

Data Sheet

Customer:

Product: Automotive Grade Multilayer Ferrite Chip Inductor-MLH..A Series

Sizes.: 0805/0806/1008

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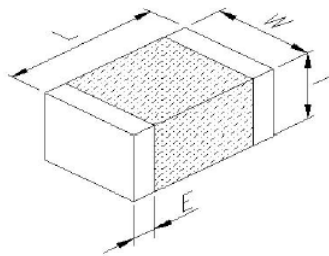
Automotive Grade Multilayer Ferrite Chip Inductor



■Features

- AEC-Q200 Compliance
- Sizes 0805 / 0806 / 108

■Dimensions



Type	Size (Inch)	L mm	W mm	T mm	E mm	Weight (g) (1000pcs)
MLH05	0805	2.00±0.20	1.25±0.20	0.90±0.10	0.50±0.30	10
MLH06	0806	2.00±0.20	1.60±0.20	0.90±0.10	0.50±0.30	12
MLH08	1008	2.50±0.20	2.00±0.20	0.90±0.10	0.50±0.30	21

■Part Numbering

MLH	05	M	T	2R2	A
Product Type	Dimensions	Inductance Tolerance	Packaging Code	Inductance	Application
MLH :High Current	05: 0805 06: 0806 08: 1008	M: ±20%	T: Taping Reel	1R0: 1.0uH 2R2: 2.2uH 4R7: 4.7uH	A: Automotive Grade

■High Current Electrical Specifications

MLH05 Multilayer Ferrite Chip Inductors Type

Part No.	Inductance (uH)	Tolerance	Test Condition	SRF (MHz)	DCR (Ω) ±25%.	IDC (mA) max.
MLH05MT2R2A	2.2	±20%	1MHz, 100mV	70	0.170	900
MLH05MT4R7A	4.7	±20%	1MHz, 100mV	40	0.230	700

MLH06 Multilayer Ferrite Chip Inductors Type

Part No.	Inductance (uH)	Tolerance	Test Condition	SRF (MHz)	DCR (Ω) ±25%.	IDC (mA) max.
MLH06MT2R2A	2.2	±20%	1MHz, 100mV	40	0.120	1100
MLH06MT4R7A	4.7	±20%	1MHz, 100mV	20	0.160	900

MLH08 Multilayer Ferrite Chip Inductors Type

Part No.	Inductance (uH)	Tolerance	Test Condition	SRF (MHz)	DCR (Ω) ±25%.	IDC (mA) max.
MLH08MT1R0A	1.0	±20%	1MHz, 100mV	60	0.055	1600
MLH08MT1R5A	1.5	±20%	1MHz, 100mV	50	0.070	1500
MLH08MT2R2A	2.2	±20%	1MHz, 100mV	40	0.080	1300
MLH08MT3R3A	3.3	±20%	1MHz, 100mV	30	0.100	1200
MLH08MT4R7A	4.7	±20%	1MHz, 100mV	25	0.110	1100

■Operating Temperature Range: -55~+125℃

■Apply DC 0.4~0.6A to chip for 1~3 sec. before to measure inductance.

■Test Equipment: HP4291B RF Impedance / Material Analyzer
HP4338A/B Milloohmmeter

Environmental Characteristics

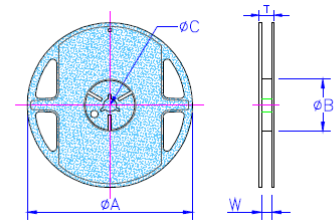
Item	Requirement	Test Method						
High Temperature Exposure	No mechanical damage Inductance should be within $\pm 20\%$ of the initial value *Apply DC 0.4~0.6A to chip for 1~3 sec. before to measure inductance	Temperature: 125 $\pm 5^{\circ}\text{C}$ Test time: 1000 hrs Measurement: at ambient temperature 24 hrs after test completion						
Temperature Cycle		Temperature: -55~+125 $^{\circ}\text{C}$ Cycle: 1000 cycles Dwell time: 30 minutes Measurement: at ambient temperature 24 hrs after test completion						
Biased Humidity		Temperature: 85 $\pm 2^{\circ}\text{C}$ Humidity: 85% RH Test time: 1000 hrs Apply current: full rated current Measurement: at ambient temperature 24 hrs after test completion						
Operational Life		Temperature: 125 $\pm 5^{\circ}\text{C}$ Test time: 1000 hrs Apply current: full rated current Measurement: at ambient temperature 24 hrs after test completion						
Mechanical Shock		Condition F: 1500g's/0.5ms/Half sine						
Vibration Test		5g's for 20 minutes, 12 cycles each of 3 orientations Test from 10-2000Hz., 12cycles each of 3 orientations						
Resistance to Soldering Heat	More than 95% of terminal electrode should be covered with new solder No mechanical damage Inductance should be within $\pm 20\%$ of the initial value *Apply DC 0.4~0.6A to chip for 1~3 sec. before to measure inductance	Solder Temperature: 260 $\pm 5^{\circ}\text{C}$ Flux: Rosin Dip time: 10 ± 1 sec.						
ESD	No mechanical damage Inductance should be within $\pm 20\%$ of the initial value *Apply DC 0.4~0.6A to chip for 1~3 sec. before to measure inductance	Classification levels 1C 1000V(DC) to <2000V(DC)						
Solderability	More than 95% of terminal electrode Should be covered with new solder No mechanical damage	Solder Temperature: 235 $\pm 5^{\circ}\text{C}$ Flux: Rosin Dip time: 5 ± 1 sec.						
Board Flex	No mechanical damage	Epoxy-PCB(1.6mm) Deflection 2mm(min) 60s minimum holding time						
Terminal Strength	No mechanical damage	<table border="1"> <tr> <th>Size</th><th>Apply Force(F)</th><th>Test Time</th></tr> <tr> <td>≥ 0805</td><td>17.7N</td><td>60± 1 sec</td></tr> </table>	Size	Apply Force(F)	Test Time	≥ 0805	17.7N	60 ± 1 sec
Size	Apply Force(F)	Test Time						
≥ 0805	17.7N	60 ± 1 sec						

