

Shielded Surface Mount Inductors

MODELS HM78D1210XXXMLF

Features

- Operating Temperature Range -40°C to +125°C
- Temperature Rise, Maximum 40°C
- Ideal for SEPIC applications, high inductance, high efficiency and excellent current handling in rugged, low cost part
- Use as DC-DC converter and in applications like hand phones, CD/DVD player, digital camera, GPS system. Also used as two single inductors connected series or parallel or as 1:1 transformer
- RoHS Compliant



Electrical Schematic



Specifications @ 25°C

| Leads connected in parallel | | | | | | Leads connected in series | | | | |
|-----------------------------|------------|-------------|------------------------|----------------------|----------------------|---------------------------|-------------|------------------------|----------------------|----------------------|
| Part Number | L (μH) | DCR Max (Ω) | I _{rated} (A) | I _{sat} (A) | I _{rms} (A) | L (μH) | DCR Max (Ω) | I _{rated} (A) | I _{sat} (A) | I _{rms} (A) |
| HM78D-12104R7MLF | 4.70±20% | 0.014 | 10.60 | 18.00 | 3.250 | 18.80±25% | 0.056 | 5.30 | 9.00 | 1.625 |
| HM78D-12106R8MLF | 6.80±20% | 0.017 | 10.40 | 14.20 | 3.100 | 27.20±25% | 0.068 | 5.20 | 7.10 | 1.550 |
| HM78D-12108R2MLF | 8.20±20% | 0.018 | 9.50 | 12.85 | 2.250 | 32.80±25% | 0.072 | 4.75 | 6.45 | 1.125 |
| HM78D-1210100MLF | 10.00±20% | 0.020 | 8.60 | 11.75 | 3.200 | 41.12±25% | 0.080 | 4.30 | 5.85 | 1.600 |
| HM78D-1210220MLF | 22.00±20% | 0.040 | 5.40 | 8.20 | 2.700 | 88.00±25% | 0.160 | 2.70 | 4.10 | 1.350 |
| HM78D-1210330MLF | 33.00±20% | 0.050 | 4.50 | 6.60 | 2.000 | 132.00±25% | 0.200 | 2.25 | 3.30 | 1.000 |
| HM78D-1210470MLF | 47.00±20% | 0.065 | 3.70 | 5.50 | 1.900 | 188.00±25% | 0.260 | 1.85 | 2.75 | 0.950 |
| HM78D-1210560MLF | 56.00±20% | 0.081 | 3.28 | 4.90 | 0.850 | 224.00±25% | 0.324 | 1.64 | 2.45 | 0.425 |
| HM78D-1210680MLF | 68.00±20% | 0.098 | 2.96 | 4.45 | 0.800 | 272.00±25% | 0.392 | 1.48 | 2.20 | 0.400 |
| HM78D-1210101MLF | 100.00±20% | 0.128 | 2.54 | 3.70 | 0.700 | 400.00±25% | 0.512 | 1.27 | 1.85 | 0.350 |
| HM78D-1210121MLF | 120.00±20% | 0.170 | 2.38 | 3.40 | 0.630 | 480.00±25% | 0.680 | 1.19 | 1.70 | 0.315 |
| HM78D-1210331MLF | 330.00±20% | 0.440 | 1.32 | 2.10 | 0.410 | 1320.00±25% | 1.760 | 0.66 | 1.05 | 0.205 |
| HM78D-1210471MLF | 470.00±20% | 0.570 | 1.22 | 1.80 | 0.300 | 1880.00±25% | 2.280 | 0.61 | 0.90 | 0.150 |

- Notes : (1) Inductance is measured at 100kHz, 0.1V_{rms}, 0Adc.
 (2) When leads connected in parallel, DCR is half the value.
 (3) I_{sat} current is the saturation current at which inductance rolls off approximately 30% from its initial (zero DC) value.
 (4) I_{rms} equals DC current, that causes component to increase by 40°C from 25°C ambient.
 (5) I_{rated} current is the rated current at which inductance rolls off approximately 10% from its initial (zero DC) value.

Mechanical Outline (mm)



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.

