

SPECIFICATION FOR

APPROVAL

DESCRIPTION High Current Inductor
PART NUMBER EMA6540S Series
CUSTOMER
DATE
AEC-Q200 Qualified

Index

- | | |
|-----------------------------|-------------------------------------|
| 1 Dimension/Quantity | 7 Dimension for Carrier Tape & Reel |
| 2 Electrical Specifications | 8 Packing Quantity |
| 3 Part Number Information | |
| 4 Product Profile | |
| 5 Performance Graphs | |
| 6 Reflow Condition | |



Revision	Ornated by	Reason for Change	Approved by
2018-02-13	MY.HONG	First release	D.G.YUN

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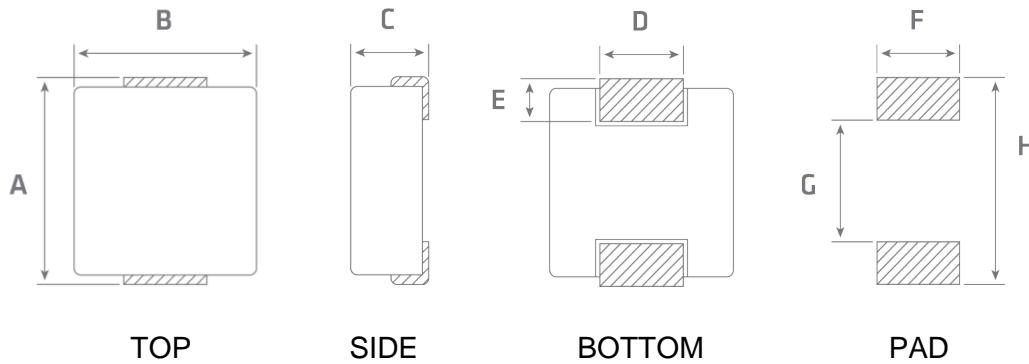
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EMA6540S

1 Dimension / Quantity



TYPE	EMA6540S	
A	7.0 ± 0.3	mm
B	6.6 ± 0.2	mm
C	3.8 ± 0.2	mm
D	3.0 ± 0.3	mm
E	1.6 ± 0.3	mm
F	3.5	mm
G	3.7	mm
H	8.4	mm
Quantity	1,000	pcs

2 Electrical Specifications

Part Number	Inductance [uH]	DC Resistance [typ., mΩ]	DC Resistance [max., mΩ]	Saturation Rated Current [typ.,A] ¹	Temperature Rise Current [typ.,A] ²
EMA6540S - 1R0M	1.0 ± 20%	6.5	8.0	15.0	14.0
EMA6540S - 1R5M	2.2 ± 20%	8.5	10.0	11.5	10.0
EMA6540S - 2R2M	2.2 ± 20%	11.0	13.5	11.0	9.0
EMA6540S - 3R3M	3.3 ± 20%	17.5	21.0	10.0	8.0
EMA6540S - 4R7M	4.7 ± 20%	30.0	35.0	9.0	7.0
EMA6540S - 5R6M	5.6 ± 20%	33.0	40.0	8.0	6.3
EMA6540S - 6R8M	6.8 ± 20%	39.0	45.0	6.5	5.5
EMA6540S - 100M	10.0 ± 20%	60.0	65.0	5.0	5.0
EMA6540S - 150M	15.0 ± 20%	95.0	105.0	4.5	4.0
EMA6540S - 220M	22.0 ± 20%	115.0	125.0	4.0	3.5

- All Test Data is Referenced to 25°C Ambient
- Measuring Condition : 100kHz, 100mV
- Tolerance of Inductance : ± 20%
- ¹ Saturation Rated Current : 30% lower than its initial value
- ² Temperature Rise Current : ΔT = 40°C
(Temperature of components should be checked in the end application)
- Operating Temperature : -55~125°C

