

# ISC1812ESR22K Datasheet

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DiGi Electronics Part Number	ISC1812ESR22K-DG
Manufacturer	<a href="#">Vishay Dale</a>
Manufacturer Product Number	ISC1812ESR22K
Description	FIXED IND 220NH 441MA 360MOHM SM
Detailed Description	220 nH Shielded Wirewound Inductor 441 mA 360m Ohm Max 1812 (4532 Metric)



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## Purchase and inquiry

Manufacturer Product Number:

ISC1812ESR22K

Series:

ISC-1812

Type:

Wirewound

Inductance:

220 nH

Current Rating (Amps):

441 mA

Shielding:

Shielded

Q @ Freq:

30 @ 25.2MHz

Ratings:

-

Inductance Frequency - Test:

25.2 MHz

Package / Case:

1812 (4532 Metric)

Size / Dimension:

0.177" L x 0.126" W (4.50mm x 3.20mm)

Manufacturer:

Vishay Dale

Product Status:

Active

Material - Core:

Non-Magnetic

Tolerance:

±10%

Current - Saturation (Isat):

-

DC Resistance (DCR):

360mOhm Max

Frequency - Self Resonant:

310MHz

Operating Temperature:

-55°C ~ 125°C

Mounting Type:

Surface Mount

Supplier Device Package:

1812

Height - Seated (Max):

0.134" (3.40mm)

## Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8504.50.8000

Moisture Sensitivity Level (MSL):

1 (Unlimited)

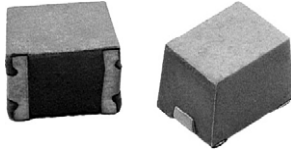
ECCN:

EAR99





# Wirewound, Surface-Mount, Molded, Shielded Inductors



STANDARD ELECTRICAL SPECIFICATIONS						
IND. (μH)	TOL.	TEST FREQ. (MHz)	Q MIN.	SRF MIN. (MHz)	DCR MAX. (Ω)	RATED DC CURRENT (mA) <sup>(1)</sup>
		L & Q				
0.10	± 20 %	25.2	30	460	0.23	552
0.12	± 20 %	25.2	30	400	0.26	519
0.15	± 20 %	25.2	30	390	0.29	491
0.18	± 20 %	25.2	30	350	0.32	468
0.22	± 20 %	25.2	30	310	0.36	441
0.33	± 20 %	25.2	30	280	0.40	418
0.39	± 20 %	25.2	30	240	0.45	394
0.47	± 20 %	25.2	30	215	0.60	342
0.56	± 20 %	25.2	30	205	0.75	306
0.68	± 20 %	25.2	30	195	0.80	296
0.82	± 20 %	25.2	30	165	0.95	271
0.8	± 20 %	25.2	30	155	1.20	242
1.0	± 10 %	7.96	30	140	0.35	447
1.2	± 10 %	7.96	30	120	0.38	429
1.5	± 10 %	7.96	30	100	0.40	418
1.8	± 10 %	7.96	30	90.0	0.43	403
2.2	± 10 %	7.96	30	80.0	0.46	390
2.7	± 10 %	7.96	30	67.0	0.49	378
3.3	± 10 %	7.96	30	61.0	0.55	357
3.9	± 10 %	7.96	30	56.0	0.59	344
4.7	± 10 %	7.96	30	50.0	0.62	336
5.6	± 10 %	7.96	30	40.0	0.69	333
6.8	± 10 %	7.96	30	32.0	0.75	306
8.2	± 10 %	7.96	30	30.0	0.82	292
10.0	± 10 %	2.52	50	25.0	0.90	279
12.0	± 10 %	2.52	50	22.0	1.00	265
15.0	± 10 %	2.52	50	18.0	1.10	252
18.0	± 10 %	2.52	50	15.0	1.24	238
22.0	± 10 %	2.52	50	14.0	1.36	227
27.0	± 10 %	2.52	40	13.0	1.56	212
33.0	± 10 %	2.52	40	12.0	1.72	202
39.0	± 10 %	2.52	40	11.0	1.89	192
47.0	± 10 %	2.52	40	9.0	2.10	183
56.0	± 10 %	2.52	40	8.0	2.34	173
68.0	± 10 %	2.52	40	7.6	2.60	164
82.0	± 10 %	2.52	40	7.2	2.86	156
100.0	± 10 %	0.796	40	7.0	3.25	147
120.0	± 10 %	0.796	40	6.0	3.64	139
150.0	± 10 %	0.796	40	5.0	4.16	130
180.0	± 10 %	0.796	40	4.5	5.72	111
220.0	± 10 %	0.796	40	4.2	6.30	105
270.0	± 10 %	0.796	40	4.0	6.90	101
330.0	± 10 %	0.796	40	3.7	7.54	96
390.0	± 10 %	0.796	40	3.5	8.20	92
470.0	± 10 %	0.796	40	3.3	9.20	87
560.0	± 10 %	0.796	30	2.8	10.50	82
680.0	± 10 %	0.796	40	2.6	12.00	76
820.0	± 10 %	0.796	30	2.2	13.50	72
1000.0	± 10 %	0.252	30	2.0	16.00	66

