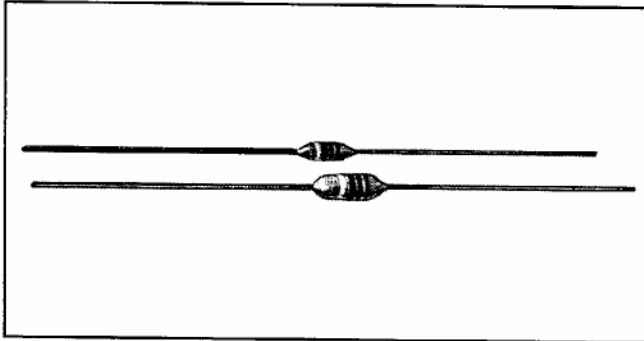


# MODEL IR Inductors

## Epoxy Conformal Coated Uniform Roll Coated



### FEATURES

- Flame-retardant coating
- Color band identification
- Excellent environmental characteristics
- Uniform coating is excellent for automatic insertion
- Comparable in quality to molded chokes at a lower price
- Epoxy coating is more durable than lacquer coated models, yet is priced comparably

### ELECTRICAL SPECIFICATIONS

**Inductance Tolerance:**  $\pm 1\%$ ,  $\pm 3\%$ ,  $\pm 5\%$ ,  $\pm 10\%$ ,  $\pm 20\%$ .  
Other tolerances available on request.

**Insulation Resistance:** 1000 Megohm minimum per MIL-STD-202, Method 302, Test Condition B.

**Dielectric Strength:** 1000 VAC per MIL-STD-202, Method 301.

### MATERIAL SPECIFICATIONS

**Coating:** Epoxy-uniform roll coated.

**Lead:** Tinned copper.

### MECHANICAL SPECIFICATIONS

**Terminal Strength:** 5 pounds pull per MIL-STD-202, Method 211, Test Condition A.

**Weight:** IR-2 = .30 gram maximum.  
IR-4 = .65 gram maximum.

### TEST EQUIPMENT\*

- H/P 4342A Q-Meter.
- Measurements Corporation Megacycle Meter, Model 59.
- Wheatstone bridge.

\* Test procedures per MIL-C-15305.

DIMENSIONAL CONFIGURATIONS				
[Numbers in brackets indicate millimeters]				
MODEL	A (Max.)	B (Max.)	C (Max.)	D
IR-2	.260 [6.60]	.120 [3.05]	.330 [8.38]	.0200 $\pm$ .0015 [.508 $\pm$ .038]
IR-4	.385 [9.78]	.180 [4.57]	.440 [11.18]	.025 $\pm$ .002 [.635 $\pm$ .051]

ENVIRONMENTAL PERFORMANCE		
TEST	CONDITIONS	SPECIFICATIONS
Barometric Pressure	Test Condition C	MIL-STD-202, Method 105
Thermal Shock	Test Condition A-1	MIL-STD-202, Method 107
Flammability	—	MIL-STD-202, Method 111
Overload	—	MIL-C-15305
Low Temperature Storage	—	MIL-C-15305
Resistance to Soldering Heat	Test Condition A	MIL-STD-202, Method 210
Resistance to Solvents	—	MIL-STD-202, Method 215

MAXIMUM TEMPERATURE RISE				
		OPERATING TEMPERATURE RANGE	OPERATING TEMPERATURE RANGE	
IR-2	.1 $\mu$ H to 1.0 $\mu$ H = + 35°C @ + 90°C ambient.	- 55°C to + 125°C	IR-4	
	1.2 $\mu$ H to 27 $\mu$ H = + 15°C @ + 90°C ambient.	- 55°C to + 105°C		
	33 $\mu$ H to 1000 $\mu$ H = + 15°C @ + 90°C ambient.	- 55°C to + 105°C		
			.15 $\mu$ H to 4.7 $\mu$ H = + 35°C @ + 90°C ambient.	- 55°C to + 125°C
			5.6 $\mu$ H to 33 $\mu$ H = + 15°C @ + 90°C ambient.	- 55°C to + 105°C
			36 $\mu$ H to 240 $\mu$ H = + 15°C @ + 90°C ambient.	- 55°C to + 105°C
			270 $\mu$ H to 1800 $\mu$ H = + 35°C @ + 90°C ambient.	- 55°C to + 125°C

