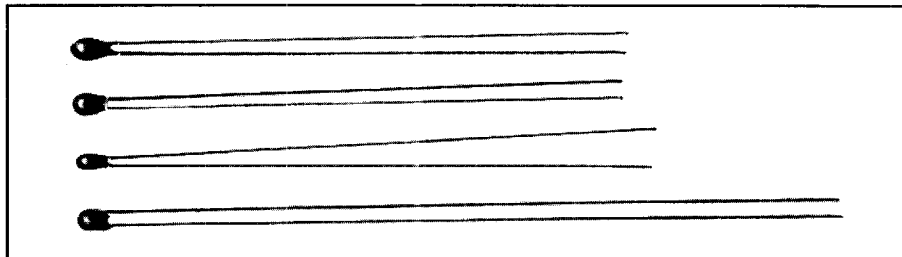


MODELS X, M, C, F, T, B

NTC Thermistors

Coated

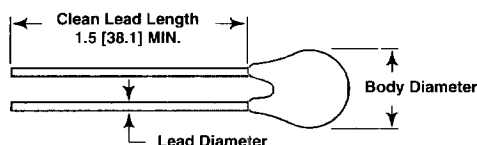


FEATURES

- Small size - conformal coated
- Wide resistance range
- Available in 11 different R-T curves
- Configured for standard P.C. board mounting or assembly in probes

STANDARD ELECTRICAL SPECIFICATIONS and DIMENSIONAL CONFIGURATIONS

[Numbers in brackets indicate millimeters]



Models X, M, C, F, T and B are conformally coated, leaded thermistors for standard P.C. board mounting or assembly in probes. The coating is baked-on phenolic for durability and long-term stability. Leads are solid tinned copper, except T models have solid nickel wires with Teflon[®] insulation to provide isolation when assembled in metal probes or housings.

	R ₂₅ (Ohms)	R ₇₀ (Ohms)	PART NUMBER	CURVE NUMBER	DISSIPATION CONSTANT (Nominal)	THERMAL TIME CONSTANT (Nominal)	BODY DIAMETER		LEAD DIAMETER
							(Max.)	(Min.)	
MODEL X ± 10%, ± 5% R ₇₀ tolerance. Leads solid tinned copper 1.8 ± .2 [45.7 ± 5.1] long.	19.68M	1.6M	13X1604	13	—	—	.095 [2.4]	.070 [1.8]	AWG30 (.0100)
	9.84M	800,000	13X8003	13	—	—	.095 [2.4]	.070 [1.8]	AWG28 (.0126)
	4.92M	400,000	13X4003	13	—	—	.100 [2.5]	.080 [2.0]	AWG28 (.0126)
	3.08M	250,000	13X2503	13	—	—	.125 [3.2]	.100 [2.5]	AWG28 (.0126)
	1.082M	130,000	12X1303	12	—	—	.095 [2.4]	.070 [1.8]	AWG30 (.0100)
	998.300	120,000	12X1203	12	—	—	.095 [2.4]	.070 [1.8]	AWG30 (.0100)
MODEL M ± 10%, ± 5%, ± 3%, ± 2%, ± 1% R ₂₅ tolerance. Leads solid tinned copper 1.8 ± .2 [45.7 ± 5.1] long AWG30 (.0100").	1.0M	—	12M1004*	12	—	—	.087 [2.2]	.061 [1.55]	—
	200,000	—	7M2003	7	2	12	.095 [2.4]	.070 [1.8]	—
	150,000	—	7M1503	7	—	—	.100 [2.5]	.075 [1.9]	—
	100,000	—	7M1003	7	—	—	.095 [2.4]	.070 [1.8]	—
	100,000	—	8M1003	8	—	—	.095 [2.4]	.070 [1.8]	—
	100,000	—	4M1003	4	2	12	.095 [2.4]	.070 [1.8]	—
	80,000	—	8M8002	8	—	—	.095 [2.4]	.070 [1.8]	—
	50,000	—	8M5002	8	—	—	.095 [2.4]	.070 [1.8]	—
	50,000	—	7M5002	7	—	—	.095 [2.4]	.070 [1.8]	—
	50,000	—	4M5002	4	2	10	.085 [2.2]	.060 [1.5]	—
	30,000	—	8M3002	8	—	—	.095 [2.4]	.070 [1.8]	—
	30,000	—	4M3002	4	2	10	.085 [2.2]	.060 [1.5]	—
	30,000	—	1M3002	1	—	—	.095 [2.4]	.070 [1.8]	—
	25,000	—	1M2502	1	—	—	.095 [2.4]	.070 [1.8]	—
	20,000	—	9M2002	9	2	10	.095 [2.4]	.070 [1.8]	—
	20,000	—	1M2002	1	—	—	.095 [2.4]	.070 [1.8]	—
	17,500	—	1M1752	1	—	—	.095 [2.4]	.070 [1.8]	—
	15,000	—	1M1502	1	—	—	.095 [2.4]	.070 [1.8]	—
	10,000	—	9M1002	9	2	12	.095 [2.4]	.070 [1.8]	—
	10,000	—	1M1002	1	2	10	.085 [2.2]	.060 [1.5]	—
	6,000	—	1M6001	1	2	10	.085 [2.2]	.060 [1.5]	—
	5,000	—	1M5001	1	2	10	.085 [2.2]	.060 [1.5]	—
	2,252	—	1M2251	1	3	12	.095 [2.4]	.070 [1.8]	—
	2,000	—	2M2001	2	3	12	.100 [2.5]	.075 [1.9]	—
	1,000	—	2M1001	2	3	12	.085 [2.2]	.060 [1.5]	—

