

SMD POWER INDUCTORS / ATNR M Type Series

● Features

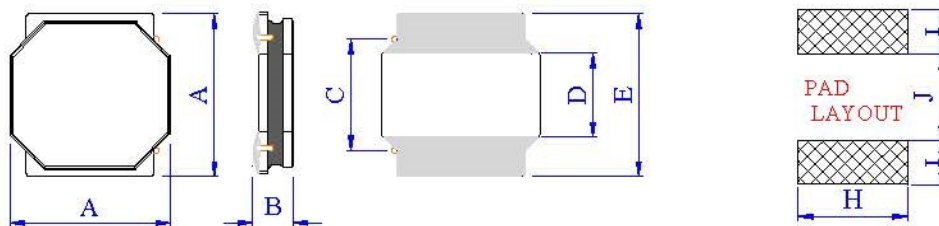
1. Small and Low profile inductor.
2. It corresponds to High current.
3. Simple and original magnetic shield structure.
4. Durable structure against dropping impact.

● Applications

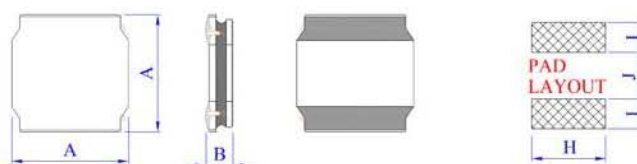
1. LCD displays
2. STB
3. LCD Monitor / TV
4. Smart meter
5. Tablet PC and other Portable devices
6. DC/DC converters



● Shape & Dimensions



TYPE	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	H (Ref.)	I (Ref.)	J (Ref.)
ATNR3010M	3.0±0.2	0.9±0.1	2.0±0.2	1.0±0.2	3.0±0.2	2.7	0.8	1.4
ATNR3012M	3.0±0.2	1.1±0.1	2.0±0.2	1.0±0.2	3.0±0.2	2.7	0.8	1.4
ATNR3015M	3.0±0.2	1.5 MAX.	2.0±0.2	1.0±0.2	3.0±0.2	2.7	0.8	1.4
ATNR4010M	4.0±0.2	0.9±0.1	2.7±0.2	1.4±0.2	4.0±0.2	3.7	1.2	1.6
ATNR4012M	4.0±0.2	1.1±0.1	2.7±0.2	1.4±0.2	4.0±0.2	3.7	1.2	1.6
ATNR4018M	4.0±0.2	1.8 MAX.	2.7±0.2	1.4±0.2	4.0±0.2	3.7	1.2	1.6
ATNR5010M	5.0±0.2	0.9±0.1	3.5±0.2	2.0±0.2	5.0±0.2	4.7	1.4	2.4
ATNR5040M	5.0±0.3	4.2 MAX.	3.5 REF.	2.0 REF.	5.0 REF.	3.7	1.2	1.6
ATNR6010M	6.0±0.2	0.9±0.2/-0.1	4.325±0.2	2.65±0.2	6.0±0.2	5.7	1.6	3.1
ATNR6012M	6.0±0.2	1.1±0.1	4.325±0.2	2.65±0.2	6.0±0.2	5.7	1.6	3.1
ATNR6020M	6.0±0.2	2.0 MAX.	4.325±0.2	2.65±0.2	6.0±0.2	5.7	1.6	3.1
ATNR6045M	6.0±0.2	4.5 MAX.	4.325±0.2	2.65±0.2	6.0±0.2	5.7	1.6	3.1



TYPE	A (mm)	B (mm)	H (Ref.)	I (Ref.)	J (Ref.)
ATNR4030M	4.0 ± 0.3	3.1 MAX.	4.0	1.35	1.3

