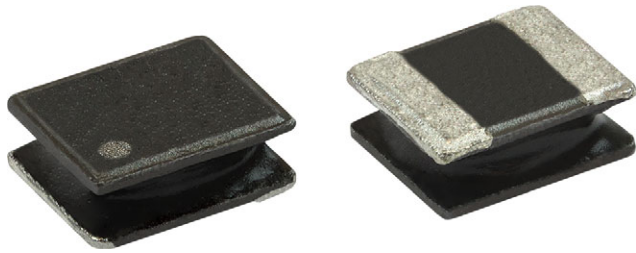


## Semi-Shielded, Low Profile, SMD Power Inductors



### FEATURES

- 2.5 mm x 2.0 mm x 1.0 mm max. SMD package
- Semi-shielded, metal based construction for stable saturation
- Low profile inductors from 0.24  $\mu\text{H}$  to 4.7  $\mu\text{H}$
- Unique low core loss and high saturation performance
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**  
**GREEN**  
(5-2008)

### LINKS TO ADDITIONAL RESOURCES



Product Page

### APPLICATIONS

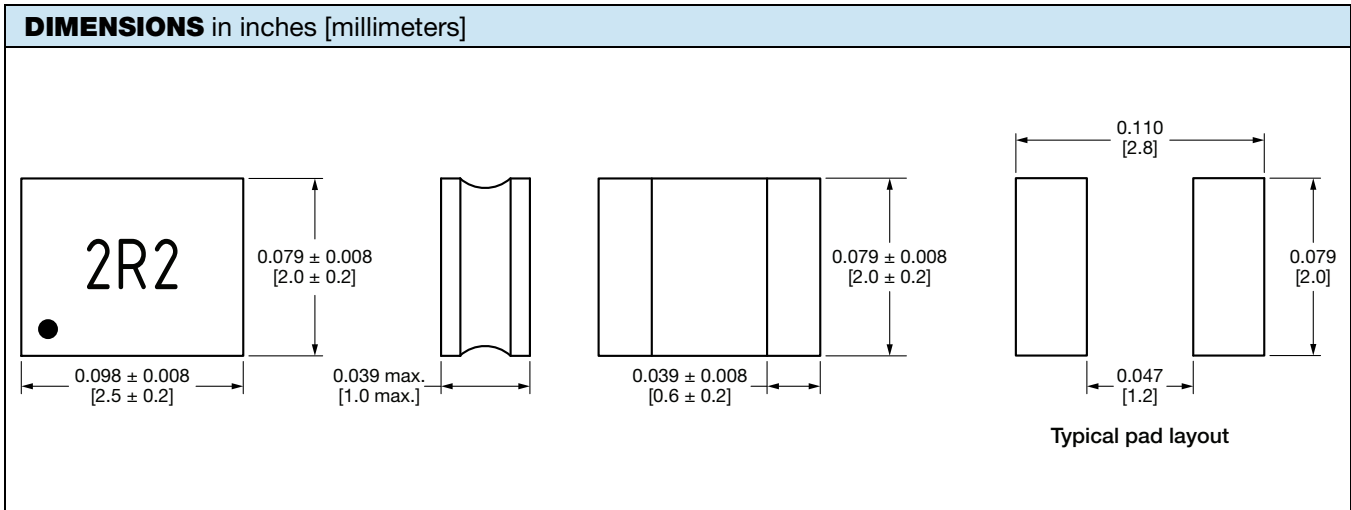
- DC/DC power supplies in smartphones, virtual reality headsets
- Noise suppression and filtering
- Portable and hand held devices
- HDD and SSD storage

### STANDARD ELECTRICAL SPECIFICATIONS

| PART NUMBER      | L <sub>0</sub><br>INDUCTANCE<br>( $\mu\text{H}$ ) | INDUCTANCE<br>TOLERANCE<br>(%) | DCR TYP.<br>25 °C<br>(m $\Omega$ ) | DCR MAX.<br>25 °C<br>(m $\Omega$ ) | HEAT RATING<br>CURRENT DC TYP.<br>I <sub>DC</sub><br>(A) <sup>(1)</sup> | SATURATION<br>CURRENT DC TYP.<br>I <sub>SAT</sub><br>(A) <sup>(2)</sup> | SRF<br>MIN.<br>(MHz) |
|------------------|---|--------------------------------|------------------------------------|------------------------------------|---|---|----------------------|
| IMSC1008AZERR24M | 0.24  | 20                             | 15                                 | 18                                 | 5.65  | 9.9   | 148                  |
| IMSC1008AZERR33M | 0.33  | 20                             | 18                                 | 22                                 | 5.15  | 9   | 115                  |
| IMSC1008AZERR47M | 0.47  | 20                             | 25                                 | 30                                 | 4.4   | 7.2   | 100                  |
| IMSC1008AZER1R0M | 1   | 20                             | 42                                 | 50                                 | 3.7   | 4.8   | 54                   |
| IMSC1008AZER1R5M | 1.5   | 20                             | 60                                 | 68                                 | 2.9   | 3.95  | 39                   |
| IMSC1008AZER2R2M | 2.2   | 20                             | 83                                 | 93                                 | 2.45  | 2.95  | 32                   |
| IMSC1008AZER3R3M | 3.3   | 20                             | 110                                | 130                                | 2.1   | 2.2   | 27                   |
| IMSC1008AZER4R7M | 4.7   | 20                             | 160                                | 180                                | 1.75  | 1.8   | 23                   |

#### Notes

- All test data is referenced to 25 °C ambient
  - Test condition: 1 MHz, 1 V
  - Operating temperature range -40 °C to +125 °C
- (1) DC current (A) that will cause an approximate  $\Delta T$  of 40 °C  
 (2) DC current (A) that will cause L<sub>0</sub> to drop approximately 30 %



| DESCRIPTION |                  |                      |              |                                |
|-------------|------------------|----------------------|--------------|--------------------------------|
| IMSC1008AZ  | 2.2 μH           | ± 20 %               | ER           | e3                             |
| MODEL       | INDUCTANCE VALUE | INDUCTANCE TOLERANCE | PACKAGE CODE | JEDEC® LEAD (Pb)-FREE STANDARD |

| GLOBAL PART NUMBER |             |                    |                  |                      |
|--------------------|-------------|--------------------|------------------|----------------------|
| I M S C            | 1 0 0 8 A Z | E R                | 2 R 2            | M                    |
| PRODUCT FAMILY     | SIZE        | PACKAGE CODE       | INDUCTANCE VALUE | INDUCTANCE TOLERANCE |
|                    |             | ER = tape and reel | 2R2 = 2.2 μH     | M = ± 20 %           |



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