

Model 7173-50 High Frequency Two-Pole 4x12 Matrix Card

MATRIX CONFIGURATION: 4 rows by 12 columns.
CROSSPOINT CONFIGURATION: 2-pole Form C with Row Isolator(HI, LO).

CHARACTERISTIC IMPEDANCE: 50Ω nominal.

CONNECTOR TYPE: BNC.

MAXIMUM SIGNAL LEVEL: 30V, 0.5A switched, 10VA.

COMMON MODE VOLTAGE: 42V peak (LO to Chassis).

CONTACT LIFE:

Cold Switching: 5×10^6 closures.

At Maximum Signal Level: 3×10^5 closures.

PATH RESISTANCE:

HI: $<2.0\Omega$ initial, $<4.0\Omega$ at end of contact life.

LO: $<0.10\Omega$ initial, $<0.15\Omega$ at end of contact life.

CONTACT POTENTIAL: $<15\mu\text{V}$ per crosspoint (HI to LO).

OFFSET CURRENT: $<200\text{pA}$ (HI to LO).

ISOLATION:

Path: $>10^{10}\Omega$, $<0.040\text{pF}$.

Differential: $>10^9\Omega$, 150pF nominal.

Common Mode: $>10^9\Omega$, 9400pF nominal.

RISE TIME (50Ω load and 50Ω source): $<2\text{ns}$.

AC PERFORMANCE (50Ω load and 50Ω source):

	1 MHz	10 MHz	100 MHz	200MHz
CROSSTALK:¹	$<-85\text{dB}$	$<-50\text{dB}$	$<-35\text{dB}$	
INSERTION LOSS:	$<0.2\text{dB}$	$<0.4\text{dB}$	$<1.5\text{dB}$	$<3.0\text{dB}$
VSWR (TYPICAL):			1.4	1.7

¹Closed crosspoint to closed crosspoint

RELAY DRIVE CURRENT: 108mA (per crosspoint).

RELAY SETTLING TIME: $<6\text{ms}$.

ENVIRONMENT:

Operating: 0° to 50°C , up to 35°C at 70% R.H.

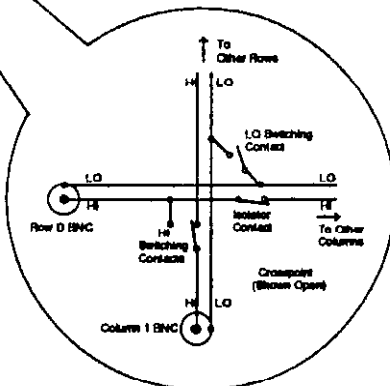
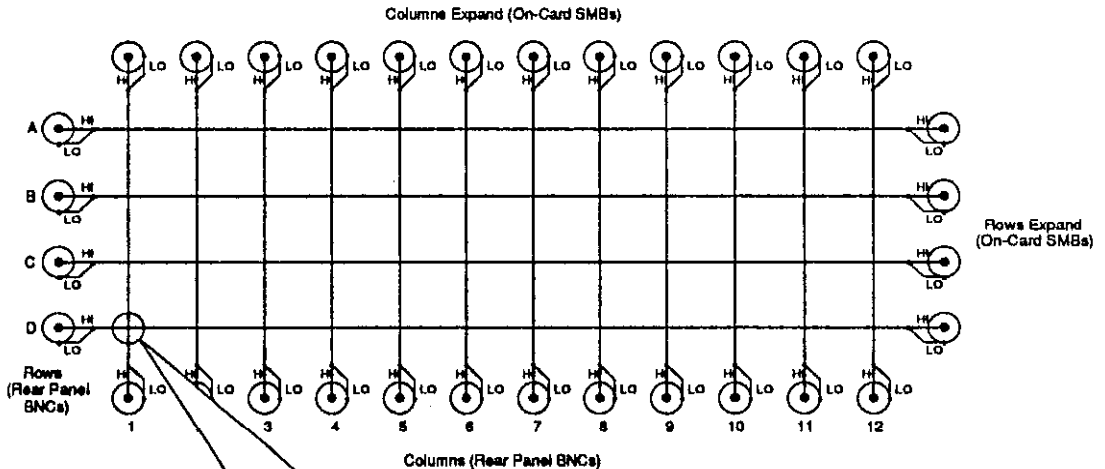
Storage: -25° to 65°C .

ACCESSORY SUPPLIED: Instruction manual.

Specifications apply for one 7173-50 with all row isolators in automatic mode.

Specifications subject to change without notice.

Simplified Model 7173-50 Schematic



Row Isolator Control

Automatic mode: Isolator contact opens when crosspoint (HI and LO contact) is closed.

Manual mode: Isolator contact is controlled independent of crosspoint (HI and LO contact).