

Inductors, Epoxy Conformal Coated, Uniform Roll Coated, Axial Leaded



ELECTRICAL SPECIFICATIONS

Inductance Tolerance: $\pm 5\%$, $\pm 10\%$, $\pm 20\%$

Other tolerances available on request

Insulation Resistance: 1000 M Ω minimum per MIL-STD-202, method 302, test condition B

Operating Temperature: - 55 °C to + 105 °C

MATERIAL SPECIFICATIONS

Coating: Epoxy-uniform roll coated

Lead: Tinned copper

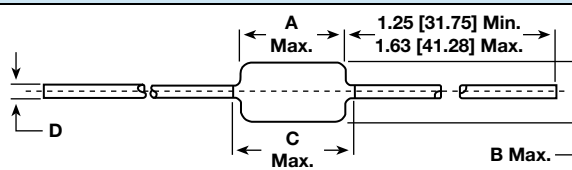
Core: Ferrite

MECHANICAL SPECIFICATIONS

Terminal Strength: 5 pounds pull per MIL-STD-202, method 211, test condition A

Weight: IRF-1 = 0.3 g maximum

IRF-3 = 0.6 g maximum

DIMENSIONS in inches [millimeters]				
				
MODEL	A (MAX.)	B (MAX.)	C (MAX.)	D
IRF-1	0.260 [6.60]	0.120 [3.05]	0.330 [8.38]	0.0200 $\pm$ 0.0015 [0.508 $\pm$ 0.038]
IRF-3	0.385 [9.78]	0.170 [4.32]	0.410 [10.41]	0.025 $\pm$ 0.002 [0.635 $\pm$ 0.051]

FEATURES

- Flame-retardant coating
- Color band identification
- Uniform coating is excellent for automatic insertion
- Available in bulk, ammo and reel pack per EIA RS/296
- Superior electrical specifications high Q and self resonant frequency, low DC resistance, high rated DC current
- Compliant to RoHS Directive 2002/95/EC



RoHS
COMPLIANT

TEST EQUIPMENT ⁽¹⁾

- H/P 4342A Q-meter
- Measurements corporation megacycle meter, model 59
- Wheatstone bridge

Note

⁽¹⁾ Test procedures per MIL-PRF-15305

ENVIRONMENTAL PERFORMANCE		
TEST	CONDITIONS	SPECIFICATIONS
Flammability	-	MIL-STD-202, method 111
Overload	-	MIL-PRF-15305
Resistance to Soldering Heat	A	MIL-STD-202, method 210
Resistance to Solvents	-	MIL-STD-202, method 215

STANDARD ELECTRICAL SPECIFICATIONS							
MODEL	IND. (μ H)	TOL. (%)	Q MIN.	TEST FREQUENCY L AND Q (MHz)	SRF MIN. (MHz) ⁽¹⁾	DCR MAX. (Ω)	RATED DC CURRENT (mA) ⁽²⁾
IRF-1	0.10	± 20	40	25.0	400.0	0.06	1350
IRF-1	0.12	± 20	40	25.0	400.0	0.06	1270
IRF-1	0.15	± 20	40	25.0	400.0	0.07	1200
IRF-1	0.18	± 20	40	25.0	400.0	0.075	1155
IRF-1	0.22	± 20	40	25.0	380.0	0.075	1150
IRF-1	0.27	± 20	40	25.0	360.0	0.08	1110
IRF-1	0.33	± 20	40	25.0	350.0	0.08	1110
IRF-1	0.39	± 20	40	25.0	320.0	0.09	1000
IRF-1	0.47	± 20	40	25.0	300.0	0.10	1000
IRF-1	0.56	± 20	40	25.0	280.0	0.11	950
IRF-1	0.68	± 20	40	25.0	250.0	0.12	900
IRF-1	0.82	± 20	40	25.0	200.0	0.12	900
IRF-1	1.0	± 10	50	25.0	180.0	0.15	815
IRF-1	1.2	± 10	50	7.9	165.0	0.18	740
IRF-1	1.5	± 10	50	7.9	150.0	0.20	700

