Data Sheet

Customer:	
Product:	**Automotive Grade Multilayer Ferrite Chip Inductor-MLH..A Series**
Sizes.:	**0805/0806/1008**
Issued Date:	**15-Apr-25**
Edition:	**REV.A1**

RoHS Compliant

HONG KONG HELISTO INDUSTRIAL LIMITED
香港海利斯特实业有限公司

SHENZHEN HELISTO TECHNOLOGYCOLTD
深圳市海利斯特科技有限公司

ADD:5/F., A Block, Hongdu Industrial Park, Fanshen Road, 45 Area, Baoan, Shenzhen, China
TEL:+86-755-29741555 29749555
FAX:+86-755-29742111
E-mail:donnyhai@helisto.com
www.Helisto.com

Produced by (QC)	Checked (QC)	Approved by (QC)	Prepared by (Sales)	Accepted by (Customer)
15-Apr-25	15-Apr-25	15-Apr-25	15-Apr-25	
Mandy Chang	*Ben Chang*	*Ben Chang*		

Automotive Grade Multilayer Ferrite Chip Inductor

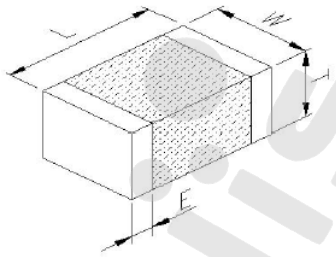


■Features

－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±20% of the initial value *Apply DC 0.4~0.6A to chip for 1~3 sec. before to measure inductance	Temperature: 125±5°C Test time: 1000 hrs Measurement: at ambient temperature 24 hrs after test completion
Temperature Cycle		Temperature: -55~+125°C Cycle: 1000 cycles Dwell time: 30 minutes Measurement: at ambient temperature 24 hrs after test completion
Biased Humidity		Temperature: 85±2°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±5°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±20% of the initial value *Apply DC 0.4~0.6A to chip for 1~3 sec. before to measure inductance	Solder Temperature: 260±5°C Flux: Rosin Dip time: 10±1 sec.
ESD	No mechanical damage Inductance should be within±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±5°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	Size: ≧0805 / Apply Force(F): 17.7N / Test Time: 60±1 sec

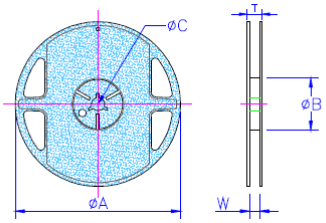
■Storage Temperature: 15~28°C; Humidity < 80%RH

■Shelf life: 1 years max

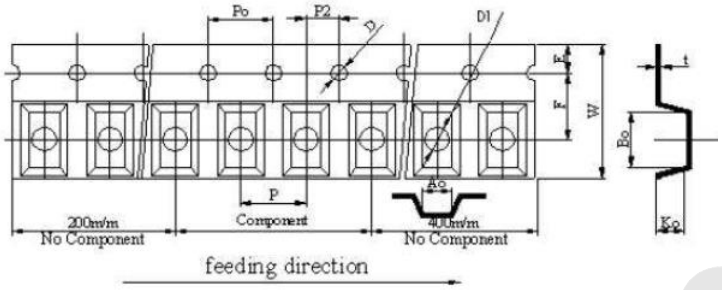
■Packaging

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

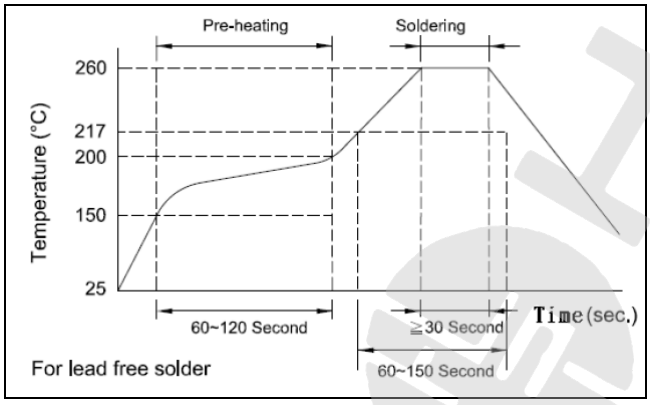


Embossed Plastic Tape Specifications

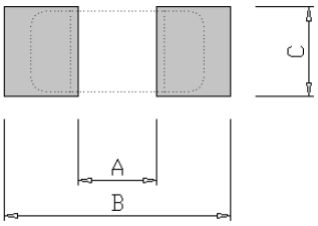


Type	A0 mm	B0 mm	W mm	E mm	F mm	P mm	P0 mm	P2 mm	D mm	D1 mm	K0 mm	t mm
MLH05	1.40±0.10	2.30±0.10	8.00±0.10	1.75±0.10	3.50±0.10	4.00±0.10	4.00±0.10	2.00±0.10	1.55±0.05	1.00±0.05	1.13±0.10	0.22±0.05
MLH06	1.80±0.10	2.20±0.10	8.00±0.10	1.75±0.10	3.50±0.10	4.00±0.10	4.00±0.10	2.00±0.10	1.55±0.05	1.00±0.05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

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