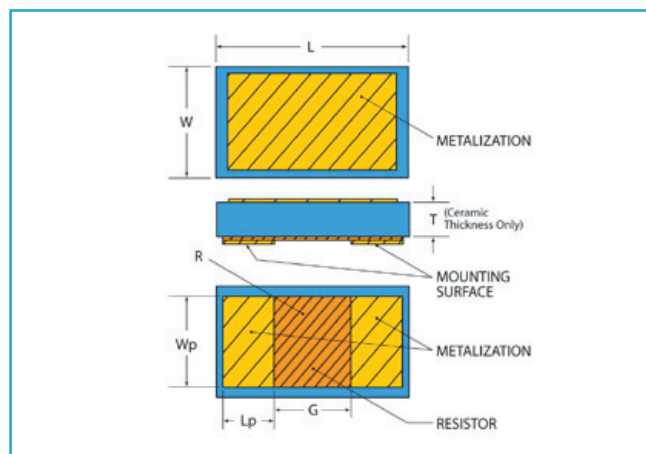


- Package optimized for typical 50  $\Omega$  transmission line width
- No ground connection required

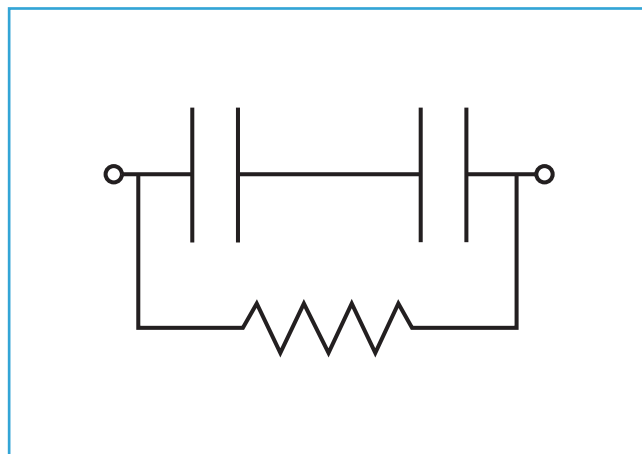
Part Number		L	W	T	Lp	Wp	G	Nominal Slope
Epoxy	Solderable							
AEQ2050	AEQ05510	30 $\pm$ 2	18 $\pm$ 2	5 $\pm$ 1	9 $\pm$ 1	14 $\pm$ 1	8 $\pm$ 1	2.25 dB
AEQ2199	AEQ05246	28 $\pm$ 2	16 $\pm$ 2	7 $\pm$ 1	7 $\pm$ 1	14 $\pm$ 1	12 $\pm$ 1	3.5 dB
AEQ2234	AEQ06042	32 $\pm$ 2	16 $\pm$ 2	5 $\pm$ 1	8 $\pm$ 1	12 $\pm$ 1	12 $\pm$ 1	3.25 dB
AEQ3042	AEQ3042	40 $\pm$ 2	20 $\pm$ 2	6 $\pm$ 1	17.5 $\pm$ 1	17.5 $\pm$ 1	3 $\pm$ 1	0.6 dB
AEQ3055	AEQ3055	40 $\pm$ 2	20 $\pm$ 2	6 $\pm$ 1	15.4 $\pm$ 1	18.4 $\pm$ 1	7.2 $\pm$ 1	1.5 dB
AEQ05467	AEQ05467	28 $\pm$ 1	16 $\pm$ 1	7 $\pm$ 1	7 min.	14 $\pm$ 1	10	1.0 dB
AEQ05468	AEQ05468	28 $\pm$ 1	16 $\pm$ 1	7 $\pm$ 1	7 min.	14 $\pm$ 1	10	1.5 dB
AEQ05469	AEQ05469	28 $\pm$ 1	16 $\pm$ 1	7 $\pm$ 1	7 min.	14 $\pm$ 1	10	2.0 dB
AEQ05470	AEQ05470	28 $\pm$ 1	16 $\pm$ 1	7 $\pm$ 1	7 min.	14 $\pm$ 1	10	2.5 dB
AEQ05471	AEQ05471	28 $\pm$ 1	16 $\pm$ 1	7 $\pm$ 1	7 min.	14 $\pm$ 1	10	3.0 dB
AEQ05472	AEQ05472	28 $\pm$ 1	16 $\pm$ 1	7 $\pm$ 1	7 min.	14 $\pm$ 1	10	3.5 dB

All dimensions in mils. Mechanical outline drawings for equalizers listed above are available. Please contact DLI Applications Engineering for details.