Notes

⁽¹⁾ Measured with full length lead

⁽²⁾ Rated DC current based on maximum temperature rise of 15 °C at + 90 °C ambient

**STANDARD ELECTRICAL SPECIFICATIONS**

MODEL	IND. (μ H)	TOL. (%)	Q MIN.	TEST FREQUENCY L AND Q (MHz)	SRF MIN. (MHz) ⁽¹⁾	DCR MAX. (Ω)	RATED DC CURRENT (mA) ⁽²⁾
IRF-1	1.8	± 10	50	7.9	125.0	0.23	655
IRF-1	2.2	± 10	50	7.9	115.0	0.25	630
IRF-1	2.7	± 10	50	7.9	100.0	0.28	595
IRF-1	3.3	± 10	50	7.9	90.0	0.30	575
IRF-1	3.9	± 10	50	7.9	80.0	0.32	555
IRF-1	4.7	± 10	50	7.9	75.0	0.35	530
IRF-1	5.6	± 10	50	7.9	65.0	0.40	500
IRF-1	6.8	± 10	50	7.9	60.0	0.45	470
IRF-1	8.2	± 10	50	7.9	55.0	0.55	425
IRF-1	10.0	± 10	50	7.9	50.0	0.72	370
IRF-1	12.0	± 10	50	2.5	40.0	0.80	350
IRF-1	15.0	± 10	50	2.5	35.0	0.88	335
IRF-1	18.0	± 10	50	2.5	30.0	1.0	315
IRF-1	22.0	± 10	50	2.5	25.0	1.2	285
IRF-1	27.0	± 10	50	2.5	20.0	1.35	270
IRF-1	33.0	± 10	50	2.5	24.0	1.5	255
IRF-1	39.0	± 10	50	2.5	22.0	1.7	240
IRF-1	47.0	± 10	60	2.5	20.0	2.3	205
IRF-1	56.0	± 10	60	2.5	18.0	2.6	195
IRF-1	68.0	± 10	60	2.5	15.0	2.9	185
IRF-1	82.0	± 10	60	2.5	14.0	3.2	175
IRF-1	100.0	± 10	60	2.5	13.0	3.5	165
IRF-1	120.0	± 10	60	0.79	5.40	3.8	160
IRF-1	150.0	± 10	60	0.79	4.75	4.4	150
IRF-1	180.0	± 10	60	0.79	4.35	5.0	140
IRF-1	220.0	± 10	60	0.79	4.0	5.7	130
IRF-1	270.0	± 10	60	0.79	3.70	6.5	120
IRF-1	330.0	± 10	60	0.79	3.40	9.5	100
IRF-1	390.0	± 10	60	0.79	2.80	10.5	95
IRF-1	470.0	± 10	60	0.79	2.55	11.6	90
IRF-1	560.0	± 10	60	0.79	2.35	13.0	85
IRF-1	680.0	± 10	60	0.79	2.0	18.0	75
IRF-1	820.0	± 10	60	0.79	1.85	23.0	65
IRF-1	1000.0	± 10	60	0.79	1.40	26.0	60
IRF-3	0.22	± 20	55	25.0	380.0	0.10	1400
IRF-3	0.27	± 20	55	25.0	340.0	0.11	1320
IRF-3	0.33	± 20	55	25.0	300.0	0.12	1280
IRF-3	0.39	± 20	55	25.0	280.0	0.13	1200
IRF-3	0.47	± 20	55	25.0	250.0	0.14	1150
IRF-3	0.56	± 20	55	25.0	230.0	0.15	1100
IRF-3	0.68	± 20	55	25.0	210.0	0.16	1030
IRF-3	0.82	± 20	55	25.0	172.0	0.17	980
IRF-3	1.0	± 10	55	25.0	157.0	0.19	920
IRF-3	1.2	± 10	50	7.9	144.0	0.21	880
IRF-3	1.5	± 10	50	7.9	131.0	0.23	830
IRF-3	1.8	± 10	55	7.9	121.0	0.25	790
IRF-3	2.2	± 10	55	7.9	110.0	0.28	750
IRF-3	2.7	± 10	60	7.9	100.0	0.30	720
IRF-3	3.3	± 10	65	7.9	94.0	0.34	670
IRF-3	3.9	± 10	65	7.9	86.0	0.37	640
IRF-3	4.7	± 10	70	7.9	80.0	0.39	620
IRF-3	5.6	± 10	70	7.9	74.0	0.43	590
IRF-3	6.8	± 10	75	7.9	68.0	0.48	550
IRF-3	8.2	± 10	80	7.9	53.0	0.52	530
IRF-3	10.0	± 10	85	7.9	45.0	0.58	500
IRF-3	12.0	± 10	75	2.5	42.0	0.63	480
IRF-3	15.0	± 10	70	2.5	40.0	0.72	460
IRF-3	18.0	± 10	65	2.5	34.0	0.77	430
IRF-3	22.0	± 10	60	2.5	30.0	0.84	410
IRF-3	27.0	± 10	55	2.5	25.0	0.94	390
IRF-3	33.0	± 10	55	2.5	19.0	1.03	370
IRF-3	39.0	± 10	50	2.5	14.5	1.12	350