* Available in ± 10% and 5% R₂₅ tolerance only.

MODELS X, M, C, F, T, B

STANDARD ELECTRICAL SPECIFICATIONS and DIMENSIONAL CONFIGURATIONS							
[Numbers in brackets indicate millimeters]	R25 (Ohms)	PART NUMBER	CURVE NUMBER	DISSIPATION CONSTANT (Nominal)	THERMAL TIME CONSTANT (Nominal)	BODY DIAMETER	
						(Max.)	(Min.)
MODEL C ± 10%, ± 5%, ± 3%, ± 2%, ± 1% R25 tolerance. Leads solid tinned copper 1.8 ± .2 [45.7 ± 5.1] long, AWG28 (.0126").	500,000	12C5003*	12	—	—	.102 [2.6]	.073 [1.9]
	250,000	12C2503*	12	—	—	.133 [3.4]	.102 [2.6]
	150,000	12C1503*	12	—	—	.163 [4.1]	.130 [3.3]
	100,000	12C1003*	12	—	—	.192 [4.9]	.157 [4.0]
	100,000	7C1003	7	3	12	.095 [2.4]	.070 [1.8]
	50,000	7C5002	7	3	12	.095 [2.4]	.070 [1.8]
	30,000	7C3002	7	—	—	.115 [2.9]	.090 [2.3]
	30,000	8C3002	8	—	—	.095 [2.4]	.070 [1.8]
	30,000	4C3002	4	2.5	12	.095 [2.4]	.070 [1.8]
	20,000	8C2002	8	—	—	.130 [3.3]	.100 [2.5]
	20,000	7C2002	7	—	—	.130 [3.3]	.105 [2.7]
	20,000	4C2002	4	3	12	.095 [2.4]	.070 [1.8]
	10,000	1C1002	1	3	12	.095 [2.4]	.070 [1.8]
	9,000	1C9001	1	3	12	.095 [2.4]	.070 [1.8]
	8,000	1C8001	1	3	12	.095 [2.4]	.070 [1.8]
	7,000	1C7001	1	3	12	.095 [2.4]	.070 [1.8]
	6,000	1C6001	1	3	12	.095 [2.4]	.070 [1.8]
	4,000	1C4001	1	3	12	.095 [2.4]	.070 [1.8]
	3,000	1C3001	1	3	12	.095 [2.4]	.070 [1.8]
	2,000	1C2001	1	3.5	16	.095 [2.4]	.070 [1.8]
	1,500	1C1501	1	—	—	.135 [3.4]	.110 [2.8]
	1,250	1C1251	1	—	—	.145 [3.7]	.120 [3.1]
	1,000	1C1001	1	—	—	.158 [4.0]	.128 [3.2]
	1,000	2C1001	2	3	12	.095 [2.4]	.075 [1.9]
	900	2C9000	2	3	12	.095 [2.4]	.075 [1.9]
	800	2C8000	2	3	12	.095 [2.4]	.075 [1.9]
	700	2C7000	2	3	12	.100 [2.5]	.075 [1.9]
	600	2C6000	2	3	12	.100 [2.5]	.075 [1.9]
	500	2C5000	2	3	12	.100 [2.5]	.075 [1.9]
	400	2C4000	2	—	—	.120 [3.1]	.095 [2.4]
	300	2C3000	2	—	—	.130 [3.3]	.105 [2.7]
	200	2C2000	2	3.5	18	.150 [3.8]	.120 [3.1]
	150	2C1500	2	—	—	.165 [4.2]	.135 [3.4]
	100	2C1000	2	4	20	.210 [5.3]	.180 [4.6]
	50	2C0500	2	—	—	.242 [6.9]	.242 [6.2]