SMD POWER INDUCTORS / ATNR M Type Series

● Features

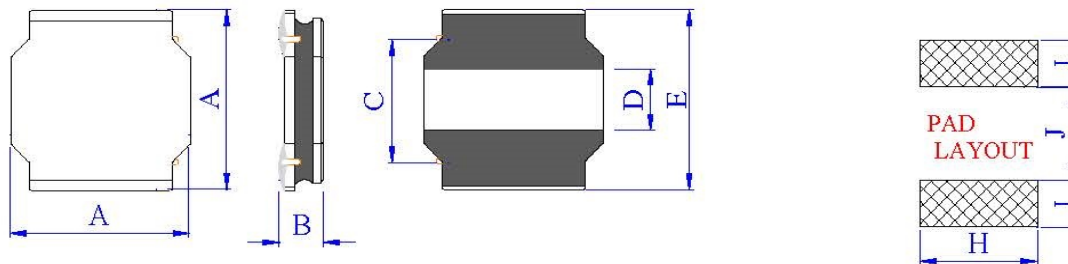
- 1.Small and Low profile inductor.
2. It corresponds to High current.
3. Simple and original magnetic shield structure.
4. Durable structure against dropping impact.

● Applications

- 1.LCD displays
- 2.STB
- 3.LCD Monitor / TV
- 4.Smart meter
- 5.Tablet PC and other Portable devices
- 6.DC/DC converters



● Shape & Dimensions

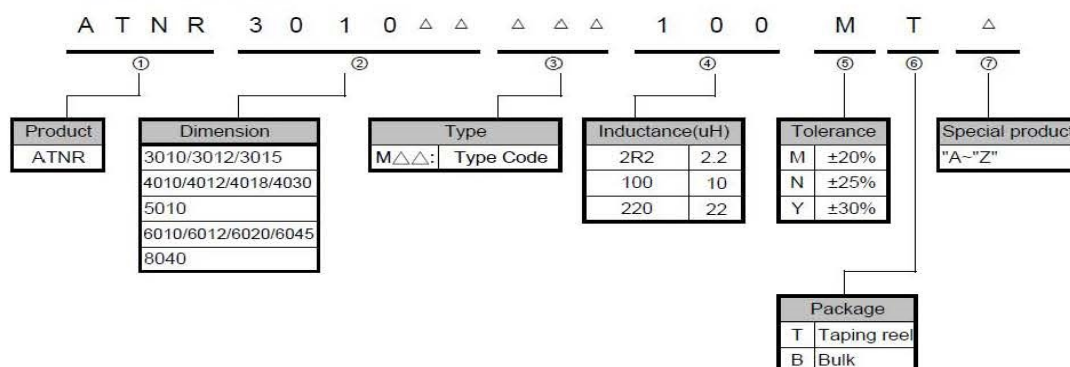


TYPE	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	H (Ref.)	I (Ref.)	J (Ref.)
ATNR8040M	8.0 ± 0.2	*1 4.2 MAX	5.6±0.3	3.1±0.3	8.0±0.2	7.7	1.8	3.8
ATNR8040M	8.0 ± 0.2	*2 4.0 MAX	5.6±0.3	3.1±0.3	8.0±0.2	7.7	1.8	3.8

*1) 0R9~8R2=4.2 MAX.

*2) 100~101=4.0 MAX.

■ PRODUCT IDENTIFICATION



◆ ATNR3010M Series Specification :

Part Number	Inductance (μ H)	Inductance Tolerance	Test Freq. (KHz)	DCR ($m\Omega$) Max.	Saturation Current (A) Max.	Temp. Rise current (A) Max.
ATNR3010M1R0□T	1.0	Y	100	78	1.30	1.40
ATNR3010M1R5□T	1.5	Y	100	96	1.20	1.30
ATNR3010M2R2□T	2.2	Y	100	114	1.10	1.10
ATNR3010M3R3□T	3.3	Y	100	168	0.87	0.94
ATNR3010M4R7□T	4.7	Y	100	228	0.75	0.78
ATNR3010M6R8□T	6.8	M,N	100	360	0.61	0.63
ATNR3010M100□T	10	M,N	100	540	0.50	0.51
ATNR3010M150□T	15	M,N	100	888	0.40	0.40
ATNR3010M220□T	22	M,N	100	1236	0.35	0.35

NOTE :

* The operating temperature range is -40°C to $+125^{\circ}\text{C}$ (Including self-temperature rise)

* □ Tolerance M : $\pm 20\%$, N : $\pm 25\%$, Y : $\pm 30\%$

* Isat: For Inductance drop 30% from its value without current.

