National Semiconductor

Character Generators

DM8678 Bipolar Character Generator

General Description

The DM8678 is a 64-character bipolar character generator with serial output designed primarily for the CRT display marketplace, and packaged in a standard 16-pin DIP. The DM8678 incorporates several CRT system level functions, as well as a 7 x 9 or 5 x 7 row scan character font. The DM8678 performs the system functions of parallel to serial shifting, character address latching, character spacing and character line spacing. These system functions have required extra packages in the past.

Shifted characters can be generated by the on-chip subtractor.

The clear input and the load enable input are active low. Load enable is synchronous with the dot clock. Both the line clock and the dot clock are positive edge-triggered. When the address latch control signal is high,
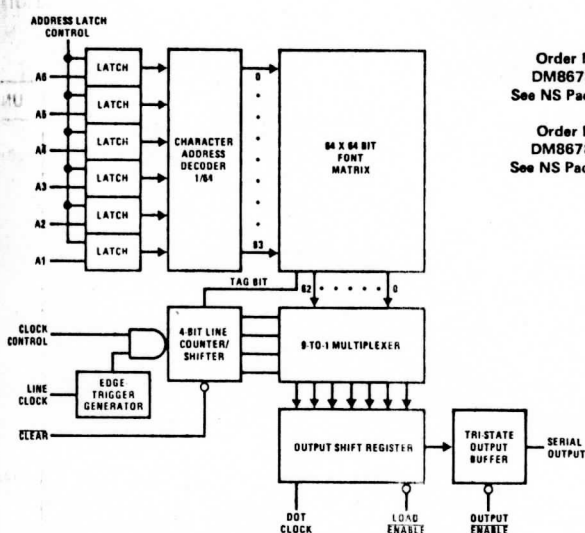
the character addresses "fall through" the latch. And when the address latch control signal goes low, the character addresses are latched.
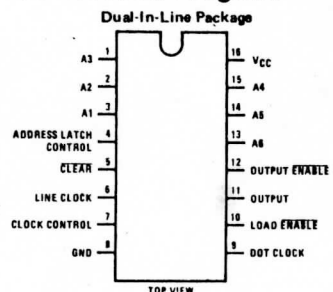
Features

- 64-character—row scan
- 5 x 7 or 7 x 9 font
- Shifted lower case descending characters
- Serial output
- 16-pin package
- 16 MHz min clock rate
- On-chip input latches
- On-chip shift register
- On-chip dot blanking
- On-chip row blanking
- TRI-STATE® output

	ROW SCAN	7 x 9	5 x 7	FONT	PACKAGE
DM8678BWF	X	X		Upper Case Block Letters	N, J
DM8678CAE	X	X		Shifted Lower Case Block	N, J
DM8678CAB	X		X	Upper Case Block Letters	N, J
DM8678CAH	X		X	Shifted Lower Case Block	N, J
DM8678CAD	X	X		Kata Kana	N, J
DM8678BTK	X	X		Upper Case Script Letters	N, J
DM8678CAS	X	X		IBM 3741 Selectric	N, J

Block Diagram

Connection Diagram

Dual-In-Line Package

Order Number
DM8678XXX/J
See NS Package J16A

Order Number
DM8678XXX/N
See NS Package N16A

Logic Symbol