MODEL F ± 10%, ± 5%, ± 3%, ± 2%, ± 1% R25 tolerance. Leads solid tinned copper 1.8 ± .2 [45.7 ± 5.1] long, AWG32 (.0080").	30,000	9F3002	9	0.8	5	.072 [1.8]	.050 [1.3]
	15,000	1F1502	1	0.8	5	.072 [1.8]	.050 [1.3]
	10,000	1F1002	1	0.8	5	.072 [1.8]	.050 [1.3]
	5,000	1F5001	1	0.8	7	.072 [1.8]	.050 [1.3]
MODEL T ± 10%, ± 5%, ± 3%, ± 2%, ± 1% R25 tolerance. Leads Teflon® insulated solid nickel 3 ± .25 [76.2 ± 6.4] long, AWG30 (.0100").	100,000	8T1003	8	—	—	.095 [2.4]	.070 [1.8]
	100,000	4T1003	4	—	—	.095 [2.4]	.070 [1.8]
	50,000	8T5002	8	—	—	.095 [2.4]	.070 [1.8]
	50,000	4T5002	4	—	—	.085 [2.2]	.060 [1.5]
	30,000	8T3002	8	—	—	.095 [2.4]	.070 [1.8]
	30,000	4T3002	4	2	12	.085 [2.2]	.060 [1.5]
	20,000	9T2002	9	2	12	.095 [2.4]	.070 [1.8]
	20,000	1T2002	1	—	—	.095 [2.4]	.070 [1.8]
	10,000	9T1002	9	2	14	.095 [2.4]	.075 [1.9]
	10,000	1T1002	1	2	12	.085 [2.2]	.060 [1.5]
	5,000	1T5001	1	2	12	.085 [2.2]	.060 [1.5]
	3,000	1T3001	1	2	13	.095 [2.4]	.070 [1.8]
	2,252	1T2251	1	2	14	.095 [2.4]	.070 [1.8]
MODEL B ± 10%, ± 5%, ± 3%, ± 2%, ± 1% R25 tolerance. Leads solid tinned copper 1.8 ± .2 [45.7 ± 5.1] long, AWG26 (.0159").	50,000	12B5002	12	—	—	.252 [6.4]	.216 [5.5]
	20,000	4B2002	4	—	—	.110 [2.8]	.090 [2.3]
	10,000	7B1002	7	—	—	.190 [4.8]	.150 [3.8]
	10,000	4B1002	4	—	—	.135 [3.4]	.110 [2.8]
	10,000	1B1002	1	—	—	.122 [3.1]	.085 [2.2]
	8,000	1B8001	1	—	—	.120 [3.1]	.080 [2.0]
	3,000	1B3001	1	—	—	.150 [3.8]	.110 [2.8]
	2,800	17B2801	17	—	—	.180 [4.6]	.150 [3.8]
	2,252	1B2251	1	—	—	.160 [4.1]	.115 [2.9]
	2,000	1B2001	1	—	—	.160 [4.1]	.115 [2.9]
	500	2B5000	2	—	—	.125 [3.2]	.085 [2.2]
	100	2B1000	2	—	—	.270 [6.9]	.220 [5.6]
	50	2B0500	2	—	—	.350 [8.9]	.295 [7.5]

* Available in ± 10% and 5% R25 tolerance only.

HOW TO ORDER

1 CURVE NUMBER	C MODEL	2001 VALUE	- 5 TOLERANCE AT 25°C*
		First three digits are significant. The last digit is the multiplier. (2000 ohm is illustrated.)	± 10% = (none) ± 5% = - 5 ± 3% = - 3 ± 2% = - 2 ± 1% = - 1

* Model X is toleranced at 70°C.