PRODUCT FAMILY	PART NUMBER	REVISION	PAGE
EMA6540S	EMA6540S	Rev.01	Page 1 of 6

3 Part Number Information

EM A 6540S □□ - 4R7 M

1 2 3 4 5 6 7 8

1 Product Series

Mark	Series
EM	Metal Molding Design

2 Core Type

Mark	Core Type
A	Metal Alloy
B	-
C	Carbonyl

4 Shape

Mark	Shape
T	Triangle
S	Square
R	Rectangle
P	Pentagon
H	Hexagon
O	Octagonal
C	Circle

7 Inductance Value

Mark (Ex.)	Induction Value [uH]
R47	0.47
4R7	4.7
100	10

3 Dimension

Mark	Dimension (L*W*H) [mm]
4012	4.0 * 4.3 * 1.2
4020	4.0 * 4.3 * 2.0
5218	5.2 * 5.4 * 1.8
5230	5.2 * 5.4 * 3.0
6515	6.5 * 7.1 * 1.5
6518	6.5 * 7.1 * 1.8
6524	6.5 * 7.1 * 2.4
6530	6.5 * 7.1 * 3.0
6540	6.5 * 7.1 * 4.0
10040	10.0 * 11.5 * 4.0
13050	12.7 * 13.2 * 5.5
17075	17.0 * 17.9 * 7.5