* Irms: The value of D.C current when the temperature rise is $\Delta T \leq 40^{\circ}\text{C}$.($T_a = 25^{\circ}\text{C}$)

◆ ATNR3012M Series Specification :

Part Number	Inductance (μ H)	Inductance Tolerance	Test Freq. (KHz)	DCR ($m\Omega$) Max.	Saturation Current (A) Max.	Temp. Rise current (A) Max.
ATNR3012M1R0□T	1.0	Y	100	60	1.50	1.49
ATNR3012M1R5□T	1.5	Y	100	72	1.36	1.40
ATNR3012M2R2□T	2.2	Y	100	96	1.10	1.20
ATNR3012M3R3□T	3.3	Y	100	120	0.91	1.05
ATNR3012M4R7□T	4.7	Y	100	156	0.77	0.98
ATNR3012M6R8□T	6.8	M,N	100	228	0.65	0.74
ATNR3012M100□T	10	M,N	100	348	0.54	0.63
ATNR3012M150□T	15	M,N	100	540	0.44	0.48
ATNR3012M220□T	22	M,N	100	756	0.37	0.42
ATNR3012M330□T	33	M,N	100	1236	0.31	0.33
ATNR3012M470□T	47	M,N	100	1740	0.25	0.28

NOTE :

* The operating temperature range is -40°C to $+125^{\circ}\text{C}$ (Including self-temperature rise)

* □ Tolerance M : $\pm 20\%$, N : $\pm 25\%$, Y : $\pm 30\%$

* Isat: For Inductance drop 30% from its value without current.

* Irms: The value of D.C current when the temperature rise is $\Delta T \leq 40^{\circ}\text{C}$.($T_a = 25^{\circ}\text{C}$)

◆ ATNR3015M Series Specification :

Part Number	Inductance (μ H)	Inductance Tolerance	Test Freq. (KHz)	DCR ($m\Omega$) Max.	Saturation Current (A) Max.	Temp. Rise current (A) Max.
ATNR3015M1R0□T	1.0	Y	100	36	2.10	2.10
ATNR3015M1R5□T	1.5	Y	100	48	1.80	1.82
ATNR3015M2R2□T	2.2	Y	100	72	1.48	1.50
ATNR3015M3R3□T	3.3	Y	100	96	1.21	1.23
ATNR3015M4R7□T	4.7	Y	100	144	1.02	1.04
ATNR3015M6R8□T	6.8	M,N	100	192	0.87	0.88
ATNR3015M100□T	10	M,N	100	276	0.70	0.71
ATNR3015M150□T	15	M,N	100	432	0.56	0.56
ATNR3015M220□T	22	M,N	100	624	0.47	0.47
ATNR3015M330□T	33	M,N	100	1008	0.39	0.37
ATNR3015M470□T	47	M,N	100	1608	0.32	0.30

NOTE :

* The operating temperature range is -40°C to $+125^{\circ}\text{C}$ (Including self-temperature rise)

* □ Tolerance M : $\pm 20\%$, N : $\pm 25\%$, Y : $\pm 30\%$

* Isat: For Inductance drop 30% from its value without current.