**MODEL IR**

STANDARD ELECTRICAL SPECIFICATIONS								
MODEL	IND. (μH)	TOL.	Q MIN.	TEST FREQ. L & Q (MHz)	SELF-RESONANT* FREQ. MIN. (MHz)	DCR MAX. (Ohms)	RATED** DC CURRENT (mA)	
IR-2	.10	± 10%	40	25.0	680.0	.08	1350	PHENOLIC CORE
IR-2	.12	± 10%	40	25.0	640.0	.09	1270	
IR-2	.15	± 10%	38	25.0	600.0	.10	1200	
IR-2	.18	± 10%	35	25.0	550.0	.12	1105	
IR-2	.22	± 10%	33	25.0	510.0	.14	1025	
IR-2	.27	± 10%	33	25.0	430.0	.16	960	
IR-2	.33	± 10%	30	25.0	410.0	.22	815	
IR-2	.39	± 10%	30	25.0	365.0	.30	700	
IR-2	.47	± 10%	30	25.0	330.0	.35	650	
IR-2	.56	± 10%	30	25.0	300.0	.50	545	
IR-2	.68	± 10%	28	25.0	275.0	.60	495	
IR-2	.82	± 10%	28	25.0	250.0	.85	415	
IR-2	1.0	± 10%	25	25.0	230.0	1.0	385	
IR-2	1.2	± 10%	25	7.9	150.0	.18	590	IRON CORE
IR-2	1.5	± 10%	28	7.9	140.0	.22	535	
IR-2	1.8	± 10%	30	7.9	125.0	.30	455	
IR-2	2.2	± 10%	30	7.9	115.0	.40	395	
IR-2	2.7	± 10%	37	7.9	100.0	.55	355	
IR-2	3.3	± 10%	45	7.9	90.0	.85	270	
IR-2	3.9	± 10%	45	7.9	80.0	1.0	250	
IR-2	4.7	± 10%	45	7.9	75.0	1.2	230	
IR-2	5.6	± 10%	50	7.9	65.0	1.8	185	
IR-2	6.8	± 10%	50	7.9	60.0	2.0	175	
IR-2	8.2	± 10%	55	7.9	55.0	2.7	155	
IR-2	10.0	± 10%	55	7.9	50.0	3.7	130	
IR-2	12.0	± 10%	45	2.5	40.0	2.7	155	
IR-2	15.0	± 10%	40	2.5	35.0	2.8	150	
IR-2	18.0	± 10%	50	2.5	30.0	3.1	145	
IR-2	22.0	± 10%	50	2.5	25.0	3.3	140	
IR-2	27.0	± 10%	50	2.5	20.0	3.5	135	
IR-2	33.0	± 10%	45	2.5	24.0	3.4	130	FERRITE CORE
IR-2	39.0	± 10%	45	2.5	22.0	3.6	125	
IR-2	47.0	± 10%	45	2.5	20.0	4.5	110	
IR-2	56.0	± 10%	45	2.5	18.0	5.7	100	
IR-2	68.0	± 10%	50	2.5	15.0	6.7	92	
IR-2	82.0	± 10%	50	2.5	14.0	7.3	88	
IR-2	100.0	± 10%	50	2.5	13.0	8.0	84	
IR-2	120.0	± 10%	30	.79	12.0	13.0	66	
IR-2	150.0	± 10%	30	.79	11.0	15.0	61	
IR-2	180.0	± 10%	30	.79	10.0	17.0	57	
IR-2	220.0	± 10%	30	.79	9.0	21.0	52	
IR-2	270.0	± 10%	30	.79	8.0	25.0	47	
IR-2	330.0	± 10%	30	.79	7.0	28.0	45	
IR-2	390.0	± 10%	30	.79	6.5	35.0	40	
IR-2	470.0	± 10%	30	.79	6.0	42.0	36	
IR-2	560.0	± 10%	30	.79	5.0	46.0	35	
IR-2	680.0	± 10%	30	.79	4.0	60.0	30	
IR-2	820.0	± 10%	30	.79	3.8	65.0	29	
IR-2	1000.0	± 10%	30	.79	3.4	72.0	28	
IR-4	.15	± 20%	50	25.0	525.0	.03	2450	PHENOLIC CORE
IR-4	.22	± 20%	50	25.0	450.0	.055	1810	
IR-4	.33	± 20%	45	25.0	360.0	.09	1400	
IR-4	.47	± 20%	45	25.0	310.0	.12	1225	
IR-4	.56	± 10%	50	25.0	280.0	.135	1150	
IR-4	.68	± 10%	50	25.0	250.0	.15	1100	
IR-4	.82	± 10%	50	25.0	220.0	.22	900	
IR-4	1.0	± 10%	50	25.0	200.0	.29	785	
IR-4	1.2	± 10%	33	7.9	180.0	.42	650	
IR-4	1.5	± 10%	33	7.9	160.0	.50	600	
IR-4	1.8	± 10%	33	7.9	150.0	.65	525	
IR-4	2.2	± 10%	33	7.9	135.0	.95	435	
IR-4	2.7	± 10%	33	7.9	120.0	1.20	385	
IR-4	3.3	± 10%	33	7.9	110.0	2.0	300	
IR-4	3.9	± 10%	33	7.9	100.0	2.30	280	
IR-4	4.7	± 10%	33	7.9	90.0	2.60	260	

\* Measured with full length lead. \*\* Rated DC Current based on maximum temperature rise as shown in table.