Storage Temperature: 15~28 $^{\circ}\text{C}$; Humidity < 80%RH
Shelf life: 1 years max

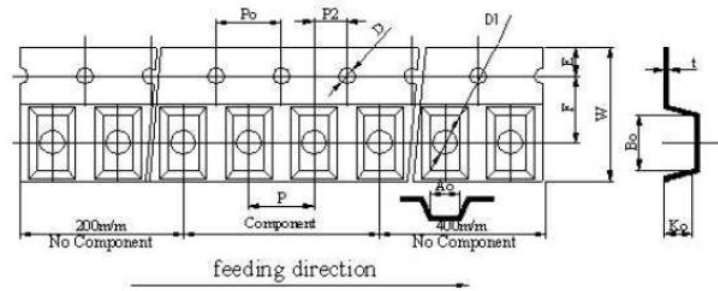
■Packaging

Reel Specifications & Packaging Quantity

Type	A mm	B mm	C mm	W mm	T mm	Quantity (EA)
MLH05	178±1	60.0+0.5	13.0±0.2	9.00±0.5	12.0±0.15	3,000
MLH06	178±1	60.0+0.5	13.0±0.2	9.00±0.5	12.0±0.15	3,000
MLH08	178±1	60.0+0.5	13.0±0.2	9.00±0.5	12.0±0.15	3,000

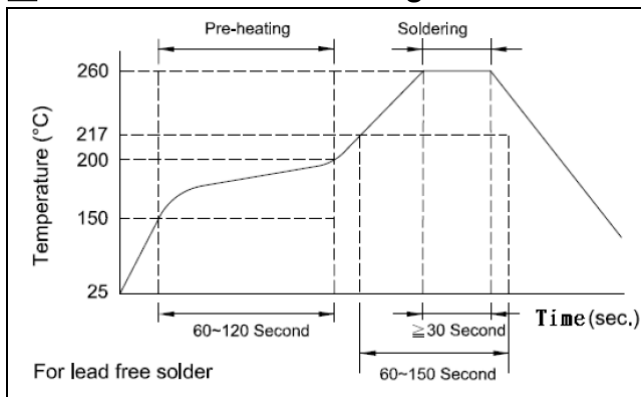


Embossed Plastic Tape Specifications

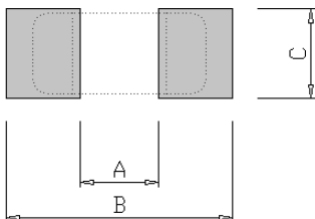


Type	A0 mm	B0 mm	W mm	E mm	F mm	P mm	P0 mm	P2 mm	D mm	D1 mm	K0 mm	t mm
MLH05	1.40±0.10	2.30±0.10	8.00±0.10	1.75±0.10	3.50±0.10	4.00±0.10	4.00±0.10	2.00±0.10	1.55±0.05	1.00±0.05	1.13±0.10	0.22±0.05
MLH06	1.80±0.10	2.20±0.10	8.00±0.10	1.75±0.10	3.50±0.10	4.00±0.10	4.00±0.10	2.00±0.10	1.55±0.05	1.00±0.05	1.15±0.10	0.22±0.05
MLH08	2.25±0.10	2.80±0.10	8.00±0.10	1.75±0.10	3.50±0.10	4.00±0.10	4.00±0.10	2.00±0.10	1.55±0.05	1.00±0.05	1.35±0.10	0.22±0.05

■Recommended Soldering Conditions



■Land Patterns for Reflow Soldering



Type	A mm	B mm	C mm
MLH05	1.0~1.2	3.0~4.0	0.8~1.1
MLH06	1.0~1.2	3.0~4.0	1.0~1.5
MLH08	1.2~1.5	3.5~4.0	1.5~2.0

REVISION HISTORY

<u>REVISION</u>	<u>DATE</u>	<u>CHANGE NOTIFICATION</u>	<u>DESCRIPTION</u>
Version A1	Apr 15 ,2025		-Add Shelf life.