* Irms: The value of D.C current when the temperature rise is $\Delta T \leq 40^{\circ}\text{C}$.($T_a = 25^{\circ}\text{C}$)

◆ ATNR4010M Series Specification :

Part Number	Inductance (μ H)	Inductance Tolerance	Test Freq. (KHz)	DCR ($m\Omega$) Max.	Saturation Current (A) Max.	Temp. Rise current (A) Max.
ATNR4010M1R0□T	1.0	Y	100	120	1.80	1.05
ATNR4010M2R2□T	2.2	Y	100	180	1.15	0.89
ATNR4010M3R3□T	3.3	Y	100	216	1.10	0.82
ATNR4010M4R7□T	4.7	Y	100	252	0.90	0.75
ATNR4010M6R8□T	6.8	M,N	100	360	0.74	0.62
ATNR4010M100□T	10	M,N	100	456	0.56	0.60
ATNR4010M150□T	15	M,N	100	612	0.47	0.51
ATNR4010M220□T	22	M,N	100	1044	0.36	0.40
ATNR4010M330□T	33	M,N	100	1848	0.28	0.30
ATNR4010M470□T	47	M,N	100	2172	0.24	0.28

NOTE :

* The operating temperature range is -40°C to $+125^{\circ}\text{C}$ (Including self-temperature rise)

* □ Tolerance M : $\pm 20\%$, N : $\pm 25\%$, Y : $\pm 30\%$

* Isat: For Inductance drop 30% from its value without current.

* Irms: The value of D.C current when the temperature rise is $\Delta T \leq 40^{\circ}\text{C}$.($T_a = 25^{\circ}\text{C}$)

◆ ATNR4012M Series Specification :

Part Number	Inductance (μ H)	Inductance Tolerance	Test Freq. (KHz)	DCR ($m\Omega$) Max.	Saturation Current (A) Max.	Temp. Rise current (A) Max.
ATNR4012M1R0□T	1.0	Y	100	72	2.50	1.50
ATNR4012M2R2□T	2.2	Y	100	108	1.65	1.20
ATNR4012M3R3□T	3.3	Y	100	156	1.20	0.98
ATNR4012M4R7□T	4.7	Y	100	168	1.05	0.96
ATNR4012M6R8□T	6.8	M,N	100	216	0.90	0.84
ATNR4012M100□T	10	M,N	100	288	0.74	0.77
ATNR4012M150□T	15	M,N	100	480	0.56	0.60
ATNR4012M220□T	22	M,N	100	576	0.51	0.54
ATNR4012M330□T	33	M,N	100	972	0.40	0.42
ATNR4012M470□T	47	M,N	100	1200	0.35	0.37

NOTE :

* The operating temperature range is -40°C to $+125^{\circ}\text{C}$ (Including self-temperature rise)

* □ Tolerance M : $\pm 20\%$, N : $\pm 25\%$, Y : $\pm 30\%$

*Isat:For Inductance drop 30% from its value without current.

*Irms:The value of D.C current when the temperature rise is $\Delta T \leq 40^{\circ}\text{C}$.(Ta= 25°C)

◆ ATNR4018M Series Specification :

Part Number	Inductance (μ H)	Inductance Tolerance	Test Freq. (KHz)	DCR ($m\Omega$) Max.	Saturation Current (A) Max.	Temp. Rise current (A) Max.
ATNR4018M1R0□T	1.0	Y	100	36	4.00	1.83
ATNR4018M2R2□T	2.2	Y	100	72	2.70	1.44
ATNR4018M3R3□T	3.3	Y	100	84	2.00	1.23
ATNR4018M4R7□T	4.7	Y	100	108	1.70	1.20
ATNR4018M6R8□T	6.8	M,N	100	132	1.45	1.06
ATNR4018M100□T	10	M,N	100	216	1.20	0.84
ATNR4018M150□T	15	M,N	100	300	0.94	0.65
ATNR4018M220□T	22	M,N	100	432	0.80	0.59
ATNR4018M330□T	33	M,N	100	636	0.65	0.49

NOTE :

* The operating temperature range is -40°C to $+125^{\circ}\text{C}$ (Including self-temperature rise)

* □ Tolerance M : $\pm 20\%$, N : $\pm 25\%$, Y : $\pm 30\%$

*Isat:For Inductance drop 30% from its value without current.

