TECHNICAL DESCRIPTION

MULTI-MIX® DELAY LINES

FEATURES
- 925 - 960 MHz
- LOW LOSS
- LOW VSWR
- SURFACE MOUNT
- LOW COST

APPLICATIONS
- GSM
- BASE STATION POWER AMPLIFIER LINEARIZATION NETWORKS
  - FEED FORWARD
 - PRE-DISTORTION
- ADAPTIVE INTERFERENCE CANCELLATION

The DLL-057R-0.94G, a member of the Multi-Mix® DLL family of delay lines, provides a mean delay of 5.68 nS in the GSM band and features low insertion loss and low VSWR. The DLL-057R-0.94G exhibits excellent phase linearity and amplitude flatness over the 925 - 960 MHz frequency range. The Multi-Mix® DLL-057R-0.94G is intended for use in power amplifier linearization networks such as feedforward and predistortion.

DLL delay lines are fusion bonded multilayer stripline structures. The DLL series offers an excellent alternative to expensive coaxial and delay filter structures. The fusion bonding process yields a homgeneous monolithic dielectric structure with reliability, ruggedness and electrical and thermal performance that is superior to conventional adhesive bonding techniques.

GENERAL SPECIFICATIONS

FREQUENCY RANGE MHz	MEAN DELAY* (nS)	PHASE DEVIATION (DEGREES MAX)	AMPLITUDE FLATNESS (dB p-p)	
925 - 960	5.68 ± 0.11	± 1.0	0.1	

RETURN LOSS (dB MIN)	INSERTION LOSS (dB MAX)	POWER HANDLING (WATTS)	RF INTERFACE	SIZE/OUTLINE (Inches - l,w,h)
20	2.6	15	Surface Mount	1.0 x 1.0 x 0.09

Specifications are based upon unit mounted on printed circuit board with 50 Ohm nominal impedance.
*Mean delay refers to the group delay of the applied input signal through the network. The specified tolerance relates to unit-unit group delay variation.

PACKAGE OUTLINE
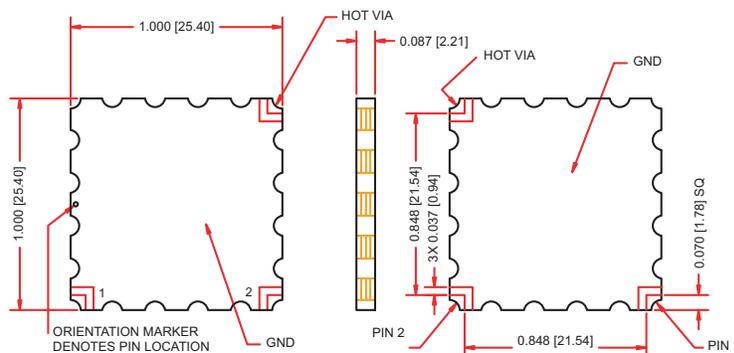
THE MULTI-MIX MICROTECHNOLOGY® GROUP IS ISO 9001:2000 REGISTERED

U.S. Patent 6,099,677 and other Patents Pending.

