Variable ISI Channel



Applied with Artek's unique technologies for analog signals as well as advanced electromagnetics, the CLE1000 & CLE1040 series are designed as a variable Inter-Symbol-Interference (ISI) channel for high speed serial interface stress tests. It controls the insertion loss continuously by 1,000 steps in its dynamic range for fine adjustment. The differential transmission lines are totally passive and DC coupled. The adjusted insertion loss is reliably repeatable and stable for secure test results. The control is done by the volume dial on the front panel and/or PC remote via USB for automated operation. Three (3) models of different loss range are available to cover various data rates. The CLE1000 & CLE1040 series are convenient ISI channel, applicable for various standard stress tests and compliance tests.

Remote Control

- USB I/F for remote control
- Installs as a COM port
- GUI included
- Remote commands compatibe with IEEE Std488-2 /SCPI-1990
- 4ch individual / simultaneous control



for CLE1040

ARTEK INC.			
ISI MAGNITUDE		26.3	%
0%	50%		100%
0%	50%		100

for CLE1000

Continuously Variable Passive & DC Coupled Repeatable & Stable Fine Adjustment

Principle : (patent-pending)

The variable insertion loss is achieved by controlling the electromagnetic field spatially around the transmission lines, which are electrically isolated from any components.



Specifications:

Transmission Line :	50 ohm Single-end, DC couple	
Input Tolerance:	10Vpp max	
Connectors (A2) :	SMA female	
(S2 / H2K) :	2.92mm(K) female	
(H2V):	1.85mm(V) female	
Delay (A2):	3.8ns +/- 600ps approx.	
(S2):	2.2ns +/- 200ps approx.	
(H2K / H2V) :	1.58ns +/- 70ps approx.	
Power:	AC 85V~264V 50/60Hz, 70VA max	
Dimensions:		
CLE1000 :	190(W) x 110(H) x 400(D) mm	
CLE1040 :	453(W) x 221(H) x 456(D) mm	

Ordering Information

Single channel	4x channels
- CLE1000-A2	- CLE1040-A2
- CLE1000-S2	- CLE1040-S2
- CLE1000-H2K	- CLE1040-H2K
- CLE1000-H2V	- CLE1040-H2V



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1,000 steps for fine adjustment Insertion Loss (Sdd21) -S2 -A2 -10 -10 $\Lambda \Lambda$ 0% 0% 20-20 -30 -30 20-20 -30 -30 -40 -40 100% 100% -50 -50 0 10g 14G 1**6**G 18g **20**G 0 4G **8**G 12g 16G 2G 4g **6**G **8**G 12g **20**G 24g **28**G **32**G **36**G 400 Frequency (Hz) Frequency (Hz) 0 0 -H2V -H2K -10 -10 ww 0% 0% 5dd21 (dB) 50-70 05-05-5dd21 (dB) 05-05-05--40 -40 1009 100% -50 -50 18G 24G 54G 0 **6**G 12g 18g 24g **30**G **36**G 42g **48**G 54g **60**G 0 **6**G 12g **30**G **36**G 42g **48**G **60**G Frequency (Hz) Frequency (Hz) **Delay Correlation** Return Loss (Sdd11) at 0% 0 4.5 4.0 -10 3.5 A2 3.03 52 -20 🗕 H2 2.5 2.5 2.0 2.11 Sdd11 (dB) -30 -40 1.5 — A2 — S2 — H2 158 .53 1.0 -50 0.5 -60 0 90% 100% 2G 4g **6**G **8**G 10G 12g 14G 16G 18G **20**G 0% 10% 20% 30% 40% 50% 60% 70% 80% Setting (%) Frequency (Hz) Subject to change without notice



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