56 Addition

Mark	Addition
*	Reserve
*	Reserve

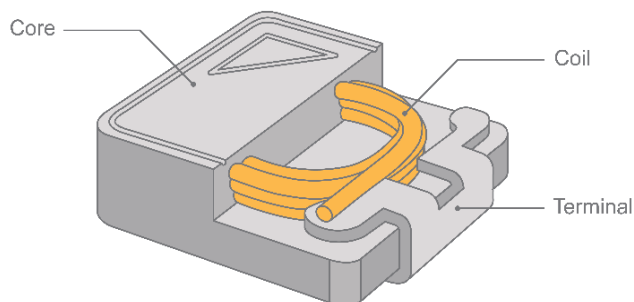
8 Inductance Tolerance

Mark	Tolerance [%]
K	±10
M	±20
N	±30

4 Product Profile

el3 COIL

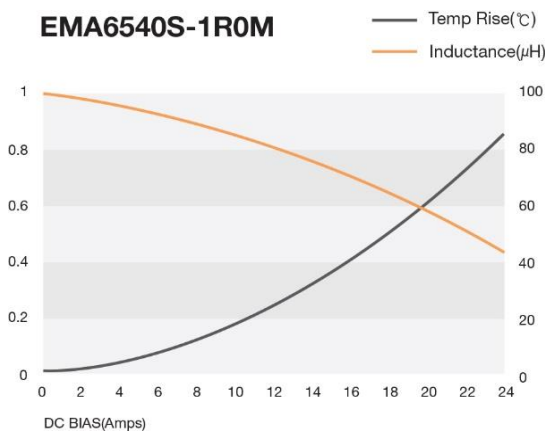
SMD High Current Inductor EM Series



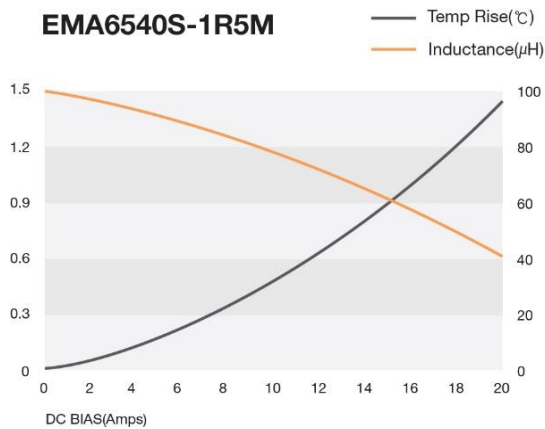
EMA6540S

5 Performance Graphs

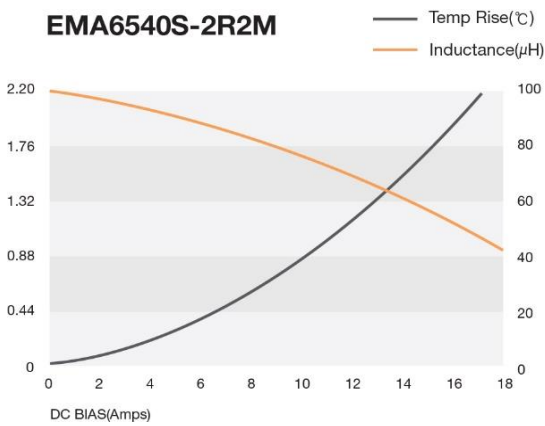
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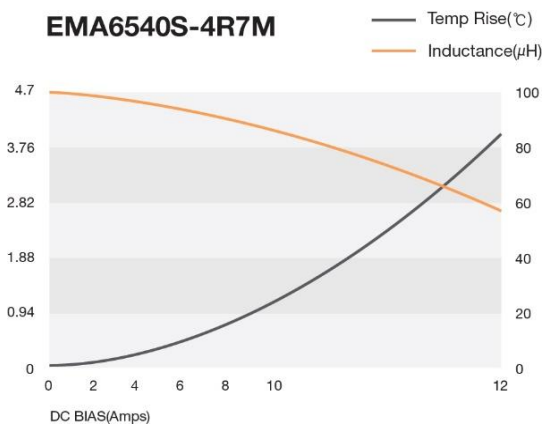
EMA6540S-1R5M



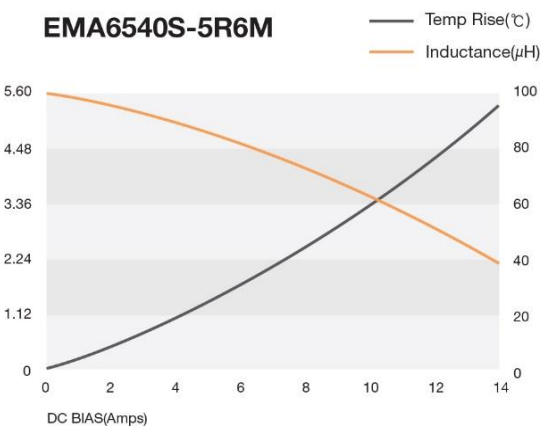
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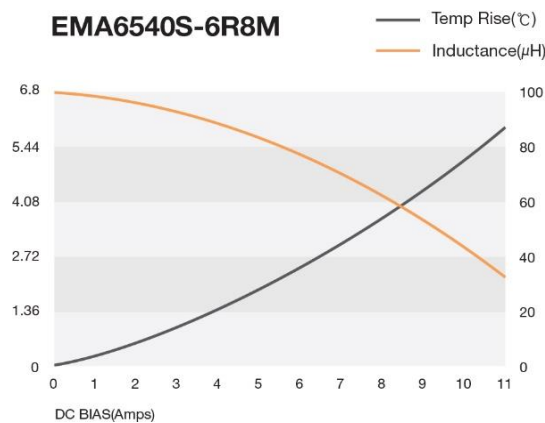
EMA6540S-4R7M