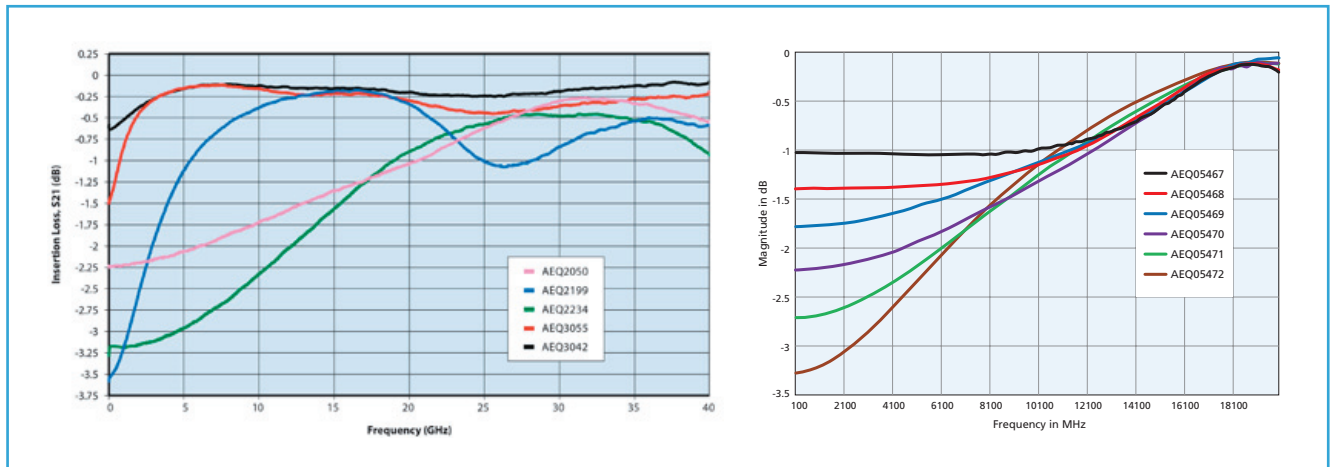
## Physical Dimensions



## Equivalent Schematic Representation

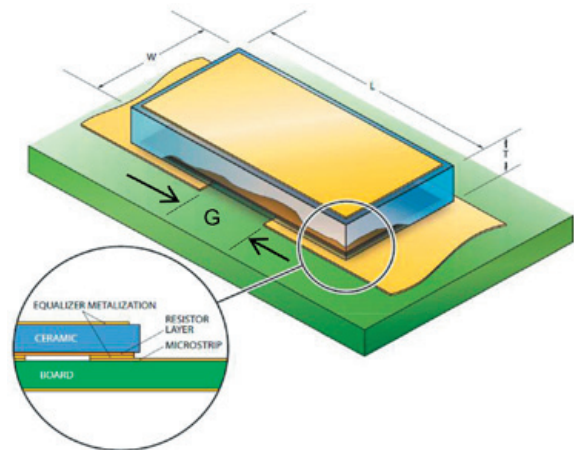


## Typical Performance



## Die Attach Recommendations

- 1) Equalizer width should be approximately as wide as 50  $\Omega$  line trace on PCB.
- 2) The gap in the microstrip line should be nominally equal to dimension G.
- 3) Vacuum pick-up tool recommended for component handling. If pressure is to be applied during component placement, it should be done uniformly across the part.
- 4) Thin, unmounted circuit boards are prone to warpage during reflow. This can cause solder attach defects and cracking of components during handling or subsequent housing installation.



## Custom Solutions

We realize that our standard offerings won't meet all customer requirements. DLI offers custom solutions with quick turn time.

Custom designs will be tailored to meet your system requirements by utilizing a design with one of our high K materials.

Temperature performance requirement? We can design on one of DLI's temperature stable materials.

Please contact Applications Engineering for more information.

## Design Kits

Two design kits are available for quick fix or circuit tuning needs. Each kit has 5 pieces of the variant equalizer.

Standard Series includes: AEQ2050, AEQ2199, AEQ2234, AEQ3042 and AEQ3055.

EW Series includes: AEQ05467, AEQ05468, AEQ05469, AEQ05470, AEQ05471 and AEQ05472.

## Qualifications



**Knowles (Cazenovia)**

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