Packaging

- 1) Tape and reel packaging.
- 2) 300pcs per 13" reel.

Ordering Information



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.

Shielded Surface Mount Coupled Inductors

MODELS HM78D-128XXXXLF, HM78D-755XXXMLF

- Operating Temperature Range -40°C to +125°C
- Temperature Rise, Maximum 40°C
- Operating Frequency Up to 3MHz
- RoHS Compliant



Electrical Schematic



Specifications @ 25°C

| Part Number | Parallel Connection | | | | Series Connection | | | |
|-----------------|-----------------------|-----------------------------|-------------------------------------|-------------------------------------|-----------------------|-----------------------------|-------------------------------------|-------------------------------------|
| | L ⁽¹⁾ (μH) | DCR Typ. ⁽²⁾ (Ω) | I _{sat} ⁽³⁾ (A) | I _{rms} ⁽⁴⁾ (A) | L ⁽¹⁾ (μH) | DCR Typ. ⁽²⁾ (Ω) | I _{sat} ⁽³⁾ (A) | I _{rms} ⁽⁴⁾ (A) |
| HM78D-1284R7MLF | 4.7 ± 20% | 0.019 | 14.90 | 7.40 | 18.8 ± 25% | 0.076 | 7.70 | 3.60 |
| HM78D-1285R6MLF | 5.6 ± 20% | 0.023 | 13.40 | 7.20 | 22.4 ± 25% | 0.092 | 6.60 | 3.50 |
| HM78D-1286R8MLF | 6.8 ± 20% | 0.024 | 13.10 | 6.90 | 27.2 ± 25% | 0.096 | 6.40 | 3.40 |
| HM78D-1288R2MLF | 8.2 ± 20% | 0.025 | 10.80 | 6.60 | 32.8 ± 25% | 0.100 | 5.60 | 3.30 |
| HM78D-128100MLF | 10 ± 20% | 0.029 | 10.50 | 6.20 | 40 ± 25% | 0.116 | 5.40 | 3.20 |
| HM78D-128120MLF | 12 ± 20% | 0.031 | 9.60 | 6.00 | 48 ± 25% | 0.124 | 4.80 | 2.90 |
| HM78D-128150MLF | 15 ± 20% | 0.036 | 9.10 | 5.80 | 60 ± 25% | 0.144 | 4.30 | 2.70 |
| HM78D-128180MLF | 18 ± 20% | 0.040 | 8.00 | 5.50 | 72 ± 25% | 0.158 | 3.90 | 2.50 |
| HM78D-128220MLF | 22 ± 20% | 0.048 | 6.80 | 5.20 | 88 ± 25% | 0.190 | 3.50 | 2.20 |
| HM78D-128270MLF | 27 ± 20% | 0.060 | 6.50 | 4.70 | 108 ± 25% | 0.240 | 3.40 | 2.00 |
| HM78D-128330MLF | 33 ± 20% | 0.075 | 5.60 | 4.20 | 132 ± 25% | 0.300 | 3.10 | 1.70 |
| HM78D-128390MLF | 39 ± 20% | 0.080 | 5.50 | 3.60 | 156 ± 25% | 0.320 | 2.80 | 1.60 |
| HM78D-128470MLF | 47 ± 20% | 0.090 | 5.20 | 3.00 | 188 ± 25% | 0.360 | 2.60 | 1.50 |
