

MDA Series

SMD Low Profile High Current Molded Inductor

Size 1040



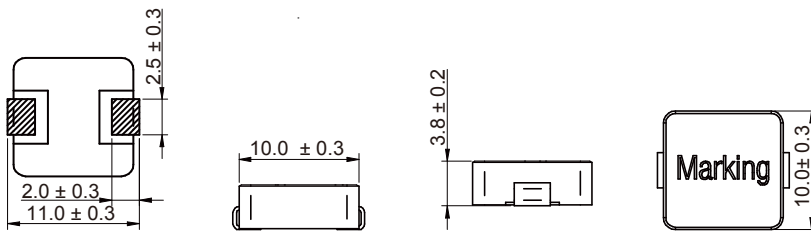
FEATURES

- Frequency range up to 5.0 MHz
- High current capability and handles high transient current spikes
- High performance (I_{sat}) realized by metal dust core.
- Very low acoustic noise and very low leakage flux noise.
- AEC-Q200 qualified
- Operating temperature: -55° to $+155^{\circ}$ (including self-temperature rise)
- Quantity: 500pcs

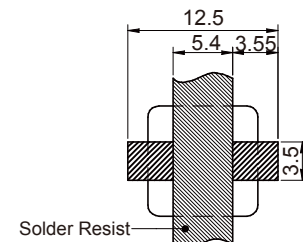
APPLICATION

- DC/DC converters for entertainment/navigation systems
- Noise suppression for motors: windshield wipers / power seats / power mirrors / heating and ventilation blowers / HID lighting
- LED drivers

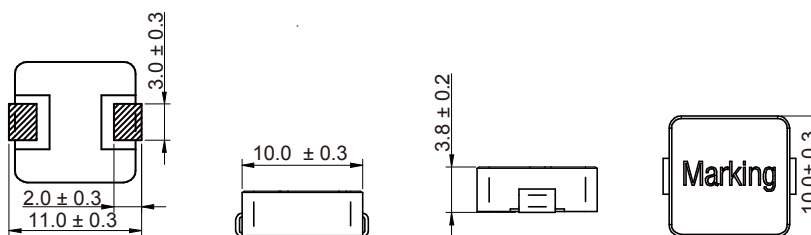
Dimensions: [mm] 0.56 μ H-1.50 μ H



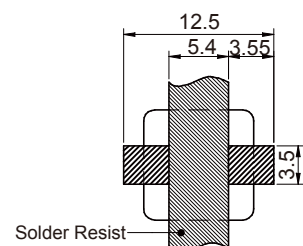
Land Pattern: [mm]



Dimensions: [mm] $\leq 0.47\mu$ H / $\geq 1.80\mu$ H



Land Pattern: [mm]



Electrical Properties:

Part No	L@100KHz /1.0V (μ H)	Tolerance	I_R Typ. (A)	I_R Max. (A)	I_{SAT} Typ. (A)	I_{SAT} Max. (A)	R_{DC} Typ. (m Ω)	R_{DC} Max. (m Ω)
MDA1040-R56M	0.56	20%	25	23	34	29.0	1.6	1.8
MDA1040-R68M	0.68	20%	23	20	31	28.0	1.9	2.2
MDA1040-1R0M	1.00	20%	20	18	29	26.0	2.9	3.25
MDA1040-1R5M	1.50	20%	17.5	16	26	22.0	3.7	4.2

Part No	L@100KHz /1.0V (μ H)	Tolerance	I _R Typ. (A)	I _R Max. (A)	I _{SAT} Typ. (A)	I _{SAT} Max. (A)	R _{DC} Typ. (m Ω)	R _{DC} Max. (m Ω)	Quantity
MDA1040-R15N	0.15	± 30%	44.0	38.0	82.0	75.0	0.50	0.60	500
MDA1040-R22M	0.22	± 20%	36.0	33.0	70.0	60.0	0.72	0.83	500
MDA1040-R36M	0.36	± 20%	33.0	29.0	51.0	45.0	1.05	1.18	500
MDA1040-R42M	0.42	± 20%	32.5	28.5	50.0	42.0	1.15	1.30	500
MDA1040-R47M	0.47	± 20%	32.0	28.0	46.0	40.0	1.30	1.50	500
MDA1040-1R8M	1.80	± 20%	16.5	15.0	23.0	20.5	5.10	5.70	500
MDA1040-2R0M	2.00	± 20%	16.0	14.5	21.0	18.0	5.30	6.10	500
MDA1040-2R2M	2.20	± 20%	15.0	13.0	20.0	16.0	5.80	6.70	500
MDA1040-3R3M	3.30	± 20%	11.0	10.0	17.5	14.0	10.5	11.8	500
MDA1040-4R7M	4.70	± 20%	8.80	8.00	15.2	13.0	15.8	19.0	500
MDA1040-5R6M	5.60	± 20%	8.00	7.20	14.1	11.5	19.0	22.8	500
MDA1040-6R8M	6.80	± 20%	7.80	6.80	12.2	11.0	22.0	24.5	500
MDA1040-8R2M	8.20	± 20%	7.60	6.50	9.50	8.50	25.0	28.0	500
MDA1040-100M	10.0	± 20%	7.50	6.10	8.60	7.50	27.0	30.0	500
MDA1040-150M	15.0	± 20%	6.25	5.00	7.00	6.00	41.0	45.0	500
MDA1040-220M	22.0	± 20%	5.00	4.10	6.20	5.50	58.0	66.0	500
MDA1040-330M	33.0	± 20%	4.40	3.50	5.50	5.00	84.0	91.0	500
MDA1040-470M	47.0	± 20%	3.50	3.00	4.00	3.70	125	143	500
MDA1040-680M	68.0	± 20%	2.60	2.40	3.20	3.00	184	210	500

I_R will cause the coil temperature rise approximately $\Delta t 40^{\circ}\text{C}$

I_{SAT} will cause L to drop approximately 30% .

Typical Electrical Characteristics:

