

### Low Noise, Low Power, I<sup>2</sup>C® Bus, 128 Taps

The ISL22326WMVEP integrates two digitally controlled potentiometers (XDCCP) and non-volatile memory on a monolithic CMOS integrated circuit.

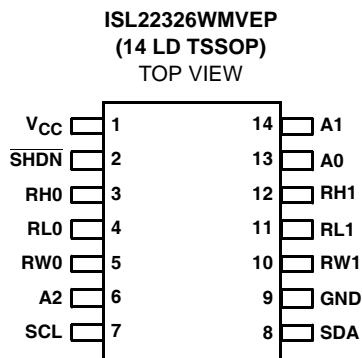
The digitally controlled potentiometers are implemented with a combination of resistor elements and CMOS switches. The position of the wipers are controlled by the user through the I<sup>2</sup>C bus interface. Each potentiometer has an associated volatile Wiper Register (WR) and a non-volatile Initial Value Register (IVR) that can be directly written to and read by the user. The contents of the WR controls the position of the wiper. At power-up, the device recalls the contents of the two DCCP's IVR to the corresponding WRs.

The DCCPs can be used as three-terminal potentiometers or as two-terminal variable resistors in a wide variety of applications including control, parameter adjustments and signal processing.

### Device Information

The specifications for an Enhanced Product (EP) device are defined in a Vendor Item Drawing (VID), which is controlled by the Defense Supply Center in Columbus (DSCC). "Hot-links" to the applicable VID and other supporting application information are provided on our website.

### Pinout



### Features

- Specifications per DSCC VID V62/08604-01XE
- Full Mil-Temp Electrical Performance from -55°C to +125°C
- Controlled Baseline with One Wafer Fabrication Site and One Assembly/Test Site
- Full Homogeneous Lot Processing in Wafer Fab
- No Combination of Wafer Fabrication Lots in Assembly
- Full Traceability Through Assembly and Test by Date/Trace Code Assignment
- Enhanced Process Change Notification
- Enhanced Obsolescence Management
- Eliminates Need for Up-Screening a COTS Component
- Two Potentiometers in One Package
- 128 Resistor Taps
- I<sup>2</sup>C Serial Interface
  - Three Address Pins, Up To Eight Devices/Bus
- Non-volatile Storage of Wiper Position
- Wiper Resistance: 70Ω Typical @ 3.3V
- Shutdown Mode
- Shutdown Current 5μA Max
- Power Supply: 2.7V to 5.5V
- 10kΩ Total Resistance
- High Reliability
  - Endurance: 1,000,000 Data Changes Per Bit Per Register
  - Register Data Retention:
    - 10 years @ T ≤ +125°C
    - 15 years @ T ≤ +90°C
    - 50 years @ T ≤ +55°C
- 14 Ld TSSOP

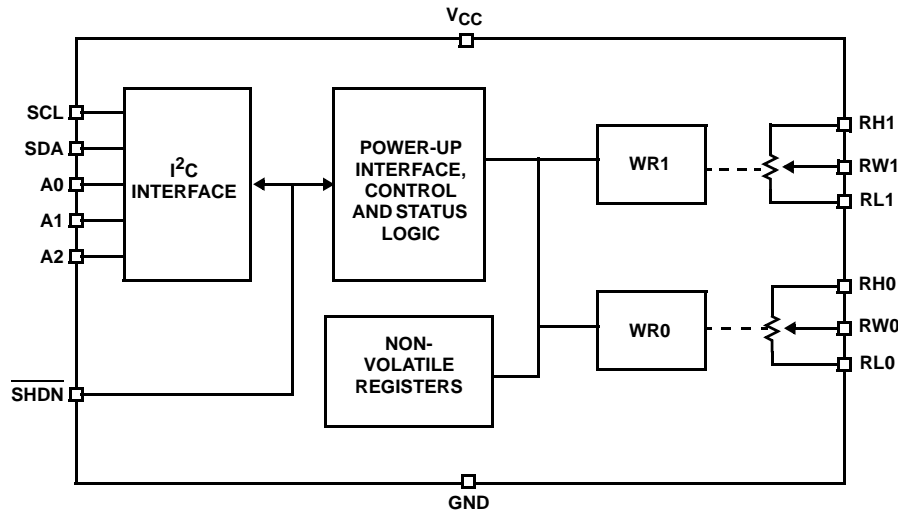
### Ordering Information

VENDOR PART NUMBER (Notes 1, 2)	VENDOR ITEM DRAWING	PART MARKING	RESISTANCE OPTION (kΩ)	TEMP. RANGE (°C)	PACKAGE	PKG. DWG. #
ISL22326WMVEP	V62/08604-01XE	22326 WMVEP	10	-55 to +125	14 Ld TSSOP	M14.173

#### NOTES:

1. Add "-TK" suffix for tape and reel. Please refer to TB347 for details on reel specifications.
2. Devices must be procured to the VENDOR PART NUMBER.

## Block Diagram



## Pin Descriptions

TSSOP PIN	SYMBOL	DESCRIPTION
1	V <sub>CC</sub>	Power supply pin
2	$\overline{\text{SHDN}}$	Shutdown active low input
3	RH0	"High" terminal of DCP0
4	RL0	"Low" terminal of DCP0
5	RW0	"Wiper" terminal of DCP0
6	A2	Device address input for the I²C interface
7	SCL	Open drain I²C interface clock input
8	SDA	Open drain Serial data I/O for the I²C interface
9	GND	Device ground pin
10	RW1	"Wiper" terminal of DCP1
11	RL1	"Low" terminal of DCP1
12	RH1	"High" terminal of DCP1
13	A0	Device address input for the I²C interface
14	A1	Device address input for the I²C interface