EMA6540S-5R6M



EMA6540S-6R8M

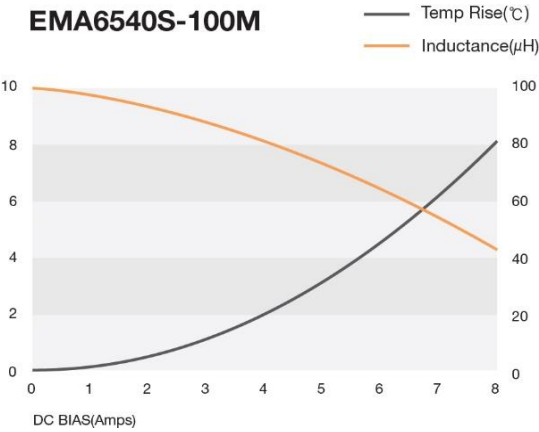


PRODUCT FAMILY	PART NUMBER	REVISION	PAGE
EMA6540S	EMA6540S	Rev.01	Page 3 of 6

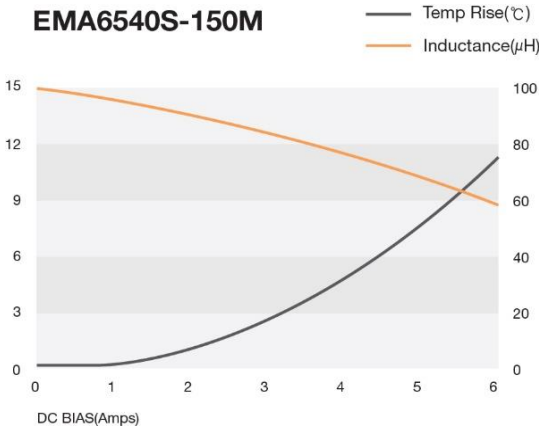
EMA6540S

5 Performance Graphs

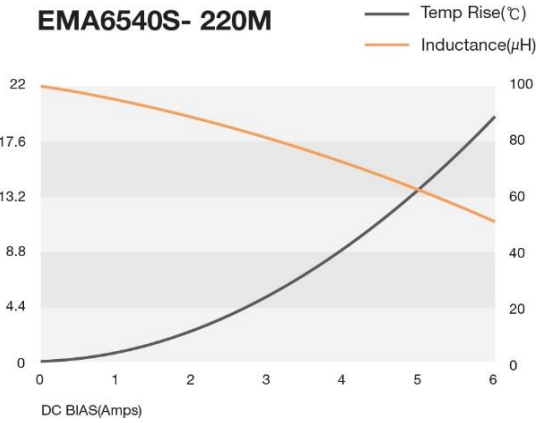
EMA6540S-100M



EMA6540S-150M

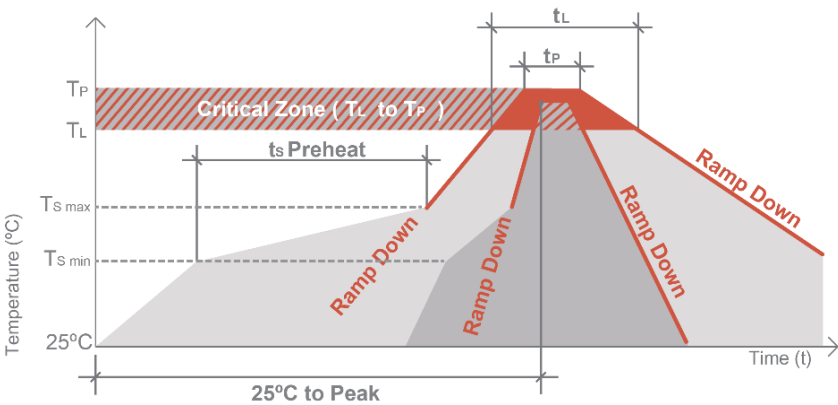


EMA6540S- 220M



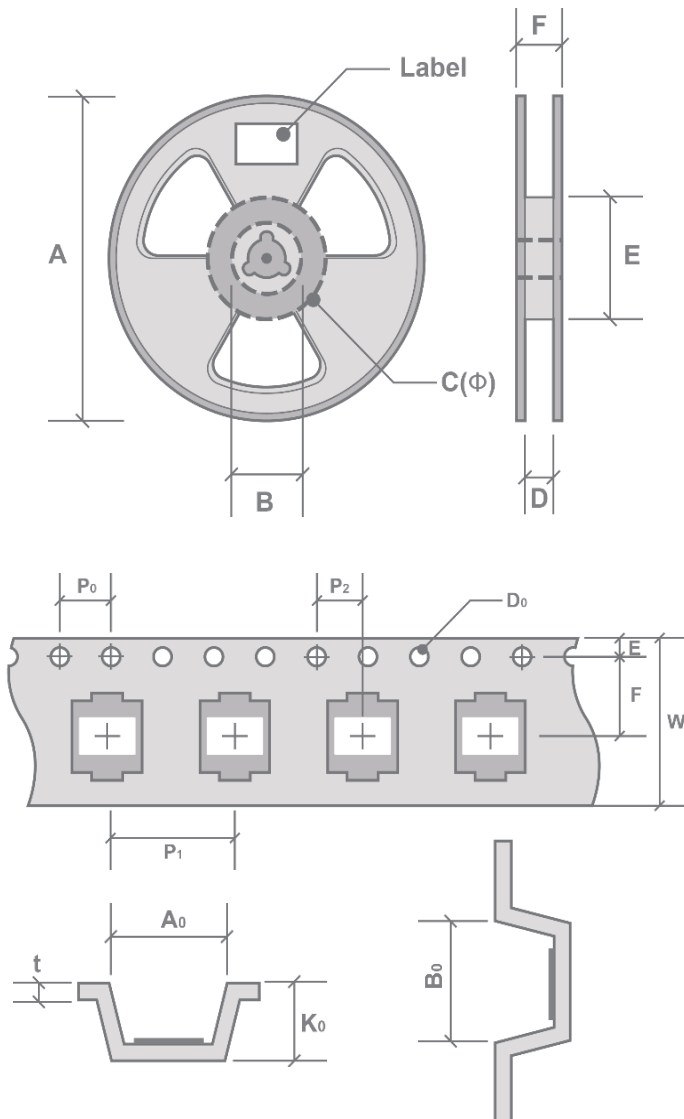
PRODUCT FAMILY	PART NUMBER	REVISION	PAGE
EMA6540S	EMA6540S	Rev.01	Page 4 of 6