CHECKLIST FOR ORDERING FILM RESISTORS



ORDERS MUST HAVE COMPLETE INFORMATION INCLUDING THE FOLLOWING:

1. Resistor type and model number
2. Resistor wattage rating
3. Resistor value
4. Resistor tolerance
5. Temperature Coefficient
6. Special quantity of each item
7. Specify routing
8. Desired delivery
9. If you have a drawing covering the part, specify your part number and drawing number and supply a copy with the order. Including the Dale® specification number on your drawings will assure you of exact duplication on all future orders.
10. Priority rating under DMS regulations and contract number (if applicable).
11. Specify if Letter of Certification is required.
12. Prices on specific items and quantities will be quoted on request. Quantity of each item ordered at one time determines unit price for manufacturers' orders.

STANDARD DECADE RESISTANCE VALUES

The following table lists four established number series which are used as preferred values in electronic design. Each series is shown under an associated value of tolerance %. The number series under the 10% column is known as the E12 Series because there are 12 standard values within a decade range. 2% and 5% utilize the E24 Series, 1% uses E96 and .1%, .25% and .5% use E192. Successive values within a decade series are related (approximately) by a factor of $^{12}\sqrt{10}$ for the E12 Series, $^{24}\sqrt{10}$ for the E24 Series, $^{96}\sqrt{10}$ for the E96 Series and $^{192}\sqrt{10}$ for the E192 Series.

Use of standard values is encouraged because stocking programs are designed around them. However, intermediate values can be special ordered where permitted. Consult factory.

.1%, .25%, .5% 1%		.1%, .25%, .5% 1%		.1%, .25%, .5% 1%		.1%, .25%, .5% 1%		.1%, .25%, .5% 1%		.1%, .25%, .5% 1%		.1%, .25%, .5% 1%		2%, 5%	10%
10.0	10.0	13.3	13.3	17.8	17.8	23.7	23.7	31.6	31.6	42.2	42.2	56.2	56.2	10	10
10.1		13.5		18.0		24.0		32.0		42.7		56.9		11	—
10.2	10.2	13.7	13.7	18.2	18.2	24.3	24.3	32.4	32.4	43.2	43.2	57.6	57.6	12	12
10.4		13.8		18.4		24.6		32.8		43.7		58.3		13	—
10.5	10.5	14.0	14.0	18.7	18.7	24.9	24.9	33.2	33.2	44.2	44.2	59.0	59.0	15	15
10.6		14.2		18.9		25.2		33.6		44.8		59.7		16	—
10.7	10.7	14.3	14.3	19.1	19.1	25.5	25.5	34.0	34.0	45.3	45.3	60.4	60.4	18	18
10.9		14.5		19.3		25.8		34.4		45.9		61.2		20	—
11.0	11.0	14.7	14.7	19.6	19.6	26.1	26.1	34.8	34.8	46.4	46.4	61.9	61.9	22	22
11.1		14.9		19.8		26.4		35.2		47.0		62.6		24	—
11.3	11.3	15.0	15.0	20.0	20.0	26.7	26.7	35.7	35.7	47.5	47.5	63.4	63.4	27	27
11.4		15.2		20.3		27.1		36.1		48.1		64.2		30	—
11.5	11.5	15.4	15.4	20.5	20.5	27.4	27.4	36.5	36.5	48.7	48.7	64.9	64.9	33	33
11.7		15.6		20.8		27.7		37.0		49.3		65.7		36	—
11.8	11.8	15.8	15.8	21.0	21.0	28.0	28.0	37.4	37.4	49.9	49.9	66.5	66.5	39	39
12.0		16.0		21.3		28.4		37.9		50.5		67.3		43	—
12.1	12.1	16.2	16.2	21.5	21.5	28.7	28.7	38.3	38.3	51.1	51.1	68.1	68.1	47	47
12.3		16.4		21.8		29.1		38.8		51.7		69.0		51	—
12.4	12.4	16.5	16.5	22.1	22.1	29.4	29.4	39.2	39.2	52.3	52.3	69.8	69.8	56	56
12.6		16.7		22.3		29.8		39.7		53.0		70.6		62	—
12.7	12.7	16.9	16.9	22.6	22.6	30.1	30.1	40.2	40.2	53.6	53.6	71.5	71.5	68	68
12.9		17.2		22.9		30.5		40.7		54.2		72.3		75	—
13.0	13.0	17.4	17.4	23.2	23.2	30.9	30.9	41.2	41.2	54.9	54.9	73.2	73.2	82	82
13.2		17.6		23.4		31.2		41.7		55.6		74.1		91	—

Standard resistance values are obtained from the decade table by multiplying by powers of 10. As an example, 13.3 can represent ohms, 133 ohms, 1.33k, 13.3k, 133k, 1.33 Megohm.