*Irms:The value of D.C current when the temperature rise is $\Delta T \leq 40^{\circ}\text{C}$.(Ta= 25°C)

◆ ATNR4030M Series Specification :

Part Number	Inductance (uH)	Inductance Tolerance	Test Freq. (KHz)	DCR (mΩ) Max.	Saturation Current (A) Max.	Temp. Rise current (A) Max.
ATNR4030M1R0□T	1.0	Y	100	30	3.00	3.00
ATNR4030M2R2□T	2.2	Y	100	39	4.90	2.95
ATNR4030M3R3□T	3.3	Y	100	52	3.30	2.40
ATNR4030M4R7□T	4.7	Y	100	78	2.90	2.00
ATNR4030M100□T	10	M,N	100	140	1.85	1.50
ATNR4030M150□T	15	M,N	100	250	1.85	1.10
ATNR4030M220□T	22	M,N	100	293	1.30	1.00
ATNR4030M330□T	33	M,N	100	330±30%	1.00	0.80
ATNR4030M470□T	47	M,N	100	845	0.95(≤35%)	0.72
ATNR4030M101□T	100	M,N	100	1650	0.40	0.40

NOTE :

* The operating temperature range is -40℃ to +125℃(Including self-temperature rise)

* □ Tolerance M : ±20% , N : ±25% , Y : ±30%

*Isat:For Inductance drop 30% from its value without current.

*Irms:The value of D.C current when the temperature rise is $\Delta T \leq 40^{\circ}\text{C}$.(Ta=25℃)

◆ ATNR5010M Series Specification :

Part Number	Inductance (uH)	Inductance Tolerance	Test Freq. (KHz)	DCR (mΩ) Max.	Saturation Current (A) Max.	Temp. Rise current (A) Max.
ATNR5010M1R0□T	1.0	Y	100	84	2.35	1.75
ATNR5010M2R2□T	2.2	Y	100	126	1.50	1.40
ATNR5010M3R3□T	3.3	Y	100	150	1.40	1.25
ATNR5010M4R7□T	4.7	Y	100	174	1.20	1.15
ATNR5010M6R8□T	6.8	M,N	100	222	1.00	1.00
ATNR5010M100□T	10	M,N	100	300	0.85	0.90
ATNR5010M150□T	15	M,N	100	480	0.68	0.65

NOTE :

* The operating temperature range is -40℃ to +125℃(Including self-temperature rise)

* □ Tolerance M : ±20% , N : ±25% , Y : ±30%

*Isat:For Inductance drop 30% from its value without current.

*Irms:The value of D.C current when the temperature rise is $\Delta T \leq 40^{\circ}\text{C}$.(Ta=25℃)

◆ ATNR5040M Series Specification :

Part Number	Inductance (μ H)	Inductance Tolerance	Test Freq. (KHz)	DCR ($m\Omega$) Max.	Saturation Current (A) Max.	Temp. Rise current (A) Max.
ATNR5040M1R0□T	1.0	Y	100	19.5	7.35	4.90
ATNR5040M1R5□T	1.5	Y	100	24	6.00	4.30
ATNR5040M2R2□T	2.2	Y	100	27	5.70	3.50
ATNR5040M3R3□T	3.3	Y	100	39	3.95	3.40
ATNR5040M4R7□T	4.7	Y	100	30 $\pm$ 20%	4.20	3.20
ATNR5040M5R6□T	5.6	M,N	100	65	3.00	2.50
ATNR5040M6R8□T	6.8	M,N	100	54	3.30	2.40
ATNR5040M100□T	10	M,N	100	85	2.35	2.20
ATNR5040M150□T	15	M,N	100	117	2.30	1.80
ATNR5040M220□T	22	M,N	100	167.7	1.80	1.40
ATNR5040M330□T	33	M,N	100	216	1.30	1.20
ATNR5040M470□T	47	M,N	100	320	1.10	1.00
ATNR5040M680□T	68	M,N	100	520	0.90	0.80
ATNR5040M101□T	100	M,N	100	560 $\pm$ 30%	0.75	0.70

NOTE :

* The operating temperature range is -40°C to +125°C(Including self-temperature rise)

* □ Tolerance M : $\pm$ 20% , N : $\pm$ 25% , Y : $\pm$ 30%

*Isat:For Inductance drop 30% from its value without current.

