



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 Ω (100ps or less) 3.0 Ω /ns max (100ps or more)	1.0 Ω 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 Ω , A=100 Ω)
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	$0 \sim 150\text{ppm}/^\circ\text{C}$	
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