Military Product Identification



MILITARY PART ORDERING EXAMPLES

To help in ordering, the following are representative samples of military part numbers cross-referenced to Dale® part numbers. For complete information, consult Military Specification Qualified Products List.

RESISTORS: Fixed and Variable

MIL-R-26E (Basic [RW]) (Established Reliability MIL-R-39007 [RWR])										1. Style 2. Characteristic 3. Resistance Value 4. Tolerance		1. Style 2. Characteristic 3. Value (Tolerance below 1 ohm 10%, 1 ohm and up 5%)	
RW80 $\frac{U}{1}$ $\frac{49R9}{2}$ $\frac{F}{3}$ = Dale Type G-3 49.9 ohm 1% $\frac{4}{4}$ RW69 $\frac{V}{1}$ $\frac{101}{2}$ $\frac{3}{3}$ = Dale Type CW-2C-1 100 ohm, 5% $\frac{3}{3}$													
MIL-R-10509F (Basic [RN]) (Established Reliability MIL-R-55182 [RNR])										1. Style 2. Characteristic - Temperature Coefficient 3. Resistance Value 4. Tolerance			
RN60 $\frac{D}{1}$ $\frac{1003}{2}$ $\frac{F}{3}$ = Dale Type CMF-60 T-1 100k 1% $\frac{4}{4}$													
MIL-R-18546D (Basic [RE]) (Established Reliability MIL-R-39009 [RER])										1. Style 2. Characteristic - Maximum continuous operating temperatures 3. Resistance Value		NOTE: 1% tolerance per Military Specification.	
RE65 $\frac{G}{1}$ $\frac{1001}{2}$ $\frac{3}{3}$ = Dale Type RH-10 1k $\frac{3}{3}$													
MIL-R-22684C (Basic [RL]) (Established Reliability MIL-R-39017 [RLR])										1. Style 2. Terminal 3. Resistance Value 4. Tolerance		NOTE: Parts will be color banded.	
RL07 $\frac{S}{1}$ $\frac{103}{2}$ $\frac{J}{3}$ = Dale Type CMF-07 10k 5% $\frac{4}{4}$													
MIL-R-22097F (Basic [RJ]) (Established Reliability MIL-R-39035 [RJR])										1. Style 2. Characteristic 3. Terminal 4. Resistance		NOTE: 10% tolerance per Military Specification.	
RJ24 $\frac{F}{1}$ $\frac{P}{2}$ $\frac{103}{3}$ $\frac{4}{4}$ = Techno Type 412 1k 10% $\frac{1,3}{4}$													
MIL-R-27208C (Basic [RT]) (Established Reliability MIL-R-39015 [RTR])										1. Style 2. Resistance - Temperature Characteristic 3. Temperature Characteristic		4. Terminal 5. Resistance	
RT24 $\frac{C}{1}$ $\frac{2}{2}$ $\frac{P}{3}$ $\frac{102}{4}$ $\frac{5}{5}$ = Techno Type 126S 1k 5% $\frac{1,4}{5}$												NOTE: 5% tolerance per Military Specification.	
MIL-R-39007G (Established Reliability [RWR]) (Basic - MIL-R-26 [RW])										1. Style 2. Terminal 3. Resistance Value 4. Tolerance		5. Failure Rate Level	
RWR74 $\frac{S}{1}$ $\frac{10R1}{2}$ $\frac{F}{3}$ $\frac{R}{4}$ $\frac{5}{5}$ = Dale Type ESS-5 10.1 ohm 1% $\frac{R}{5}$													
MIL-R-39009C (Established Reliability [RER]) (Basic - MIL-R-18546 [RE])										1. Style 2. Tolerance 3. Resistance Value 4. Failure Rate Level			
RER65 $\frac{F}{1}$ $\frac{1001}{2}$ $\frac{R}{3}$ $\frac{4}{4}$ = Dale Type ERH-10 1% 1k $\frac{R}{4}$													
MIL-R-39015C (Established Reliability [RTR]) (Basic - MIL-R-27208 [RT])										1. Style 2. Characteristic 3. Terminal 4. Resistance 5. Failure Rate Level			
RTR24 $\frac{D}{1}$ $\frac{2}{2}$ $\frac{P}{3}$ $\frac{102}{4}$ $\frac{R}{5}$ = Techno Type M39015/3 007 $\frac{P}{3}$ $\frac{R}{5}$												NOTE: 5% tolerance per Military Specification.	
MIL-R-39017E (Established Reliability [RLR]) (Basic - MIL-R-22684 [RL])										1. Style 2. Terminal Type 3. Resistance Value 4. Tolerance		5. Failure Rate Level	
RLR07 $\frac{C}{1}$ $\frac{1002}{2}$ $\frac{G}{3}$ $\frac{R}{4}$ $\frac{5}{5}$ = Dale Type ERL-07 10k 2% $\frac{R}{5}$													
MIL-R-39035B (Established Reliability [RJR]) (Basic - MIL-R-22097 [RJ])										1. Style 2. Characteristic 3. Terminal 4. Resistance 5. Failure Rate Level			
RJR24 $\frac{F}{1}$ $\frac{P}{2}$ $\frac{102}{3}$ $\frac{R}{4}$ $\frac{5}{5}$ = Techno Type RJR24 $\frac{F}{1}$ $\frac{P}{2}$ $\frac{1k}{3}$ 10% $\frac{4}{4}$												NOTE: 10% tolerance per Military Specification.	
MIL-R-49465A (Basic [RLV]) (Established Reliability - None)										1. Military Specification 2. Specification Sheet Number 3. Characteristic		4. Resistance Value 5. Tolerance	
M49465 $\frac{02}{1}$ $\frac{L}{2}$ $\frac{R0100}{3}$ $\frac{J}{4}$ $\frac{5}{5}$ = Dale Type CPSL-3-6 0.01 ohm 5% $\frac{5}{5}$												NOTE: L Characteristic.	
MIL-R-55182F (Established Reliability [RNR]) (Basic MIL-R-10509 [RN])										1. Style 2. Characteristic/Temperature Coefficient 3. Resistance Value 4. Tolerance 5. Failure Rate Level			
RNC55 $\frac{H}{1}$ $\frac{49R9}{2}$ $\frac{F}{3}$ $\frac{S}{4}$ $\frac{5}{5}$ = Dale Type ERC-55 T-2 49.9 ohm 1% $\frac{S}{5}$													
MIL-R-55342E (Established Reliability [RM]) (Basic - None)										1. Military Specification 2. Characteristic 3. Specification Sheet Number 4. Termination Material 5. Resistance Value and Tolerance 6. Failure Rate Level			
M55342 $\frac{M}{1}$ $\frac{02}{2}$ $\frac{S}{3}$ $\frac{100E}{4}$ $\frac{R}{5}$ $\frac{6}{6}$ = Dale Type RCM550 100k 1% $\frac{R}{6}$												NOTES: M Characteristic. One surface, pretinned, solderable terminations. D55342 is used for 07 detail specification sheet. Separate code for resistance value and tolerance is used in this Military Specification.	