*Irms:The value of D.C current when the temperature rise is $\Delta T \leq 40^\circ\text{C}$.(Ta=25°C)

◆ ATNR6010M Series Specification :

Part Number	Inductance (μ H)	Inductance Tolerance	Test Freq. (KHz)	DCR ($m\Omega$) Max.	Saturation Current (A) Max.	Temp. Rise current (A) Max.
ATNR6010M1R5□T	1.5	Y	100	108	2.40	1.90
ATNR6010M2R2□T	2.2	Y	100	132	1.90	1.70
ATNR6010M3R3□T	3.3	Y	100	162	1.60	1.50
ATNR6010M4R7□T	4.7	Y	100	198	1.30	1.40
ATNR6010M6R8□T	6.8	M,N	100	264	1.20	1.20
ATNR6010M100□T	10	M,N	100	324	1.00	1.10
ATNR6010M220□T	22	M,N	100	696	0.65	0.70

NOTE :

* The operating temperature range is -40°C to +125°C(Including self-temperature rise)

* □ Tolerance M : $\pm$ 20% , N : $\pm$ 25% , Y : $\pm$ 30%

*Isat:For Inductance drop 30% from its value without current.

*Irms:The value of D.C current when the temperature rise is $\Delta T \leq 40^\circ\text{C}$.(Ta=25°C)

◆ ATNR6012M Series Specification :

Part Number	Inductance (μ H)	Inductance Tolerance	Test Freq. (KHz)	DCR ($m\Omega$) Max.	Saturation Current (A) Max.	Temp. Rise current (A) Max.
ATNR6012M2R5□T	2.5	Y	100	108	2.10	1.73
ATNR6012M4R0□T	4.0	Y	100	126	1.80	1.57
ATNR6012M5R3□T	5.3	M,N	100	150	1.50	1.40
ATNR6012M6R8□T	6.8	M,N	100	198	1.30	1.18
ATNR6012M100□T	10	M,N	100	282	1.00	1.00
ATNR6012M150□T	15	M,N	100	396	0.80	0.79
ATNR6012M220□T	22	M,N	100	636	0.76	0.63
ATNR6012M330□T	33	M,N	100	840	0.59	0.53
ATNR6012M470□T	47	M,N	100	1260	0.52	0.46
ATNR6012M680□T	68	M,N	100	1620	0.44	0.41
ATNR6012M101□T	100	M,N	100	2616	0.35	0.32

NOTE :

* The operating temperature range is -40°C to $+125^{\circ}\text{C}$ (Including self-temperature rise)

* □ Tolerance M : $\pm 20\%$, N : $\pm 25\%$, Y : $\pm 30\%$

* Isat: For Inductance drop 30% from its value without current.

* Irms: The value of D.C current when the temperature rise is $\Delta T \leq 40^{\circ}\text{C}$. ($T_a = 25^{\circ}\text{C}$)

◆ ATNR6020M Series Specification :

Part Number	Inductance (μ H)	Inductance Tolerance	Test Freq. (KHz)	DCR ($m\Omega$) Max.	Saturation Current (A) Max.	Temp. Rise current (A) Max.
ATNR6020M0R8□T	0.8	Y	100	24.0	5.50	3.80
ATNR6020M1R5□T	1.5	Y	100	31.2	4.00	3.20
ATNR6020M2R2□T	2.2	Y	100	40.8	3.20	2.70
ATNR6020M3R3□T	3.3	Y	100	48.0	2.80	2.60
ATNR6020M4R7□T	4.7	Y	100	67.2	2.40	2.00
ATNR6020M6R8□T	6.8	M,N	100	102.0	2.00	1.80
ATNR6020M100□T	10	M,N	100	150.0	1.60	1.40
ATNR6020M220□T	22	M,N	100	348.0	1.05	0.95

NOTE :

* The operating temperature range is -40°C to $+125^{\circ}\text{C}$ (Including self-temperature rise)

* □ Tolerance M : $\pm 20\%$, N : $\pm 25\%$, Y : $\pm 30\%$

* Isat: For Inductance drop 30% from its value without current.

