

Shielded Surface Mount Inductors

Model HA78

Features and Benefits

- Operating Temperature Range -40°C to +125°C
- Temperature Rise, Maximum 40°C
- Storage Temperature -40°C to +155°C
- Operating Frequency up to 3MHz
- AEC-Q200 CERTIFIED
- RoHS Compliant



OBSOLETE

Specification @ 25°C

Part Number	Inductance ⁽¹⁾ (μH)	DC Resistance ⁽⁴⁾ Max. (Ω)	Isat ⁽²⁾ (A)	Irms ⁽³⁾ (A)
HA78-10100LFTR	10 ± 20%	0.08	1.00	2.6
HA78-10680LFTR	68 ± 20%	0.52	0.42	1.3
HA78-20100LFTR	10 ± 20%	0.055	1.65	3.5
HA78-20271LFTR	270 ± 20%	1.25	0.31	0.7
HA78-30100LFTR	10 ± 20%	0.072	1.68	1.83
HA78-30120LFTR	12 ± 20%	0.098	1.52	1.73
HA78-30150LFTR	15 ± 20%	0.13	1.33	1.51
HA78-30180LFTR	18 ± 20%	0.14	1.20	1.41
HA78-30220LFTR	22 ± 20%	0.19	1.07	1.38
HA78-30270LFTR	27 ± 20%	0.21	0.96	1.27
HA78-30330LFTR	33 ± 20%	0.24	0.91	1.22
HA78-30390LFTR	39 ± 20%	0.32	0.77	1.03
HA78-30470LFTR	47 ± 20%	0.36	0.76	0.85
HA78-30560LFTR	56 ± 20%	0.47	0.68	0.84
HA78-30680LFTR	68 ± 20%	0.52	0.61	0.74
HA78-30820LFTR	82 ± 20%	0.69	0.57	0.69
HA78-30101LFTR	100 ± 20%	0.79	0.50	0.62
HA78-30121LFTR	120 ± 20%	0.89	0.49	0.60
HA78-30151LFTR	150 ± 20%	1.27	0.43	0.56
HA78-30181LFTR	180 ± 20%	1.45	0.39	0.49
HA78-30221LFTR	220 ± 20%	1.65	0.35	0.43
HA78-30271LFTR	270 ± 20%	2.31	0.32	0.40
HA78-30331LFTR	330 ± 20%	2.62	0.28	0.32
HA78-30391LFTR	390 ± 20%	2.94	0.26	0.30
HA78-30471LFTR	470 ± 20%	4.18	0.24	0.30
HA78-30102LFTR	1000 ± 20%	6.50	0.16	0.20
HA78-40100LFTR	10 ± 20%	0.055	2.00	2.00
HA78-40120LFTR	12 ± 20%	0.058	1.71	1.82
HA78-40150LFTR	15 ± 20%	0.081	1.47	1.60
HA78-40180LFTR	18 ± 20%	0.091	1.31	1.50
HA78-40220LFTR	22 ± 20%	0.11	1.23	1.41

General Note

TT Electronics reserves the right to make changes in product specification without notice or liability.
All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