Military Product Identification

MILITARY PART ORDERING EXAMPLES															
RACK AND PANEL CONNECTORS															
MIL-C-28748A (Basic) (Established Reliability - None) M28748 $\frac{7}{1}$ $\frac{B}{2}$ $\frac{0}{3}$ $\frac{0}{4}$ $\frac{F}{5}$ $\frac{1A}{6}$ = Dale Type MMP22G5 $\frac{7}{7}$ $\frac{SL2L}{3}$ $\frac{6}{6}$										1. Military Specification 2. Specification Sheet Number 3. Insert Designator (B-7 Contacts) 4. Shield (0 = None)			5. Shell Polarization (0 = None) 6. Jackscrews or Guidepins 7. Contacts (1A = 100 percent size 22)		
RESISTOR NETWORKS															
MIL-R-83401F (Basic [RZ]) (Established Reliability MIL-R-874 [RZR]) M8340101 $\frac{M}{1, 2}$ $\frac{1003}{3}$ $\frac{G}{4}$ $\frac{A}{5}$ = Dale Type MDM 100k $\frac{2\%}{4}$ $\frac{A}{5}$ $\frac{6}{6}$ NOTE: M Characteristic.										1. Military Specification 2. Specification Sheet Number 3. Characteristic 4. Resistance Value			5. Tolerance 6. Schematic		
Resistance Value Examples															
Three Digit Figure 100 = 10 ohm, 101 = 100 ohm 102 = 1k ohm, 203 = 20k ohm				Four Digit Figure 49R9 = 49.9 ohm, 1000 = 100 ohm 1001 = 1k ohm, 1004 = 1 Megohm				Five Digit Figure 10R60 = 10.6 ohm, 10000 = 1k ohm 12701 = 12.7k ohm, 10202 = 102k ohm							
Tolerance Examples															
A = ± 0.05%			B = ± 0.10%			D = ± 0.50%			F = ± 1.0%			G = ± 2.0%		J = ± 5.0%	
TRANSFORMERS AND INDUCTORS															
MIL-T-27E (Basic [TF]) (Established Reliability - None) $\frac{M27}{1}$ $\frac{215}{2}$ $\frac{05}{3}$ = Dale Type TE-3Q0TR 1.0 mH 2%										1. Military Specification 2. Specification Sheet Number 3. Specification Sheet Dash Number Indicating Value and Electrical Ratings					
MIL-C-15305E (Basic [LT]) (Established Reliability MIL-C-39010) $\frac{LT}{1}$ $\frac{4}{2}$ $\frac{K}{3}$ = Dale Type IM-2 (.10 µH to 1.00 µH) 10%										NOTES: Parts will be color banded. Value per Military Standard dash number.			1. Style 2. Grade and Class 3. Family K = Coil, Radio Frequency, Fixed		

