

## CL1L, CL2L series, surface-mount thin film delay lines



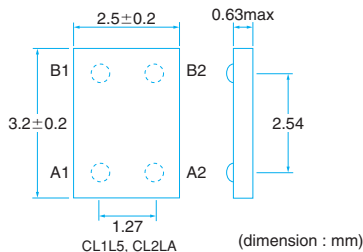
This series permits ultra-precision timing adjustment from 20 to 200 picoseconds with accuracy of  $\pm$  picoseconds for ultrahigh-speed signal processing applications.  
Differential delay line:CL2L

RoHS compliant Completely lead free



### SPECIFICATIONS

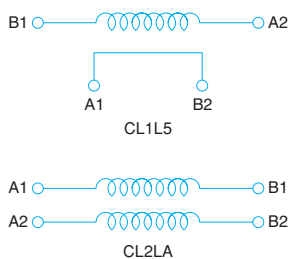
#### Mechanical



#### Electrical

Type	CL1L5	CL2LA
Time Delay	40~220ps(20ps step)	
Time Delay Tolerance	$\pm 10\%$	
Temp. coefficient of Td	$\pm 100\text{ppm}/^\circ\text{C}$	
Characteristic Impedance	$50\Omega \pm 10\%$	$100\Omega \pm 10\%$
DC Resistance	$0.3\Omega$ (100ps or less) $3.0\Omega/\text{ns}$ max (100ps or more)	1.0 $\Omega$ Max.
Insertion loss	0.5dB or less (at 0.75GHz) - 0.5dB or less (at 1.0GHz)	
Rated Current	100mA	
Rated Current	$-40^\circ\text{C} \sim 85^\circ\text{C}$	

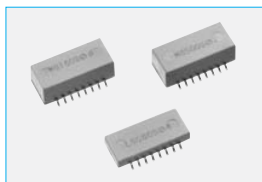
#### Equivalent circuit



### PART NUMBER

CL 1L 5 A T 020 L T1 (-C)

- Given to RoHS compliant CL2LA series products
- Package(T1:100pcs, T5:500pcs, TA:1,000pcs)
- Serial code (L=CL1L5A, D=CL2LA)
- Time Delay (020=200ps)
- Termination type (T)
- Height code (A)
- Impedance (5=50 $\Omega$ , A=100 $\Omega$ )
- Number of elements (1L=CL1L5, 2L=CL2LA)
- Part Code, Number of elements



## GL1L/GL2L series, SOP (small outline package) thin film differential delay lines



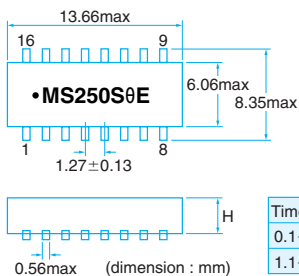
These delay lines offer the same excellent frequency performance as SIP delay lines but come in a gullwinged surface mount package. The differential SMT is useful for PECL application, and contains two identical transmission lines matched for the time delay. Featuring a stripline shielded construction, these parts offer very low EMI/RFI, and are ideal for high frequency/tight tolerance timing and deskew applications.

RoHS compliant



### SPECIFICATIONS

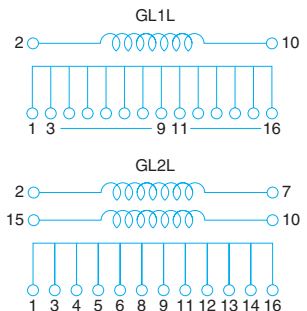
#### Mechanical



#### Electrical

Type	GL1L	GL2L
Time Delay	0.1~5.0ns(0.1ns step)	0.1~3.0ns(0.1ns step) 3.5~4.5ns(0.5ns step)
Time Delay Tolerance	$\pm 0.05\text{ns}$	$\pm 0.05\text{ns}$ (0.1~2.9ns) $-0.5/+0.1\text{ns}$ (3.0ns) $\pm 0.1\text{ns}$ (3.5~4.5ns)
Temp. coefficient of Td	0~150ppm/ $^\circ\text{C}$	
Characteristic Impedance	$50 \pm 5\Omega$	
Rise/fall time	200ps/ns	
Rated Current	100mA	
Characteristic Impedance	$-25 \sim 85^\circ\text{C}$	

#### Equivalent circuit



### PART NUMBER

GL1L 5 M S 250 S -T\* (-C)

- Given to RoHS compliant products
- Package(T1:100pcs, T5:500pcs)
- Circuit : S(GL1L), D(GL2L)
- Time Delay : (250=2.50ns)
- Lead Frame
- Height code
- Impedance : (5=50V)
- Part Code