

Data Sheet

Customer: _____

Product: Wire Wound Power Inductor (Molded) – MCS20FC Series

Size : 201610

Issued Date: 25-Feb.-2021

Edition: Ver. 1

Record of change

Date	Ver	Description	Page
20-Dec.-2018	1		
25-Feb.-2021	2	Revised code on dimension	2

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20-Dec.-2018	20-Dec.-2018	20-Dec.-2018	
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MOLDED POWER INDUCTOR MCS20FC SERIES

■ Features

- * The MCS-20FC series are characterized by low profile, low DC resistance, and high current handling capacities.
- * Because they are magnetically shielded, these parts can be used in high-density mounting configurations.
- * Flat bottom surface ensures secure, reliable mounting.
- * Provided in embossed carrier tape packaging for use with automatic mounting machines.

■ Application

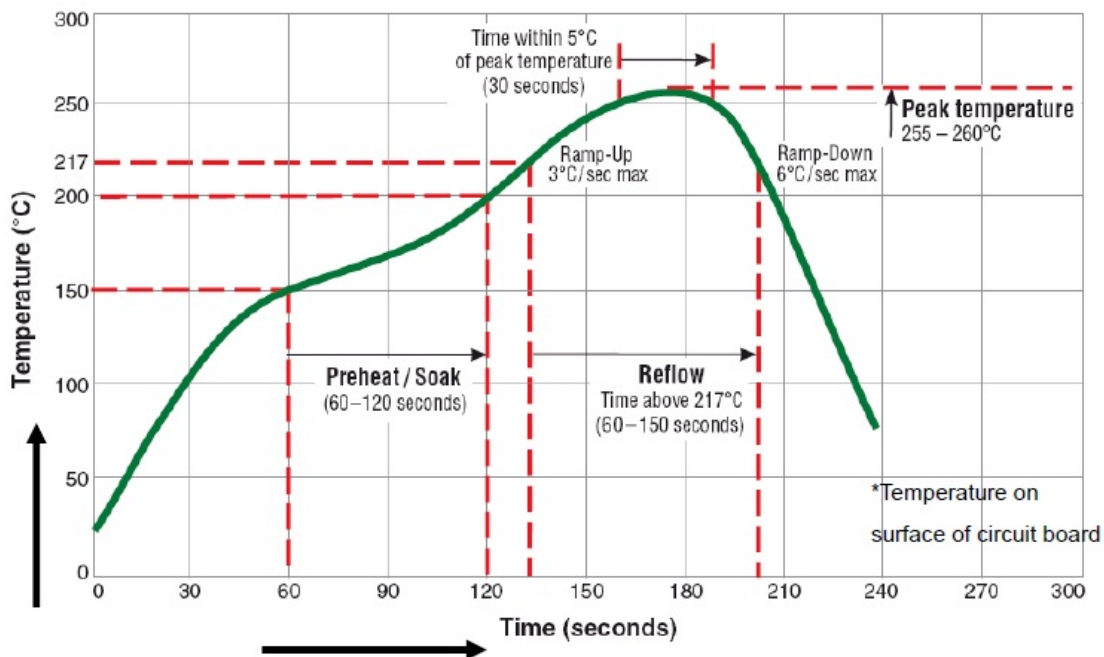
- * Thin Type On-Board Power Supply Module.
- * DC/DC Converters, etc.
- * Portable Device and Other Various Electronic Appliance.