* Irms: The value of D.C current when the temperature rise is $\Delta T \leq 40^{\circ}\text{C}$. ($T_a = 25^{\circ}\text{C}$)

◆ ATNR6045M Series Specification :

Part Number	Inductance (μ H)	Inductance Tolerance	Test Freq. (KHz)	DCR ($m\Omega$) Max.	Saturation Current (A) Max.	Temp. Rise current (A) Max.
ATNR6045M1R0□T	1.0	Y	100	19	8.50	4.20
ATNR6045M1R3□T	1.3	Y	100	21	8.00	4.00
ATNR6045M1R8□T	1.8	Y	100	23	7.00	3.70
ATNR6045M2R2□T	2.2	Y	100	27	6.00	3.50
ATNR6045M3R3□T	3.3	Y	100	31	5.00	3.20
ATNR6045M4R7□T	4.7	Y	100	41	4.00	3.00
ATNR6045M6R8□T	6.8	M,N	100	52	3.60	2.60
ATNR6045M100□T	10	M,N	100	61	3.00	2.50
ATNR6045M150□T	15	M,N	100	100	2.30	1.90
ATNR6045M220□T	22	M,N	100	149	1.90	1.50
ATNR6045M330□T	33	M,N	100	210	1.50	1.40
ATNR6045M470□T	47	M,N	100	286	1.30	1.10
ATNR6045M680□T	68	M,N	100	429	1.00	0.90
ATNR6045M101□T	100	M,N	100	650	0.80	0.70

NOTE :

* The operating temperature range is -40°C to $+125^{\circ}\text{C}$ (Including self-temperature rise)

* □ Tolerance M : $\pm 20\%$, N : $\pm 25\%$, Y : $\pm 30\%$

* Isat: For Inductance drop 30% from its value without current.

* Irms: The value of D.C current when the temperature rise is $\Delta T \leq 40^{\circ}\text{C}$. ($T_a = 25^{\circ}\text{C}$)

◆ ATNR8040M Series Specification :

Part Number	Inductance (μ H)	Inductance Tolerance	Test Freq. (KHz)	DCR ($m\Omega$) Max.	Saturation Current (A) Max.	Temp. Rise current (A) Max.
ATNR8040M0R9□T	0.9	Y	100	7.8	11.00	7.80
ATNR8040M1R4□T	1.4	Y	100	9.1	9.00	7.00
ATNR8040M2R0□T	2.0	Y	100	11.7	7.40	6.30
ATNR8040M3R6□T	3.6	Y	100	19.5	5.30	4.90
ATNR8040M4R7□T	4.7	Y	100	23.4	4.70	4.10
ATNR8040M6R8□T	6.8	M,N	100	32.5	4.00	3.70
ATNR8040M100□T	10	M,N	100	44.2	3.40	3.10
ATNR8040M150□T	15	M,N	100	65.0	2.70	2.40
ATNR8040M220□T	22	M,N	100	85.6	2.40	2.20
ATNR8040M330□T	33	M,N	100	130.0	1.90	1.70
ATNR8040M470□T	47	M,N	100	195.0	1.50	1.40
ATNR8040M680□T	68	M,N	100	299.0	1.20	1.10
ATNR8040M101□T	100	M,N	100	377.0	1.00	1.00

NOTE :

* The operating temperature range is -40°C to $+125^{\circ}\text{C}$ (Including self-temperature rise)

* □ Tolerance M : $\pm 20\%$, N : $\pm 25\%$, Y : $\pm 30\%$

* Isat: For Inductance drop 30% from its value without current.

* Irms: The value of D.C current when the temperature rise is $\Delta T \leq 40^{\circ}\text{C}$. ($T_a = 25^{\circ}\text{C}$)