


Decoder/Demultiplexer Single 3-to-8 16-Pin PDIP Tube

Manufacturer:	Texas Instruments, Inc
Package/Case:	DIP
Product Type:	Logic ICs
RoHS:	RoHS Compliant/Lead free 
Lifecycle:	Active



Images are for reference only

[Inquiry](#)

General Description

These Schottky-clamped TTL MSI circuits are designed to be used in high-performance memory decoding or data-routing applications requiring very short propagation delay times. In high-performance memory systems, these decoders can be used to minimize the effects of system decoding. When employed with high-speed memories utilizing a fast enable circuit, the delay times of these decoders and the enable time of the memory are usually less than the typical access time of the memory. This means that the effective system delay introduced by the Schottky-clamped system decoder is negligible.

The 'LS138, SN54S138, and SN74S138A decode one of eight lines dependent on the conditions at the three binary select inputs and the three enable inputs. Two active-low and one active-high enable inputs reduce the need for external gates or inverters when expanding. A 24-line decoder can be implemented without external inverters and a 32-line decoder requires only one inverter. An enable input can be used as a data input for demultiplexing applications. All of these decoder/demultiplexers feature fully buffered inputs, each of which represents only one normalized load to its driving circuit. All inputs are clamped with high-performance Schottky diodes to suppress line-ringing and to simplify system design.

The SN54LS138 and SN54S138 are characterized for operation over the full military temperature range of -55°C to 125°C. The SN74LS138 and SN74S138A are characterized for operation from 0°C to 70°C.

Key Features

Designed Specifically for High-Speed:
Memory Decoders

Data Transmission Systems

3 Enable Inputs to Simplify Cascading and/or Data Reception

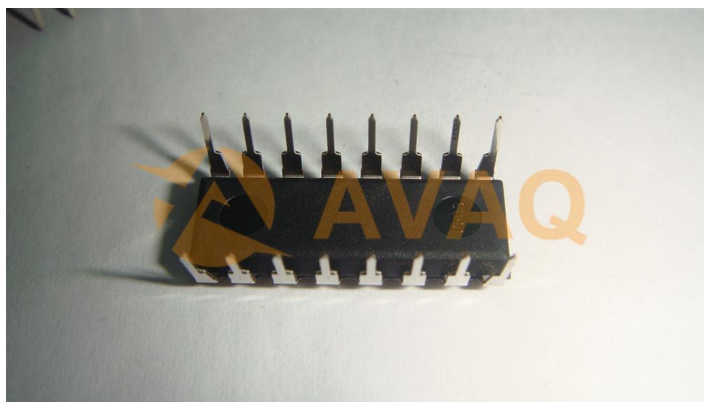
Schottky-Clamped for High Performance

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Recommended For You

SN74S38N

Texas Instruments, Inc

DIP

SN7438N

Texas Instruments, Inc

DIP14

SN75462P

Texas Instruments, Inc

DIP8

SN74F08D

Texas Instruments, Inc

SOP-14

SN74LS257BN

Texas Instruments, Inc

DIP16

SN75452BP

Texas Instruments, Inc

DIP8

SN74LS245DW

Texas Instruments, Inc

SOP20

SN74LS74AN

Texas Instruments, Inc

DIP

SN74S74N

Texas Instruments, Inc

DIP

SN7406N

Texas Instruments, Inc

DIP-14

SN74CBTLV3257D

Texas Instruments, Inc

SOP-16P

SN74HC138DR

Texas Instruments, Inc

SOP16

SN74LS14N

Texas Instruments, Inc

DIP

SN74HC139N

Texas Instruments, Inc

DIP

SN74AVC16T245DGGR

Texas Instruments, Inc

TSSOP48