Model HA78

Part Number	Inductance(1)(μ H)	DC Resistance ⁽⁴⁾ Max. (Ω)	Isat(2) (A)	Irms(3) (A)
HA78-40270LFTR	27 $\pm$ 20%	0.15	1.12	1.24
HA78-40330LFTR	33 $\pm$ 20%	0.17	1.00	1.13
HA78-40390LFTR	39 $\pm$ 20%	0.23	0.91	1.11
HA78-40470LFTR	47 $\pm$ 20%	0.26	0.88	1.03
HA78-40560LFTR	56 $\pm$ 20%	0.35	0.75	0.93
HA78-40680LFTR	68 $\pm$ 20%	0.38	0.69	0.87
HA78-40820LFTR	82 $\pm$ 20%	0.43	0.61	0.84
HA78-40101LFTR	100 $\pm$ 20%	0.61	0.60	0.79
HA78-40121LFTR	120 $\pm$ 20%	0.66	0.52	0.67
HA78-40151LFTR	150 $\pm$ 20%	0.88	0.46	0.52
HA78-40181LFTR	180 $\pm$ 20%	0.98	0.42	0.51
HA78-40221LFTR	220 $\pm$ 20%	1.17	0.36	0.44
HA78-40271LFTR	270 $\pm$ 20%	1.64	0.34	0.43
HA78-40331LFTR	330 $\pm$ 20%	1.86	0.32	0.39
HA78-40391LFTR	390 $\pm$ 20%	2.85	0.29	0.38
HA78-40471LFTR	470 $\pm$ 20%	3.01	0.26	0.29
HA78-40561LFTR	560 $\pm$ 20%	3.62	0.23	0.28
HA78-40681LFTR	680 $\pm$ 20%	4.63	0.22	0.23
HA78-40821LFTR	820 $\pm$ 20%	5.20	0.20	0.21
HA78-453R9LFTR	3.9 $\pm$ 20%	0.015	6.50	5.90
HA78-454R7LFTR	4.7 $\pm$ 20%	0.018	5.70	5.20
HA78-456R8LFTR	6.8 $\pm$ 20%	0.023	4.90	4.30
HA78-45100LFTR	10 $\pm$ 20%	0.028	4.50	3.80
HA78-45120LFTR	12 $\pm$ 20%	0.038	4.00	3.50
HA78-45180LFTR	18 $\pm$ 20%	0.057	3.10	3.20
HA78-45220LFTR	22 $\pm$ 20%	0.066	2.90	2.90
HA78-45330LFTR	33 $\pm$ 20%	0.097	2.70	2.30
HA78-45470LFTR	47 $\pm$ 20%	0.150	1.90	2.00
HA78-45101LFTR	100 $\pm$ 20%	0.308	1.20	1.30
HA78-45221LFTR	220 $\pm$ 20%	0.700	0.80	0.95
HA78-45331LFTR	330 $\pm$ 20%	0.990	0.50	1.20
HA78-501R5LFTR	1.5 $\pm$ 25%	0.012	13.00	9.50
HA78-502R2LFTR	2.2 $\pm$ 25%	0.014	7.00	9.00
HA78-503R1LFTR	3.1 $\pm$ 25%	0.017	6.00	7.50
HA78-504R4LFTR	4.4 $\pm$ 25%	0.020	5.00	6.50
HA78-505R2LFTR	5.2 $\pm$ 25%	0.021	4.40	5.60
HA78-507R5LFTR	7.5 $\pm$ 25%	0.024	4.20	6.25
HA78-50100LFTR	10 $\pm$ 20%	0.025	4.00	5.00
HA78-50120LFTR	12 $\pm$ 20%	0.027	3.50	3.91
HA78-50150LFTR	15 $\pm$ 20%	0.030	3.30	3.75
HA78-50180LFTR	18 $\pm$ 20%	0.034	3.00	3.48
HA78-50220LFTR	22 $\pm$ 20%	0.036	2.80	3.37
HA78-50270LFTR	27 $\pm$ 20%	0.051	2.30	2.97
HA78-50330LFTR	33 $\pm$ 20%	0.057	2.10	2.68
HA78-50390LFTR	39 $\pm$ 20%	0.068	2.00	2.49
HA78-50470LFTR	47 $\pm$ 20%	0.075	1.80	2.21
HA78-50560LFTR	56 $\pm$ 20%	0.11	1.70	2.01
HA78-50680LFTR	68 $\pm$ 20%	0.12	1.50	1.91

General Note

TT Electronics reserves the right to make changes in product specification without notice or liability.
All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

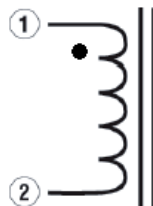
BI Technologies
A-1445, Jalan Tanjung Api
25050 Kuantan
Pahang Darul Makmur
Malaysia

Model HA78

Part Number	Inductance(1)(μ H)	DC Resistance ⁽⁴⁾ Max. (Ω)	Isat(2) (A)	Irms(3) (A)
HA78-50820LFTR	82 $\pm$ 20%	0.14	1.40	1.65
HA78-50101LFTR	100 $\pm$ 20%	0.16	1.50	1.53
HA78-50121LFTR	120 $\pm$ 20%	0.17	1.10	1.30
HA78-50151LFTR	150 $\pm$ 20%	0.23	1.00	1.21
HA78-50181LFTR	180 $\pm$ 20%	0.29	0.90	1.06
HA78-50221LFTR	220 $\pm$ 20%	0.40	0.80	0.96
HA78-50271LFTR	270 $\pm$ 20%	0.46	0.75	0.89
HA78-50331LFTR	330 $\pm$ 20%	0.51	0.68	0.78
HA78-50391LFTR	390 $\pm$ 20%	0.69	0.65	0.68
HA78-50471LFTR	470 $\pm$ 20%	0.77	0.58	0.64
HA78-50561LFTR	560 $\pm$ 20%	0.86	0.54	0.62
HA78-50681LFTR	680 $\pm$ 20%	1.20	0.48	0.55
HA78-50821LFTR	820 $\pm$ 20%	1.34	0.43	0.51
HA78-50102LFTR	1000 $\pm$ 20%	1.53	0.40	0.43
HA78-50182LFTR	1800 $\pm$ 20%	3.20	0.30	0.70
HA78-601R4LFTR	1.4 $\pm$ 30%	0.007	12.00	10.00
HA78-602R4LFTR	2.4 $\pm$ 30%	0.012	8.00	8.10
HA78-603R9LFTR	3.9 $\pm$ 30%	0.014	7.50	7.80
HA78-604R7LFTR	4.7 $\pm$ 30%	0.016	6.80	7.00
HA78-605R6LFTR	5.6 $\pm$ 30%	0.018	6.60	6.50
HA78-607R6LFTR	7.6 $\pm$ 30%	0.020	5.90	6.10
HA78-60100LFTR	10 $\pm$ 20%	0.022	5.40	6.00
HA78-60120LFTR	12 $\pm$ 20%	0.025	4.90	5.90
HA78-60150LFTR	15 $\pm$ 20%	0.027	4.50	5.00
HA78-60180LFTR	18 $\pm$ 20%	0.039	3.90	4.20
HA78-60220LFTR	22 $\pm$ 20%	0.043	3.60	4.10
HA78-60270LFTR	27 $\pm$ 20%	0.046	3.40	4.50
HA78-60330LFTR	33 $\pm$ 20%	0.065	3.00	3.20
HA78-60390LFTR	39 $\pm$ 20%	0.073	2.75	3.00
HA78-60470LFTR	47 $\pm$ 20%	0.085	2.50	2.70
HA78-60221LFTR	220 $\pm$ 20%	0.370	1.20	1.30