TYPICAL PERFORMANCE

Deviation from Linear Phase vs. Frequency

Transmission vs. Frequency

Return vs. Frequency

Series1
Series2

Amplitude Flatness vs. Frequency

Group Delay vs. Frequency
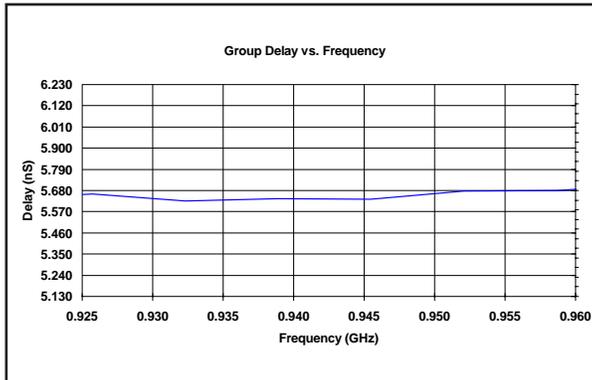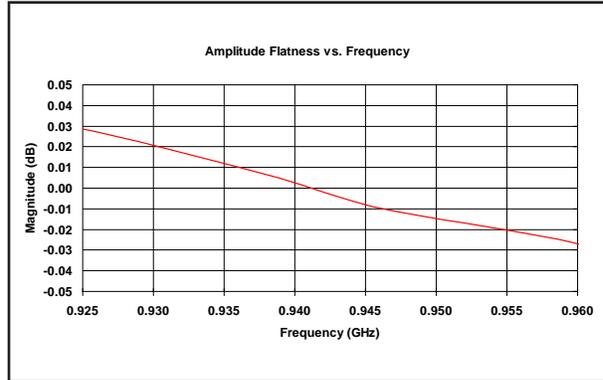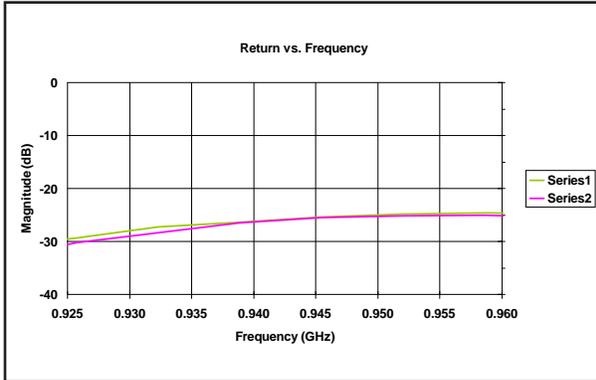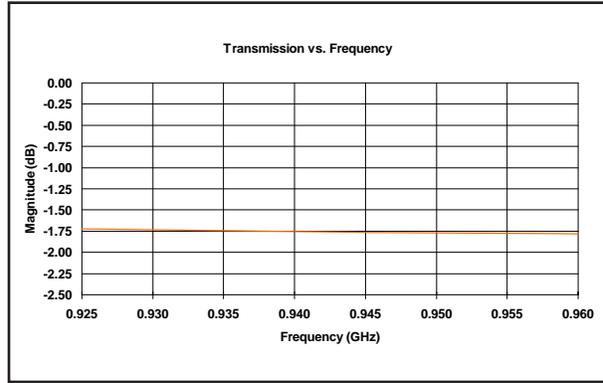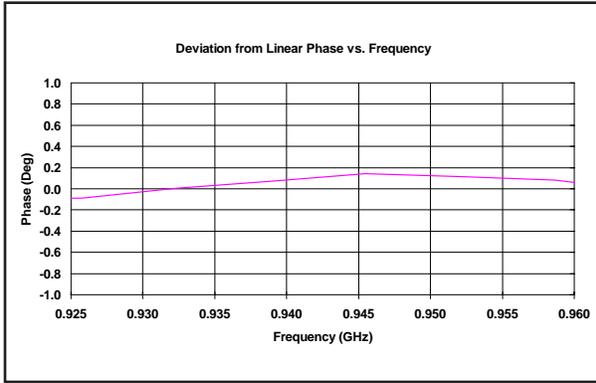
MOUNTING CONFIGURATION

GROUND PLANE OF UNIT SHOULD
BE SOLDERED TO GROUND PLANE
OF CIRCUIT BOARD FOR OPTIMUM
PERFORMANCE.

2X 0.848 [21.54]

2X 0.848 [21.54]

2X 0.069 [1.77]

0.037
TYP [0.94]

4X 0.076 [1.93]

4X 0.076 [1.93]

50 OHM LINE
.032 DIELECTRIC THICKNESS
ER = 3.38

GROUND PLANE

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