

## Device Information

HCS138MS

[Printer Friendly Version](#)**Decoder/Demultiplexer, 3-to-8, Inverter, Rad-Hard, High-Speed, CMOS, Logic**[Get Datasheet](#)

### Ordering Information

Part No.	Status	Temp.	Package	MSL	SMD	Price US \$	
HCS138DMSR	Active	-	<a href="#">16 Ld SBDIP</a>	N/A	5962R9572701VEC	Contact Us	<a href="#">Buy</a>
HCS138HMSR	Active	-	<a href="#">Other</a>	N/A	-	Contact Us	<a href="#">Buy</a>
HCS138KMSR	Active	-	<a href="#">16 Ld FlatPack</a>	N/A	5962R9572701VXC	Contact Us	<a href="#">Buy</a>

**The price listed is the manufacturer's suggested retail price for quantities between 100 and 999 units. However, prices in today's market are fluid and may change without notice.**

**MSL** = Moisture Sensitivity Level - per IPC/JEDEC J-STD-020

**SMD** = Standard Microcircuit Drawing

### Description

The Intersil HCS138MS is a Radiation Hardened 3-to-8 line Decoder/Demultiplexer. The outputs are active in the low state. Two active low and one active high enables (E1, E2, E3) are provided. If the device is enabled, the binary inputs (A0, A1, A2) determine which one of the eight normally high outputs will go to a low logic level.

The HCS138MS utilizes advanced CMOS/SOS technology to achieve high-speed operation. This device is a member of radiation hardened, high-speed, CMOS/SOS Logic Family.

The HCS138MS is supplied in a 16 lead Ceramic flatpack (K suffix) or a SBDIP Package (D suffix).

### Key Features

- 3 Micron Radiation Hardened SOS CMOS
- Total Dose 200K RAD (Si)
- SEP Effective LET No Upsets: >100 MEV-cm<sup>2</sup>/mg
  - Single Event Upset (SEU) Immunity < 2 x 10<sup>-9</sup> Errors/ Bit-Day (Typ)
  - Dose Rate Survivability: >1 x 10<sup>12</sup> RAD (Si)/s
  - Latch-Up Free Under Any Conditions
  - Fanout (Over Temperature Range)
    - Standard Outputs - 10 LSTTL Loads
  - Military Temperature Range: -55oC to +125oC
  - Significant Power Reduction Compared to LSTTL ICs
  - DC Operating Voltage Range: 4.5V to 5.5V
  - Input Logic Levels
    - VIL = 0.3 VCC Max
    - VIH = 0.7 VCC Min
  - Input Current Levels Ii d 5μA at VOL, VOH

### Related Documentation



## Datasheet(s):

- [Radiation Hardened Inverting 3-to-8 Line Decoder/Demultiplexer](#)



## Military SMD(s):

- [Radiation Hardened Inverting 3-to-8 Line Decoder/Demultiplexer](#)

**Parametric Data**

RH Level

200

**Related Devices**[Parametric Table](#)[ACS138MS](#)

3 to 8 Line Decoder/Demultiplexer, Rad-Hard, Advanced Logic, CMOS

[HCTS138MS](#)

Decoder/Demultiplexer, 3-to-8, Inverter, TTL Inputs, Rad-Hard, High-Speed, CMOS, Logic

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