- Notes:
- (1) Inductance is measured at 1 kHz, 1Vac without DC current.
 - (2) Isat is the saturation current at which inductance rolls off approximately 10% from its initial (zero DC).
 - (3) Irms is the approximate current at which $\Delta T = 40^\circ \text{C}$.
 - (4) DC resistance is measure at 25°C .

Specification @ 25°C

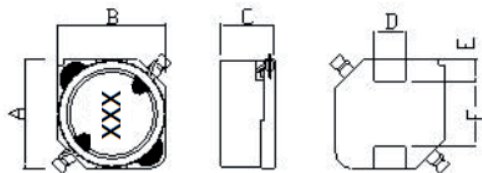


General Note

TT Electronics reserves the right to make changes in product specification without notice or liability.
All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

Mechanical Outline Dimensions (mm)

FIGURE 1(CASE 10, 20)



Recommended Solder Pad Layout

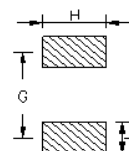


FIGURE 2 (CASE 30, 40)

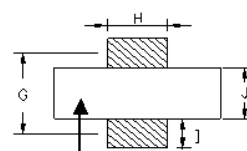
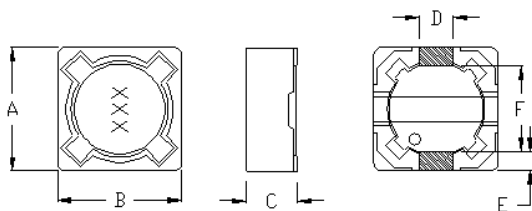
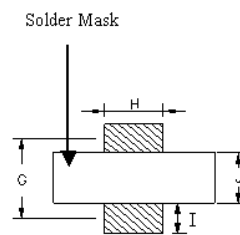
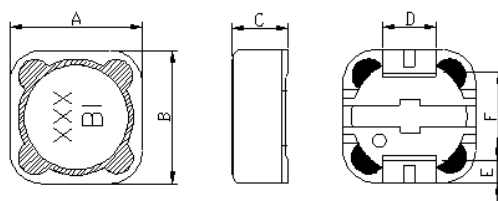


FIGURE 3 (CASE 45, 50, 60)



Case Size	Fig	A (Max)	B (Max)	C (Max)	D	E	F	G	H	I	J
10	1	7.4	7.4	3.8	2.0	0.85	5.6	6.5	3.0	1.91	-
20	1	7.4	7.4	5.2	2.0	0.85	5.6	6.5	3.0	1.91	-
30	2	7.5	7.5	3.5	2.0	1.10	5.08	6.3	3.0	1.91	4.5
40	2	7.5	7.5	4.5	2.0	1.10	5.08	6.3	3.0	1.91	4.5
45	3	12.5	12.5	4.5	5.0	2.0	7.6	10.0	6.0	3.0	7.0
50	3	12.5	12.5	6.2	5.0	2.0	7.6	10.0	6.0	3.0	7.0
60	3	12.5	12.5	8.0	5.0	2.0	7.6	10.0	6.0	3.0	7.0