**MODEL IR**

<b>STANDARD ELECTRICAL SPECIFICATIONS</b>							
MODEL	IND. ( $\mu$ H)	TOL.	Q MIN.	TEST FREQ. L & Q (MHz)	SELF-RESONANT* FREQ. MIN. (MHz)	DCR MAX. (Ohms)	RATED** DC CURRENT (mA)
IR-4	5.6	$\pm 10\%$	45	7.9	60.0	.32	495
IR-4	6.8	$\pm 10\%$	50	7.9	55.0	.50	395
IR-4	8.2	$\pm 10\%$	50	7.9	50.0	.60	360
IR-4	10.0	$\pm 10\%$	55	7.9	45.0	.90	290
IR-4	12.0	$\pm 10\%$	65	2.5	42.0	1.10	265
IR-4	15.0	$\pm 10\%$	65	2.5	40.0	1.40	240
IR-4	18.0	$\pm 10\%$	75	2.5	34.0	2.25	185
IR-4	22.0	$\pm 10\%$	75	2.5	30.0	2.50	175
IR-4	27.0	$\pm 10\%$	60	2.5	25.0	2.60	170
IR-4	33.0	$\pm 10\%$	65	2.5	19.0	3.0	165
IR-4	36.0	$\pm 5\%$	60	2.5	15.5	2.50	180
IR-4	39.0	$\pm 5\%$	60	2.5	14.5	2.60	176
IR-4	43.0	$\pm 5\%$	60	2.5	13.7	2.70	172
IR-4	47.0	$\pm 5\%$	55	2.5	13.0	2.75	170
IR-4	51.0	$\pm 5\%$	55	2.5	12.7	2.85	167
IR-4	56.0	$\pm 5\%$	55	2.5	12.0	3.0	164
IR-4	62.0	$\pm 5\%$	55	2.5	11.5	3.15	160
IR-4	68.0	$\pm 5\%$	55	2.5	11.0	3.30	156
IR-4	75.0	$\pm 5\%$	55	2.5	10.5	3.70	147
IR-4	82.0	$\pm 5\%$	50	2.5	10.3	3.90	143
IR-4	91.0	$\pm 5\%$	50	2.5	10.0	4.30	136
IR-4	100.0	$\pm 5\%$	50	2.5	9.5	4.50	133
IR-4	110.0	$\pm 5\%$	60	.79	8.9	4.90	128
IR-4	120.0	$\pm 5\%$	65	.79	8.7	5.20	124
IR-4	130.0	$\pm 5\%$	65	.79	8.5	5.45	121
IR-4	150.0	$\pm 5\%$	65	.79	8.0	6.05	114
IR-4	160.0	$\pm 5\%$	65	.79	7.5	6.40	111
IR-4	180.0	$\pm 5\%$	65	.79	7.0	6.75	108
IR-4	200.0	$\pm 5\%$	65	.79	6.5	7.10	106
IR-4	220.0	$\pm 5\%$	65	.79	6.2	7.45	103
IR-4	240.0	$\pm 5\%$	65	.79	5.9	7.80	101
IR-4	270.0	$\pm 5\%$	65	.79	5.7	11.0	129
IR-4	300.0	$\pm 5\%$	65	.79	5.4	11.5	125
IR-4	330.0	$\pm 5\%$	65	.79	5.1	12.0	123
IR-4	360.0	$\pm 5\%$	65	.79	4.8	15.5	108
IR-4	390.0	$\pm 5\%$	65	.79	4.5	16.3	105
IR-4	430.0	$\pm 5\%$	65	.79	4.2	17.1	102
IR-4	470.0	$\pm 5\%$	65	.79	3.9	17.9	100
IR-4	510.0	$\pm 5\%$	65	.79	3.7	18.8	98
IR-4	560.0	$\pm 5\%$	65	.79	3.5	24.7	85
IR-4	620.0	$\pm 5\%$	65	.79	3.3	25.9	83
IR-4	680.0	$\pm 5\%$	55	.79	3.1	27.2	81
IR-4	750.0	$\pm 5\%$	55	.79	2.9	28.6	79
IR-4	820.0	$\pm 5\%$	55	.79	2.7	30.0	77
IR-4	910.0	$\pm 5\%$	55	.79	2.5	31.5	76
IR-4	1000.0	$\pm 5\%$	55	.79	2.3	33.1	74
IR-4	1100.0	$\pm 5\%$	30	.25	2.1	43.5	64
IR-4	1200.0	$\pm 5\%$	30	.25	2.0	45.7	63
IR-4	1300.0	$\pm 5\%$	30	.25	1.9	49.0	61
IR-4	1500.0	$\pm 5\%$	30	.25	1.8	52.5	59
IR-4	1600.0	$\pm 5\%$	30	.25	1.7	54.0	58
IR-4	1800.0	$\pm 5\%$	30	.25	1.6	56.7	56

IRON CORE

\* Measured with full length lead. \*\* Rated DC Current based on maximum temperature rise as shown in table.

<b>HOW TO ORDER</b>		
<u>IR-2</u>	<u>10<math>\mu</math>H</u>	<u><math>\pm 10\%</math></u>
MODEL	INDUCTANCE VALUE	INDUCTANCE TOLERANCE