



**MOTOROLA**

**4 X 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, Data In was a one and will turn off if during strobe, Data In was a zero. 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.

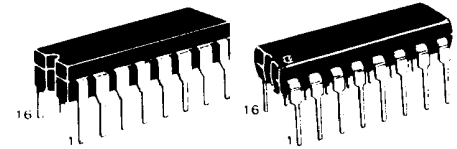
- Internal Latches Control State of Switches
- Power-On Reset (MC145100 Only)
- Low On Resistance — Typically on 110 Ω @ 10 Vdc
- Large Analog Range (VDD-VSS)
- All Pins Are Diode Protected
- Matched Switch Characteristics
- High CMOS Noise Immunity
- MC142100 Pin-for-Pin Replacement for CD22100

**MC142100  
MC145100**

**CMOS MSI**

(LOW-POWER COMPLEMENTARY MOS)

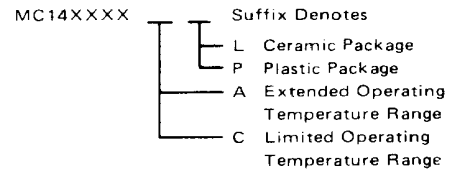
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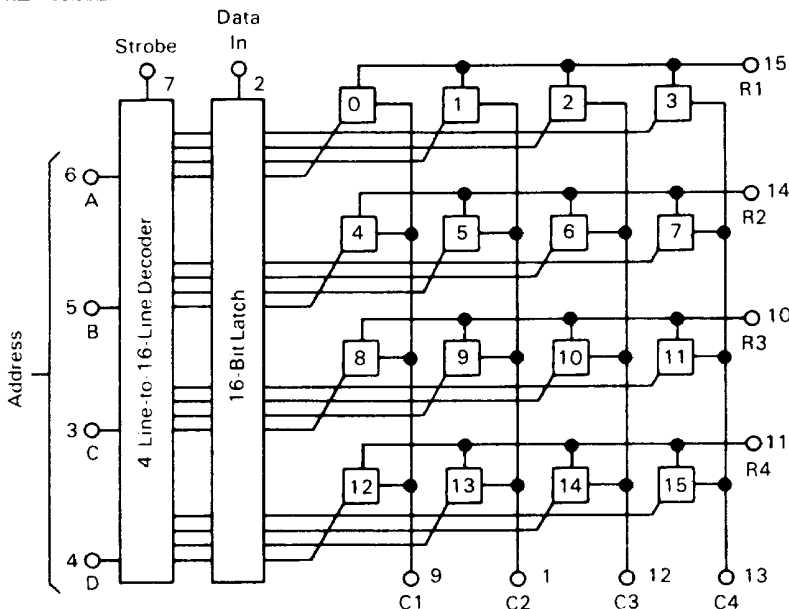
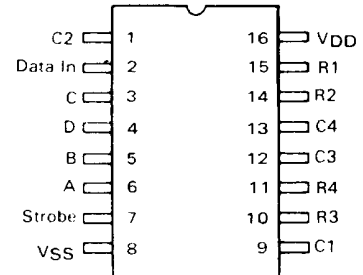
**L SUFFIX**  
CERAMIC PACKAGE  
CASE 620

**P SUFFIX**  
PLASTIC PACKAGE  
CASE 648

**ORDERING INFORMATION**



**PIN ASSIGNMENTS**



**MAXIMUM RATINGS** (Voltages referenced to VSS, Pin 8)

Rating	Symbol	Value	Unit
DC Supply Voltage	VDD	-0.5 to +18	Vdc
Input Voltage, All Inputs	Vin	-0.5 to VDD +0.5	Vdc
Through Current	I	25	mAdc
Operating Temperature Range	TA	AL Device	-55 to +125
		CL/CP Device	-40 to +85
Storage Temperature Range	Tstg	-65 to +150	°C

This device contains circuitry to protect the inputs against damage due to high static voltages or electric fields; however, it is advised that normal precautions be taken to avoid application of any voltage higher than maximum rated voltages to this high impedance circuit. For proper operation it is recommended that Vin and Vout be constrained to the range VSS ≤ (Vin or Vout) ≤ VDD. Unused control inputs must always be tied to an appropriate logic voltage level (e.g., either VSS or VDD).