6 Reflow Condition



Profile Feature		Sn-Pb Eutectic Assembly		Pb-Free assembly	
		Large Body	Small Body	Large Body	Small Body
Average ramp-up rate (TL to TP)		3°C/second max.		3°C/second max.	
Preheat	Temperature Min(Tsmin)	100°C		150°C	
	Temperature Min(Tsmin)	150°C		200°C	
	Time (min to max) (ts)	60~120 seconds		60~180 seconds	
Ramp-up Rate (Ts max to TL)		-		3°C/second max.	
Time maintained above	Temperature(TL)	183°C		217°C	
	Time(tL)	60-150 seconds		60-150 seconds	
Peak Temperature (TP)		225+0/-5°C	240+0/-5°C	245+0/-5°C	255+0/-5°C
Time within 5°C of actual Peak Temperature (tp)		10~30 sec	10~30 sec	10~30 sec	20~40 sec
Ramp-down Rate (Time 25°C to Peak Temperature)		6°C/second max.		6°C/second max.	
		6minutes max		8minutes max	

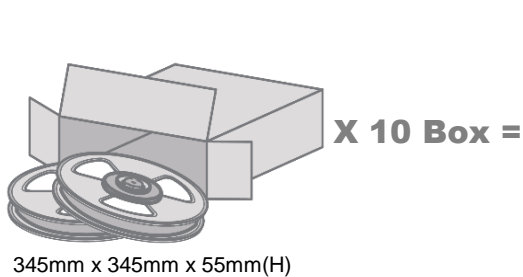
7 Dimension for Carrier Tape & Reel



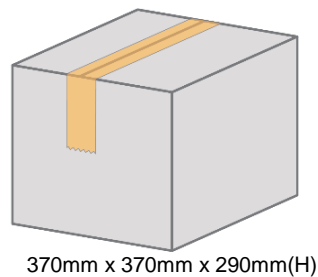
Position	Dimensions	
A	330±2.0	mm
B	13±1.0	mm
C	20±0.5	mm
D	2±0.2	mm
E	100±1.0	mm
F	16.5±0.5	mm

Type	EMA6540S	
Quantity	1,000	pcs
P ₀	4±0.1	mm
D ₀	1.5±0.1	mm
E	1.75±0.1	mm
A ₀	7.2±0.1	mm
B ₀	7.5±0.1	mm
W	16±0.3	mm
P ₁	12±0.1	mm
P ₂	2±0.1	mm
F	7.5±0.1	mm
K ₀	4.6±0.15	mm
t	0.35±0.05	mm

8 Packing Quantity



X 10 Box =



Pack	Quantity
1 Reel	1,000 Pcs
1 Middle Carton	1 Reel
1 Big Carton	10 Middle Carton
	10,000 Pcs

PRODUCT FAMILY	PART NUMBER	REVISION	PAGE
EMA6540S	EMA6540S	Rev.01	Page 6 of 6