■ Part Numbering

MCS20FC	-	R47	M	MP
SERIES		INDUCTANCE	TOLERANCE	CONTROL CODE
		R47= 0.47uH	M= ±20%	
		2R2= 2.2 uH		

■ RoHS Reflow Soldering Profile

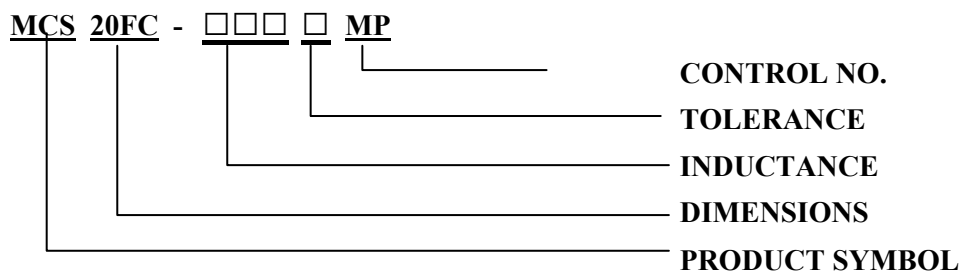


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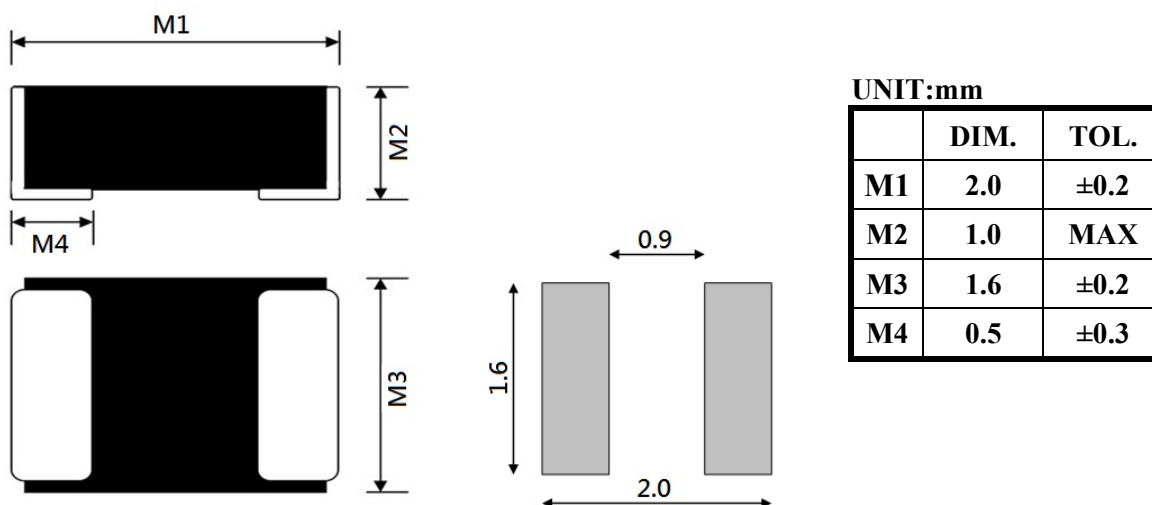
※ This is a RoHS and REACH compliant product whose related documents are available on request.

※ Graphic is only for dimensionally application.