General Note

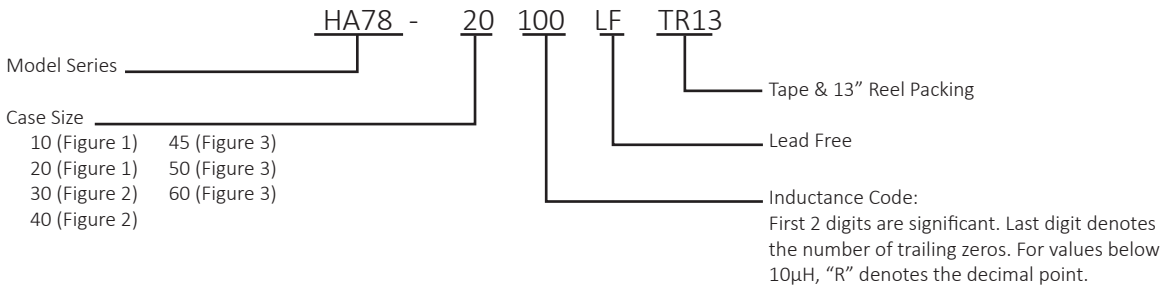
TT Electronics reserves the right to make changes in product specification without notice or liability.
All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

Model HA78

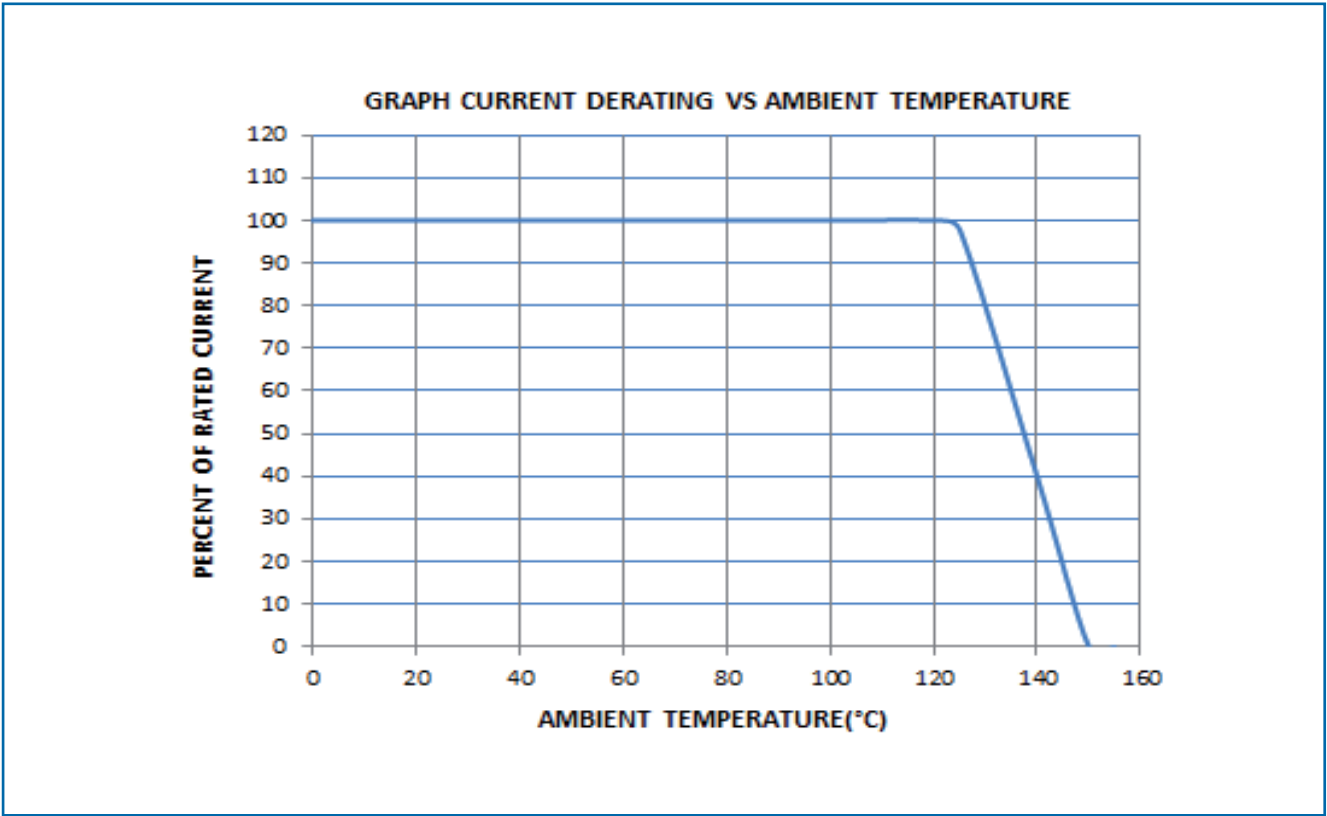
Mechanical Outline Dimensions (mm)

Standard	Embossed Tape and Reel		
	Reel	Diameter ;	= 13" (330.2mm)
	Capacity :	Case size 10, 30, 40	= 1,000 Units
		Case size 20, 45, 50, 60	= 500 Units

Ordering Information



Current Derating Vs Ambient Temperature Graph



General Note

TT Electronics reserves the right to make changes in product specification without notice or liability.
All information is subject to TT Electronics' own data and is considered accurate at time of going to print.