**Note**

(1) Rated DC current based on the maximum temperature rise, not to exceed 40 °C at +85 °C ambient

**FEATURES**

- Molded construction provides superior strength and moisture resistance
- Tape and reel packaging for automatic handling, 2000/reel, EIA-481
- Compatible with vapor phase and infrared reflow soldering
- Shielded construction minimizes coupling to other components
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



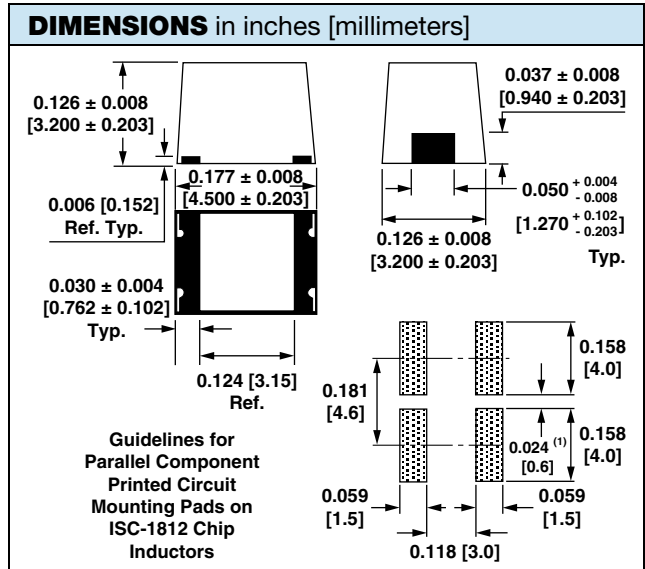
**RoHS COMPLIANT**  
HALOGEN FREE

**ELECTRICAL SPECIFICATIONS**

**Inductance range:** 0.10 μH to 1000 μH  
**Special tolerances available upon request**  
**Operating temperature:** -55 °C to +125 °C  
**Coilform material:** non-magnetic for 0.10 μH to 0.82 μH; powdered iron for 1.0 μH to 22 μH; ferrite for 27 μH to 1000 μH

**TEST EQUIPMENT**

- H/P 4342A Q meter with Vishay Dale test fixture or equivalent
- H/P 4191A RF impedance analyzer (for SRF measurements)
- Wheatstone bridge



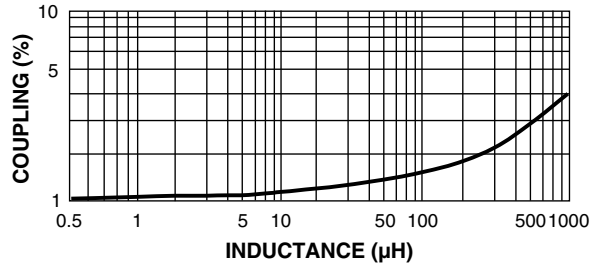
**Note**

(1) Recommended minimum spacing between components

PART MARKING	
-	Vishay Dale
-	Inductance code
-	Date code



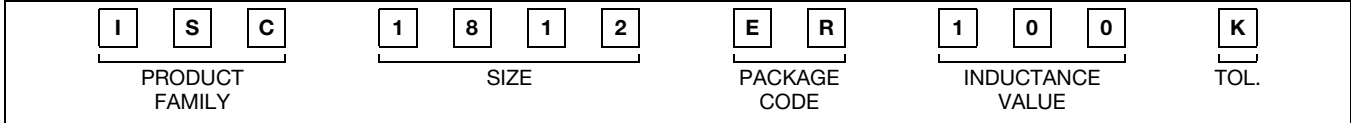
**COUPLING SPECIFICATIONS** (maximum)



**DESCRIPTION**

ISC-1812	10 µH	± 10 %	ER	e3
MODEL	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	PACKAGE CODE	JEDEC® LEAD (Pb)-FREE STANDARD

**GLOBAL PART NUMBER**





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