1. PRODUCT IDENTIFICATION



2. PRODUCT DIMENSION



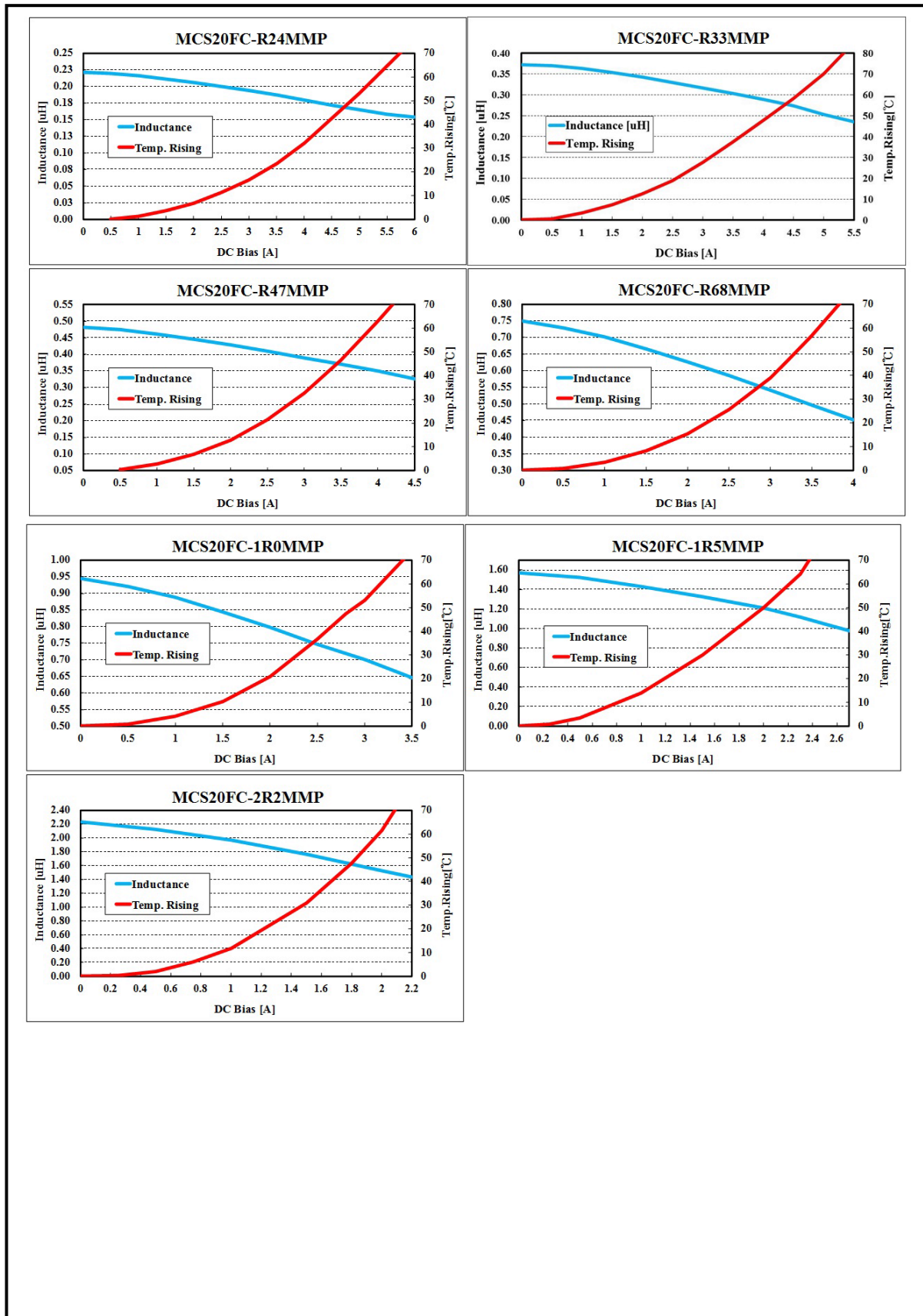
3. ELECTRICAL SPEC.

PART NO.	Inductance (uH)±20%	DCR mΩ Typical 26°C	DCR mΩ MAX.26°C	Rated Current Typical (A)	I sat Typical (A)
MCS20FC-R33MMP	0.33	24	29	4.1	5.0
MCS20FC-R47MMP	0.47	33	40	3.5	4.4
MCS20FC-R68MMP	0.68	41	49	3.4	3.7
MCS20FC-1R0MMP	1.0	60	69	2.6	2.9
MCS20FC-1R5MMP	1.5	114	129	2.0	2.5
MCS20FC-2R2MMP	2.2	135	150	1.7	1.9

- (1). Test Freq : 1MHz , 1V
- (2). All test referenced to 26°C ambient.
- (3). Operating Temperature range: -40°C to +125°C
- (4). Storage Temperature range: -50°C to +125°C
- (5). Isat means that DC current will cause a 30% inductance reduction from initial value.
- (6). Irms means that DC current will cause coil temp. rising to 40°C whichever is smaller.

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4. ELECTRICAL CURVE



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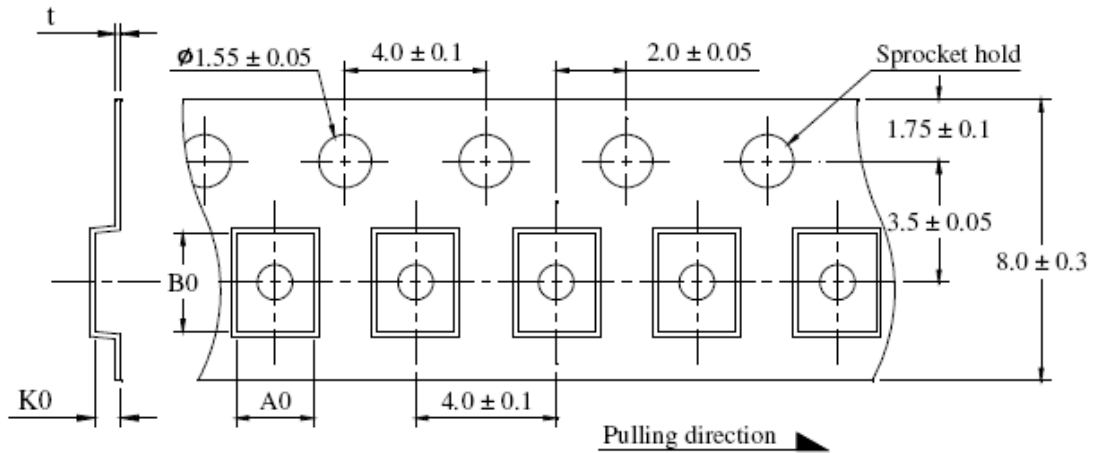
5. RELIABILITY PERFORMANCE