| HM78D-128560MLF | 56 ± 20% | 0.095 | 4.50 | 2.80 | 224 ± 25% | 0.380 | 2.40 | 1.40 |
| HM78D-128680MLF | 68 ± 20% | 0.105 | 4.10 | 2.60 | 272 ± 25% | 0.420 | 2.10 | 1.30 |
| HM78D-128820MLF | 82 ± 20% | 0.140 | 3.80 | 2.30 | 328 ± 25% | 0.560 | 1.90 | 1.20 |
| HM78D-128101MLF | 100 ± 20% | 0.150 | 3.40 | 2.00 | 400 ± 25% | 0.600 | 1.70 | 1.10 |
| HM78D-128121KLF | 120 ± 10% | 0.205 | 3.20 | 1.90 | 480 ± 25% | 0.820 | 1.60 | 1.00 |
| HM78D-128151KLF | 150 ± 10% | 0.230 | 2.80 | 1.80 | 600 ± 25% | 0.920 | 1.40 | 0.89 |
| HM78D-128181KLF | 180 ± 10% | 0.255 | 2.50 | 1.70 | 720 ± 25% | 1.02 | 1.30 | 0.84 |
| HM78D-128221KLF | 220 ± 10% | 0.345 | 2.30 | 1.60 | 880 ± 25% | 1.38 | 1.10 | 0.75 |
| HM78D-128271KLF | 270 ± 10% | 0.450 | 2.10 | 1.50 | 1080 ± 25% | 1.80 | 1.00 | 0.71 |
| HM78D-128331KLF | 330 ± 10% | 0.510 | 1.90 | 1.30 | 1320 ± 25% | 2.04 | 0.92 | 0.62 |
| HM78D-128391KLF | 390 ± 10% | 0.560 | 1.70 | 1.10 | 1560 ± 25% | 2.24 | 0.84 | 0.53 |
| HM78D-128471KLF | 470 ± 10% | 0.765 | 1.60 | 0.87 | 1880 ± 25% | 3.06 | 0.80 | 0.43 |
| HM78D-128561KLF | 560 ± 10% | 0.845 | 1.50 | 0.83 | 2240 ± 25% | 3.38 | 0.73 | 0.40 |
| HM78D-128681KLF | 680 ± 10% | 1.145 | 1.30 | 0.76 | 2720 ± 25% | 4.58 | 0.63 | 0.36 |
| HM78D-128821KLF | 820 ± 10% | 1.275 | 1.20 | 0.69 | 4000 ± 30% | 5.10 | 0.58 | 0.33 |
| HM78D-128102KLF | 1000 ± 10% | 1.415 | 1.10 | 0.60 | 4800 ± 30% | 5.66 | 0.56 | 0.30 |
| HM78D-755R33MLF | 0.33 ± 20% | 0.0074 | 18.4 | 0.620 | 1.176 ± 20% | 0.0295 | 9.18 | 3.10 |
| HM78D-7551R0MLF | 1.0 ± 20% | 0.0100 | 10.20 | 5.33 | 3.808 ± 20% | 0.0400 | 5.10 | 2.66 |
| HM78D-7551R5MLF | 1.5 ± 20% | 0.0115 | 8.35 | 4.96 | 5.688 ± 20% | 0.0461 | 4.17 | 2.48 |
| HM78D-7552R2MLF | 2.2 ± 20% | 0.0130 | 7.06 | 4.66 | 7.944 ± 20% | 0.0521 | 3.53 | 2.33 |
| HM78D-7553R3MLF | 3.3 ± 20% | 0.0183 | 5.40 | 3.94 | 13.58 ± 20% | 0.0732 | 2.70 | 1.97 |
| HM78D-7554R7MLF | 4.7 ± 20% | 0.0254 | 4.37 | 3.34 | 20.73 ± 20% | 0.102 | 2.19 | 1.67 |

