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ICM7228

8-Digit, Microprocessor-Compatible, LED Display Decoder Driver

August 1997

Features

- Improved 2nd Source to Maxim ICM7218
- Fast Write Access Time of 200ns
- Multiple Microprocessor Compatible Versions
- · Hexadecimai, Code B and No Decode Modes
- · Individual Segment Control with "No Decode" Feature
- · Digit and Segment Drivers On-Chip
- Non-Overlapping Digits Drive
- Common Anode and Common Cathode LED Versions
- Low Power CMOS Architecture
- Single 5V Supply

Applications

- Instrumentation
- Test Equipment
- Hand Held Instruments
- Bargraph Displays
- Numeric and Non-Numeric Panel Displays
- High and Low Temperature Environments where LCD Display integrity is Compromised

Description

The Harris !CM7228 display driver interfaces microprocessors to an 8-digit, 7-segment, numeric LED display. Included on chip are two types of 7-segment decoder, multiplex scan circuitry, LED display segment drivers, LED display digit drivers and an 8-byte static memory as display RAM.

Data can be written to the ICM7228A and ICM7228B's display RAM in sequential 8-digit update or in single-digit update format. Data is written to the ICM7228C and ICM7228D display RAM in parallel random access format. The ICM7228A and ICM7228C drive common anode displays. The ICM7228B and ICM7228D drive common cathode displays. All versions can display the RAM data as either Hexadecimal or Code B format. The ICM7228A and ICM7228B incorporate a No Decode mode allowing each bit of each digit's RAM word to drive individual display segments resulting in independent control of all display segments. As a result, bargraph and other irregular display segments and formats can be driven directly by this chip.

The Harris ICM7228 is an alternative to both the Maxim ICM7218 and the Harris ICM7218 display drivers. Notice that the ICM7228A/B has an additional single digit access mode. This could make the Harris ICM7218A/B software incompatible with ICM7228A/B operation.

Ordering Information

PART NUMBER	DATA ENTRY PROTOCOL	DISPLAY TYPE	TEMP. RANGE (°C)	PACKAGE	PKG. NO.
ICM7228AIPI	Sequential	Common Anode	-40 to 85	28 Ld PDIP	E28.6
ICM7228BIPI	Sequential	Common Cathode	-40 to 85	28 Ld PDIP	E28.6
ICM7228CIPI	Random	Common Anode	-40 to 85	28 Ld PDIP	E28.6
ICM7228DIPI	Random	Common Cathode	-40 to 85	28 Ld PDIP	E28.6
ICM7228AIJI	Sequential	Common Anode	-40 to 85	28 Ld CERDIP	F28.6
ICM7228BIJI	Sequential	Common Cathode	-40 to 85	28 Ld CERDIP	F28.6
ICM7228CIJI	Random	Common Anode	-40 to 85	28 Ld CERDIP	F28.6
ICM7228DIJI	Random	Common Cathode	-40 to 85	28 Ld CERDIP	F28.6
ICM7228AIBI	Sequential	Common Anode	-40 to 85	28 Ld SOIC	M28.3
ICM7228BIBI	Sequential	Common Cathode	-40 to 85	28 Ld SOIC	M28.3
ICM7228CIBI	Random	Common Anode	-40 to 85	28 Ld SOIC	M28.3
ICM7228DIBI	Random	Common Cathode	-40 to 85	28 Ld SOIC	M28.3
ICM7228AMJI883B	Sequential	Common Anode	-55 to 125	28 Ld CERDIP	F28.6
ICM7228BMJI883B	Sequential	Common Cathode	-55 to 125	28 Ld CERDIP	F28.6
ICM7228CMJI883B	Random	Common Anode	-55 to 125	28 Ld CERDIP	F28.6
ICM7228DMJI883B	Random	Common Cathode	-55 to 125	28 Ld CERDIP	F28.6

