

Table 3. ISL72027CSEH Die Layout X-Y Coordinates

Pad Number	Pad Name	X (μm)	Y (μm)	X	Y
1	DNC	90.0	90.0	901.4	1365.6
2	DNC	90.0	90.0	767.4	1365.6
3	DNC	90.0	90.0	-183.23	1365.6
4	DNC	90.0	90.0	-333.25	1365.6
5	DNC	90.0	90.0	-483.25	1365.6
6	DNC	90.0	90.0	-633.25	1365.6
7	DNC	90.0	90.0	-783.25	1365.6
8	DNC	90.0	90.0	-933.25	1365.6
9	D	110.0	110.0	-931.1	901.85
10	DNC	110.0	110.0	-931.1	563.25
11	GND	110.0	180.0	-931.1	342.25
12	GND_ESD	110.0	110.05	-931.1	119.42
13	VCC	110.0	180.0	-931.1	-115.05
14	VCC_VREF	110.0	180.05	-931.1	-371.08
15	R	110.0	180.0	-931.1	-1350.0
16	DNC	90.0	90.0	-711.1	-1394.95
17	DNC	90.0	90.0	-561.1	-1394.95
18	DNC	90.0	90.0	-411.1	-1394.95
19	DNC	90.0	90.0	-261.1	-1394.95
20	DNC	90.0	90.0	-111.1	-1394.95
21	DNC	90.0	90.0	38.9	-1394.95
22	DNC	110.0	110.0	756.9	-1307.3
23	VREF	110.0	180.0	775.3	-1072.3
24	CANL	110.0	180.0	772.1	2.15
25	CANH	110.0	180.05	772.1	343.33
26	RS	110.0	180.0	848.1	1140.6

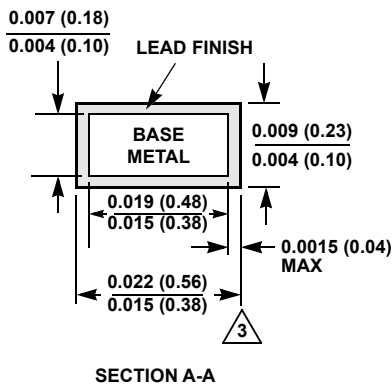
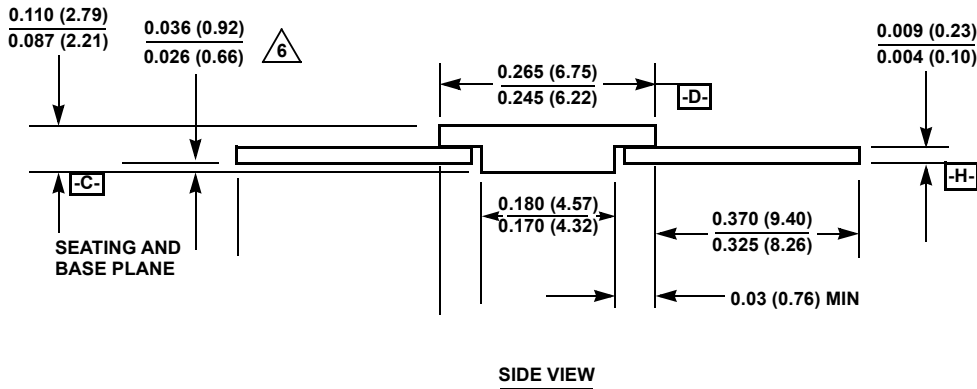
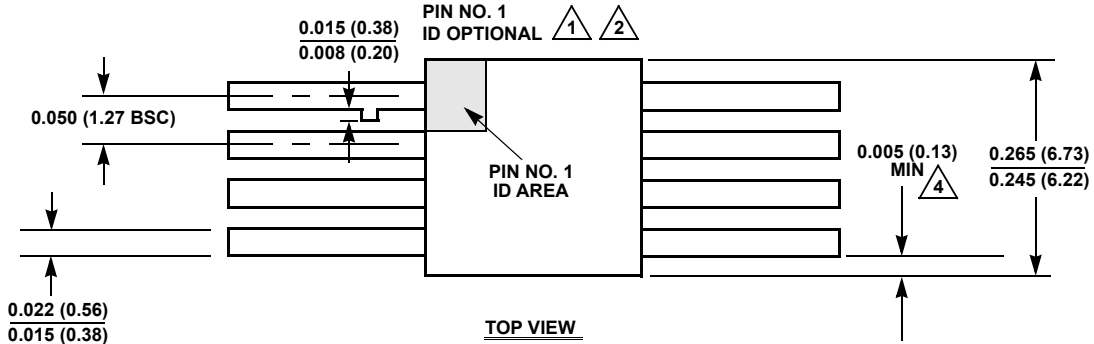
6. Package Outline Drawing

For the most recent package outline drawing, see [K8.A](#).