Notes⁽¹⁾ Measured with full length lead⁽²⁾ Rated DC current based on maximum temperature rise of 15 °C at + 90 °C ambient

**STANDARD ELECTRICAL SPECIFICATIONS**

MODEL	IND. (μ H)	TOL. (%)	Q MIN.	TEST FREQUENCY L AND Q (MHz)	SRF MIN. (MHz) ⁽¹⁾	DCR MAX. (Ω)	RATED DC CURRENT (mA) ⁽²⁾
IRF-3	47.0	± 10	45	2.5	13.0	1.22	340
IRF-3	56.0	± 10	40	2.5	12.0	1.34	320
IRF-3	68.0	± 10	40	2.5	11.0	1.47	305
IRF-3	82.0	± 10	35	2.5	10.3	1.62	290
IRF-3	100.0	± 10	30	2.5	9.5	1.8	275
IRF-3	120.0	± 10	70	0.79	3.8	3.7	185
IRF-3	150.0	± 10	70	0.79	3.5	4.2	175
IRF-3	180.0	± 10	70	0.79	3.3	4.6	165
IRF-3	220.0	± 10	70	0.79	3.0	5.1	155
IRF-3	270.0	± 10	70	0.79	2.8	5.8	145
IRF-3	330.0	± 10	70	0.79	2.6	6.4	137
IRF-3	390.0	± 10	65	0.79	2.4	7.0	133
IRF-3	470.0	± 10	65	0.79	2.25	7.7	126
IRF-3	560.0	± 10	65	0.79	2.1	8.5	120
IRF-3	680.0	± 10	65	0.79	1.95	9.4	113
IRF-3	820.0	± 10	65	0.79	1.85	10.5	105
IRF-3	1000.0	± 10	65	0.79	1.4	14.0	100

Notes⁽¹⁾ Measured with full length lead⁽²⁾ Rated DC current based on maximum temperature rise of 15 °C at + 90 °C ambient**ORDERING INFORMATION**

IRF-1	10 μ H	± 10 %	ER	e2
MODEL	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	PACKAGE CODE	JEDEC LEAD (Pb)-FREE STANDARD

GLOBAL PART NUMBER

I	R	F	0	1	E	R	1	0	0	K
MODEL					PACKAGE CODE		INDUCTANCE VALUE			INDUCTANCE TOLERANCE



Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and/or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.

Material Category Policy

Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as RoHS-Compliant fulfill the definitions and restrictions defined under Directive 2011/65/EU of The European Parliament and of the Council of June 8, 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (EEE) - recast, unless otherwise specified as non-compliant.

Please note that some Vishay documentation may still make reference to RoHS Directive 2002/95/EC. We confirm that all the products identified as being compliant to Directive 2002/95/EC conform to Directive 2011/65/EU.

Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as Halogen-Free follow Halogen-Free requirements as per JEDEC JS709A standards. Please note that some Vishay documentation may still make reference to the IEC 61249-2-21 definition. We confirm that all the products identified as being compliant to IEC 61249-2-21 conform to JEDEC JS709A standards.