Test Item	Test Condition	Criteria
Resistance to Solder Heat	<ol style="list-style-type: none"> 1. Solder temperature: 260±5°C 2. Flux: Rosin 3. DIP time: 10±1 sec 	<ol style="list-style-type: none"> 1. More than 95% of terminal electrode should be covered with new solder 2. No mechanical damage 3. Inductance value should be within ±20% of the initial value
Adhesive Test	<ol style="list-style-type: none"> 1. Reflow temperature: 245°C It shall be Soldered on the substrate applying direction parallel to the substrate 2. Apply force(F): 5N 3. Test time: 10 sec 	<ol style="list-style-type: none"> 1. No mechanical damage 2. Soldering the products on PCB after the pulling test force > 5N
Temperature Cycle	<ol style="list-style-type: none"> 1. Temperature: -50 ~ 125°C For 30 minutes each 2. Cycle: 500 cycles 3. Measurement: At ambient temperature 24 hours after test completion 	<ol style="list-style-type: none"> 1. No mechanical damage 2. Inductance should be within ±20% of the initial value
Dry Heat Test	<ol style="list-style-type: none"> 1. Temperature: 85±2°C 2. Testing time: 500 hrs 3. Applied current: Full rated current 4. Measurement: At ambient temperature 24 hours after test completion 	<ol style="list-style-type: none"> 1. No mechanical damage 2. Inductance should be within ±20% of the initial value
Humidity Test	<ol style="list-style-type: none"> 1. Temperature: 60±2°C 2. Humidity: 90-95 % RH 3. Applied current: Full rated current 4. Testing time: 500 hrs 5. Measurement: At ambient temperature 24 hours after test completion 	<ol style="list-style-type: none"> 1. No mechanical damage 2. Inductance should be within ±20% of the initial value

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6. PACKAGING

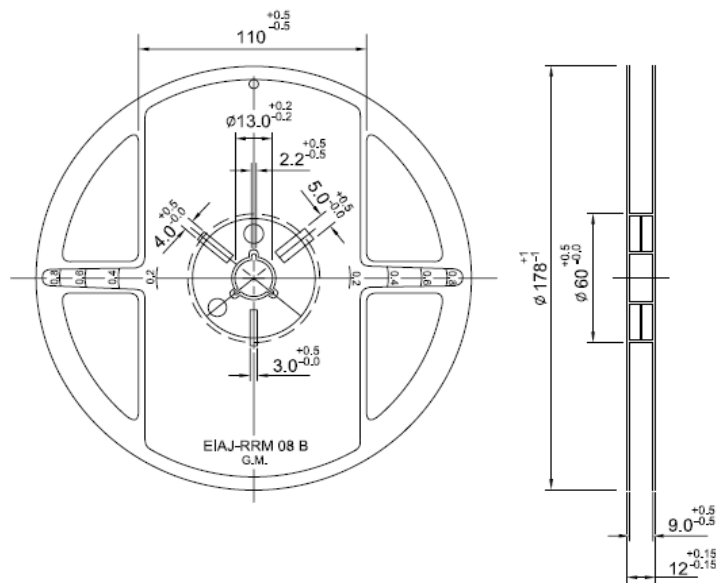
6.1 Carrier tape dimensions



UNIT : mm

	A0	B0	K0	t
DIM.	1.80±0.1	2.20±0.1	1.15±0.1	0.22±0.05

6.2 Taping reel dimensions



Qty.(pcs)	3,000
BOX	5 reels / inner box