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

Specifications @ 25°C continued

| Part Number | Parallel Connection | | | | Series Connection | | | |
|-----------------|--------------------------|--------------------------------|--|--|--------------------------|--------------------------------|--|--|
| | L ⁽¹⁾ (μH) | DCR Typ. ⁽²⁾ (Ω) | I _{sat} ⁽³⁾ (A) | I _{rms} ⁽⁴⁾ (A) | L ⁽¹⁾ (μH) | DCR Typ. ⁽²⁾ (Ω) | I _{sat} ⁽³⁾ (A) | I _{rms} ⁽⁴⁾ (A) |
| HM78D-7556R8MLF | 6.8 ± 20% | 0.0418 | 3.67 | 2.60 | 29.38 ± 20% | 0.167 | 1.84 | 1.30 |
| HM78D-7558R2MLF | 8.2 ± 20% | 0.0441 | 3.40 | 2.53 | 34.26 ± 20% | 0.177 | 1.70 | 1.27 |
| HM78D-755100MLF | 10 ± 20% | 0.0489 | 3.17 | 2.41 | 39.53 ± 20% | 0.196 | 1.58 | 1.20 |
| HM78D-755150MLF | 15 ± 20% | 0.0637 | 2.48 | 2.11 | 64.36 ± 20% | 0.255 | 1.24 | 1.05 |
| HM78D-755220MLF | 22 ± 20% | 0.0925 | 2.13 | 1.75 | 86.92 ± 20% | 0.371 | 1.07 | 0.874 |
| HM78D-755330MLF | 33 ± 20% | 0.143 | 1.73 | 1.41 | 132 ± 20% | 0.574 | 0.87 | 0.702 |
| HM78D-755470MLF | 47 ± 20% | 0.216 | 1.41 | 1.15 | 198.6 ± 20% | 0.865 | 0.71 | 0.573 |
| HM78D-755680MLF | 68 ± 20% | 0.265 | 1.19 | 1.03 | 278.7 ± 20% | 1.06 | 0.60 | 0.517 |
| HM78D-755820MLF | 82 ± 20% | 0.345 | 1.11 | 0.91 | 323.8 ± 20% | 1.38 | 0.55 | 0.453 |
| HM78D-755101MLF | 100 ± 20% | 0.383 | 0.99 | 0.86 | 406.4 ± 20% | 1.53 | 0.49 | 0.430 |
| HM78D-755151MLF | 150 ± 20% | 0.591 | 0.81 | 0.69 | 600 ± 20% | 2.37 | 0.41 | 0.346 |
| HM78D-755221MLF | 220 ± 20% | 0.907 | 0.66 | 0.56 | 908 ± 20% | 3.63 | 0.33 | 0.279 |
| HM78D-755331MLF | 330 ± 20% | 1.41 | 0.54 | 0.45 | 1342 ± 20% | 5.66 | 0.27 | 0.224 |
| HM78D-755471MLF | 470 ± 20% | 1.74 | 0.46 | 0.40 | 1861 ± 20% | 6.97 | 0.23 | 0.202 |
| HM78D-755681MLF | 680 ± 20% | 2.58 | 0.38 | 0.33 | 2685 ± 20% | 10.30 | 0.19 | 0.166 |
| HM78D-755821MLF | 820 ± 20% | 2.93 | 0.35 | 0.31 | 3251 ± 20% | 11.70 | 0.17 | 0.156 |
| HM78D-755102MLF | 1000 ± 20% | 3.89 | 0.31 | 0.27 | 4036 ± 20% | 15.60 | 0.16 | 0.135 |

- Notes: (1) Inductance is measured at 100 kHz, 0.1Vrms without DC current.
 (2) DCR Typ. is only for 755 series while 128 series is of DCR Max.
 (3) I_{sat} is the saturation current at which inductance rolls off approximately 30% from its initial (zero DC) value.
 (4) I_{rms} is the approximate current at which ΔT = 40°C.

Outline Dimensions (mm)

| Case Size | A | B | C | D | E | F | G | H | I | J | K | L | M | N | P | Q | R | S |
|-----------|------|------|------|-----|-----|------|------|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|
| 128 | 12.5 | 12.5 | 8.05 | 5.0 | 5.0 | 3.5 | 1.5 | 4.2 | 5.5 | 4.5 | 2.0 | 12.8 | 4.2 | 4.5 | 2.0 | 4.2 | 5.5 | 4.5 |
| 755 | 7.7 | 7.7 | 4.8 | 3.9 | 2.7 | 1.55 | 0.72 | 2.2 | 2.8 | 3.1 | 1.0 | 7.5 | 2.2 | 3.1 | 1.0 | 2.2 | 2.8 | 3.1 |

Packaging

| | | |
|-----------|------------------------|--|
| Standard: | Embossed Tape and Reel | |
| | Reel: | Diameter: = 13" (330.2mm) |
| | | Capacity: Case size 128 = 500 Units Case size 755 = 1,000 Units |

Ordering Information



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.



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)

Факс: 8 (812) 320-02-42

Электронная почта: org@eplast1.ru

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.