K8.A

8 Lead Ceramic Metal Seal Flatpack Package

Rev 4, 12/14



NOTES:

1. Index area: A notch or a pin one identification mark shall be located adjacent to pin one and shall be located within the shaded area shown. The manufacturer's identification shall not be used as a pin one identification mark. Alternately, a tab may be used to identify pin one.
2. If a pin one identification mark is used in addition to or instead of a tab, the limits of the tab dimension do not apply.
3. The maximum limits of lead dimensions (section A-A) shall be measured at the centroid of the finished lead surfaces, when solder dip or tin plate lead finish is applied.
4. Measure dimension at all four corners.
5. For bottom-brazed lead packages, no organic or polymeric materials shall be molded to the bottom of the package to cover the leads.
6. Dimension shall be measured at the point of exit (beyond the meniscus) of the lead from the body. Dimension minimum shall be reduced by 0.0015 inch (0.038mm) maximum when solder dip lead finish is applied.
7. Dimensioning and tolerancing per ANSI Y14.5M - 1982.
8. Controlling dimension: INCH.

7. Ordering Information

Ordering/SMD Number ^[1]	Part Number ^[2]	Radiation Hardness (Total Ionizing Dose)	Package Description (RoHS Compliant)	Pkg. Dwg. #	Temp Range
5962R1522811VXC	ISL72027CSEHVF	HDR to 100krad(Si) LDR to 75krad(Si)	8 Ld Ceramic Flatpack	K8.A	-55 to +125(°C)
N/A	ISL72027CSEHF/PROTO ^[3]	N/A			
5962R1522811V9A	ISL72027CSEHVX ^[4]	HDR to 100krad(Si) LDR to 75krad(Si)	Die	--	
N/A	ISL72027CSEHX/SAMPLE ^{[3][4]}	N/A			
N/A	ISL72027CSEHEVAL1Z ^[5]	Evaluation Board			

- Specifications for Radiation Tolerant QML devices are controlled by the Defense Logistics Agency Land and Maritime (DLA). The SMD numbers listed must be used when ordering.
- These Pb-free Hermetic packaged products employ 100% Au plate -e4 termination finish, which is RoHS compliant and compatible with both SnPb and Pb-free soldering operations.
- The /PROTO and /SAMPLE are not rated or certified for Total Ionizing Dose (TID) or Single Event Effect (SEE) immunity. These parts are intended for engineering evaluation purposes only. The /PROTO parts meet the electrical limits and conditions over-temperature specified in the DLA SMD and are in the same form and fit as the qualified device. The /SAMPLE die is capable of meeting the electrical limits and conditions specified in the DLA SMD at +25°C only. The /SAMPLE is a die and does not receive 100% screening over-temperature to the DLA SMD electrical limits. These part types do not come with a Certificate of Conformance because there is no Radiation Assurance testing and they are not DLA qualified devices.
- Die product tested at $T_A = +25^\circ\text{C}$. The wafer probe test includes functional and parametric testing sufficient to make the die capable of meeting the electrical performance outlined in [Electrical Specifications](#).
- Evaluation boards utilize the /PROTO parts and /PROTO parts are not rated or certified for Total Ionizing Dose (TID) or Single Event Effect (SEE) immunity.

Table 4. ISL7202xCSEH Product Family Feature Table

Specification	ISL72026CSEH	ISL72027CSEH	ISL72028CSEH
Loopback Feature	Yes	No	No
VREF Output	No	Yes	Yes
Listen Mode	Yes	Yes	No
Shutdown Mode	No	No	Yes
VTHRLM	900mV (maximum)	900mV (maximum)	N/A
VTHFLM	325mV (minimum)	325mV (minimum)	N/A
VHYSLM	40mV (minimum)	40mV (minimum)	N/A
Supply Current, Listen Mode	2mA (maximum)	2mA (maximum)	N/A
Supply Current, Shutdown Mode	N/A	N/A	50µA (maximum)
VREF Leakage Current	N/A	±25µA (maximum)	±25µA (maximum)

Table 5. Product Family Comparison for Optimal Data Rate and Total Dose Radiation Testing

Specification	ISL7202xSEH	ISL7202xASEH	ISL7202xBSEH	ISL7202xCSEH
Data Rate: RS = 0V	1Mbps	1Mbps	1Mbps	1Mbps
Data Rate: RS = 10k Ω	250kbps	500kbps	250kbps	500kbps
Data Rate: RS = 50k Ω	125kbps	250kbps	125kbps	250kbps
High Dose Rate (HDR) -100krad(Si) Testing	No	No	Yes	Yes
Low Dose Rate (LDR) -75krad(Si) Testing	Yes	Yes	Yes	Yes

8. Revision History

Rev.	Date	Description
1.01	Oct 26, 2023	Applied latest template and formatting. Updated the "Pin Descriptions" table on page 4: Change Pin 6 name to CANL and Pin 7 name to CANH to match the Pin Configuration diagram. On page 10 for Output Rise Time tr2 and Output Fall Time tf2 changed the Test Condition From: (medium speed - 50000kbps), To: (medium speed - 500kbps). Removed Related Literature section. Updated the ordering information table: Added Radiation information; Added Note 4.
1.00	Aug 11, 2017	Page 10: Changed the limit for Propagation Delay High to Low t _{PDHL2} from 650ns to 600ns. Page 10: Changed the limit for Total Loop Delay, Driver Input to Receiver Output, Dominant to Recessive t _(LOOP2) for RS = 10k Ω from 750ns to 700ns.
0.00	Apr 3, 2017	Initial Release