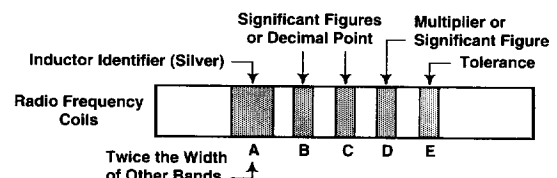
MILITARY COLOR CODES - FILM RESISTORS			
BAND A & B		BAND C	
COLOR	1st and 2nd SIGNIFICANT FIGURE	COLOR	VALUE MULTIPLIER
Black	0	Black	1
Brown	1	Brown	10
Red	2	Red	100
Orange	3	Orange	1,000
Yellow	4	Yellow	10,000
Green	5	Green	100,000
Blue	6	Blue	1,000,000
Purple (Violet)	7	Silver	0.01
Gray	8	Gold	0.1
White	9		
<p>Value — A B C D E</p> <p>First Significant Figure — A</p> <p>Second Significant Figure — B</p> <p>Terminal (1 1/2 times width of other bands) — E</p> <p>Tolerance — D</p> <p>Multiplier — C</p>			
BAND D		BAND E	
COLOR	RESISTANCE TOLERANCE (Percent)	COLOR	TERMINAL
Gold	± 5%	White	Solderable
Red	± 2%		

8 1/2 x 11 & Pocket-Size Color Code ID Charts

For a 8 1/2 x 11 chart, or a supply of pocket-size charts showing actual colors used in marking film resistors and RF chokes, write to Dale Electronics, Inc., Advertising Department, 2064 12th Avenue, P.O. Box 609, Columbus, NE 68602-0609 or call (402) 563-6417.

Indicate size and type of chart desired: Film Resistor chart or RF Choke.

MILITARY COLOR CODES - RF COILS			
	BAND A & B	BAND C	BAND C
COLOR	SIGNIFICANT FIGURES or DECIMAL POINT	MULTIPLIER* or SIGNIFICANT FIGURE	INDUCTANCE TOLERANCE
Black	0	1	—
Brown	1	10	± 1%
Red	2	100	± 2%
Orange	3	1,000	± 3%
Yellow	4	10,000	± 4%
Green	5	—	—
Blue	6	—	—
Violet	7	—	—
Gray	8	—	—
White	9	—	—
None**	—	—	± 20%
Silver	—	—	± 10%
Gold	Decimal Point	—	± 5%



Band "A" is twice the width of the other bands and is silver in color to identify part as an inductor. ***

For Inductance Values Less Than 10 either Band "B" or Band "C" will be gold and will represent the decimal point. The other two bands ("B" and "D" or "C" and "D") will represent significant figures.

For Inductance Values of 10 or More Band "B" and Band "C" represent significant figures and Band "D" is the Multiplier.

For small units, dots may be used in place of bands.

* The multiplier is the factor by which two significant figures are multiplied to yield the nominal inductance value.

** Indicates body color.

*** Coated inductors are marked with four color bands, the first being a double wide significant figure or decimal point in lieu of the double wide silver inductor identifier.

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