

MOTOROLA
SEMICONDUCTOR
TECHNICAL DATA

MOTOROLA SC (TELECOM)

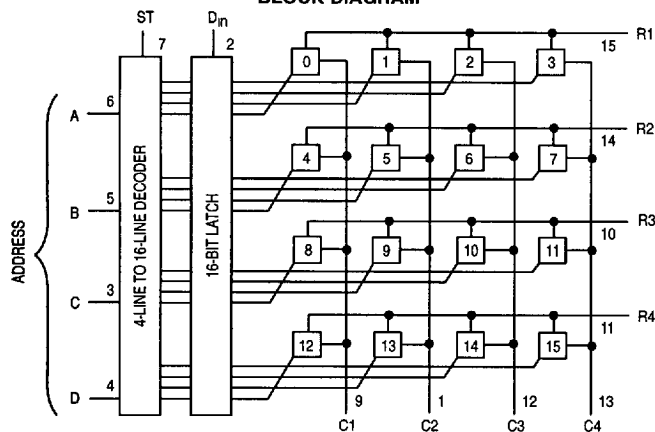
4 × 4 Crosspoint Switch with Control Memory

The MC142100 and MC145100 consist of 16 crosspoint switches (analog transmission gates) organized in 4 rows and 4 columns. Both devices have 16 latches, each of which controls the state of a particular switch. Any of the 16 switches can be selected by applying its address to the device and a pulse to the strobe input. The selected crosspoint will turn on if during strobe, D_{in} was a 1 and will turn off if during strobe, D_{in} was a 0. In addition the MC145100 will reset all non-selected switches in the same row as the selected switch. Other switches are unaffected. In the MC145100, an internal power-on reset turns off all switches as power is applied.

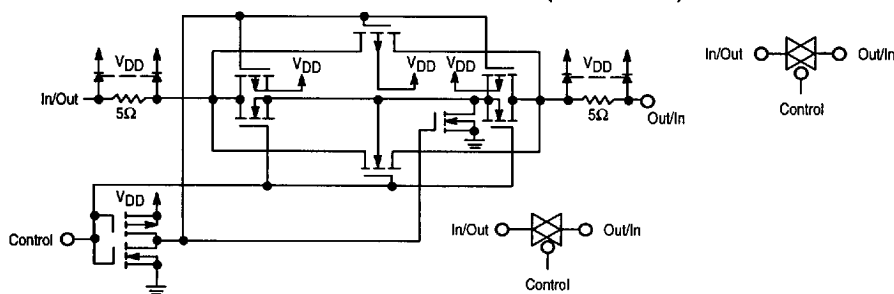
- Internal Latches Control State of Switches
- Power-On Reset (MC145100 Only)
- Low On Resistance — Typically on $110\ \Omega$ @ $10\ V_{dc}$
- Large Analog Range (V_{DD} – V_{SS})
- All Pins are Diode Protected
- Matched Switch Characteristics
- High CMOS Noise Immunity
- MC142100 Pin-for-Pin Replacement for CD22100

**NOT
RECOMMENDED
FOR NEW DESIGN**

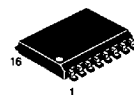
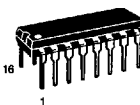
BLOCK DIAGRAM



ANALOG TRANSMISSION GATE (CROSSPOINT) SCHEMATIC



MC142100 MC145100


DW SUFFIX
SOG
CASE 751G

P SUFFIX
PLASTIC
CASE 648

ORDERING INFORMATION

MC14XXXX	SUFFIX	DENOTES
	DW	SOG Package MC142100 ONLY
	P	Plastic DIP
	C	Limited Operating Temperature Range
	A	Extended Operating Temperature Range

PIN ASSIGNMENTS

C2	1	16	V_{DD}
D_{in}	2	15	R1
C	3	14	R2
D	4	13	C4
B	5	12	C3
A	6	11	R4
ST	7	10	R3
V_{SS}	8	9	C1