



Specification for Approval

Customer	
Product Name	TU-CORE Molded SMD Power Inductors
Customer Cjiang P/N:	
Cjiang P/N:	FEXU series

☐ New Released, ☐ Revised] SPEC No.:

REMARK:		
Customer Approval Feedback		

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Version change history

Rev	Date	Description	APPROVED	CHECKED	DRAWN
1.0	2025/03/29	Document formulation	BOND	马月	朱小娟

Caution :

All products listed in this specification are developed, designed and intended for use in general electronics equipment. The products are not designed or Warranted to meet the requirements of the applications listed below, whose performance and/or quality require especially high reliability, or whose failure, malfunction or trouble might directly cause damage to society, person, or property. Please understand that we are not responsible for any damage or liability caused by use of the products in any of the applications below. Please contact us for more details if you intend to use our products in the following applications.

1. Aircraft equipment.
2. Aerospace equipment.
3. Undersea equipment.
4. nuclear control equipment.
5. military equipment.
6. Power plant equipment.
7. Medical equipment.
8. Transportation equipment (automobiles, trains, ships,etc.)
9. Traffic signal equipment.
10. Disaster prevention / crime prevention equipment.
11. Data-processing equipment.
12. Applications of similar complexity or with reliability requirements comparable to the applications listed in the above.

1. Scope

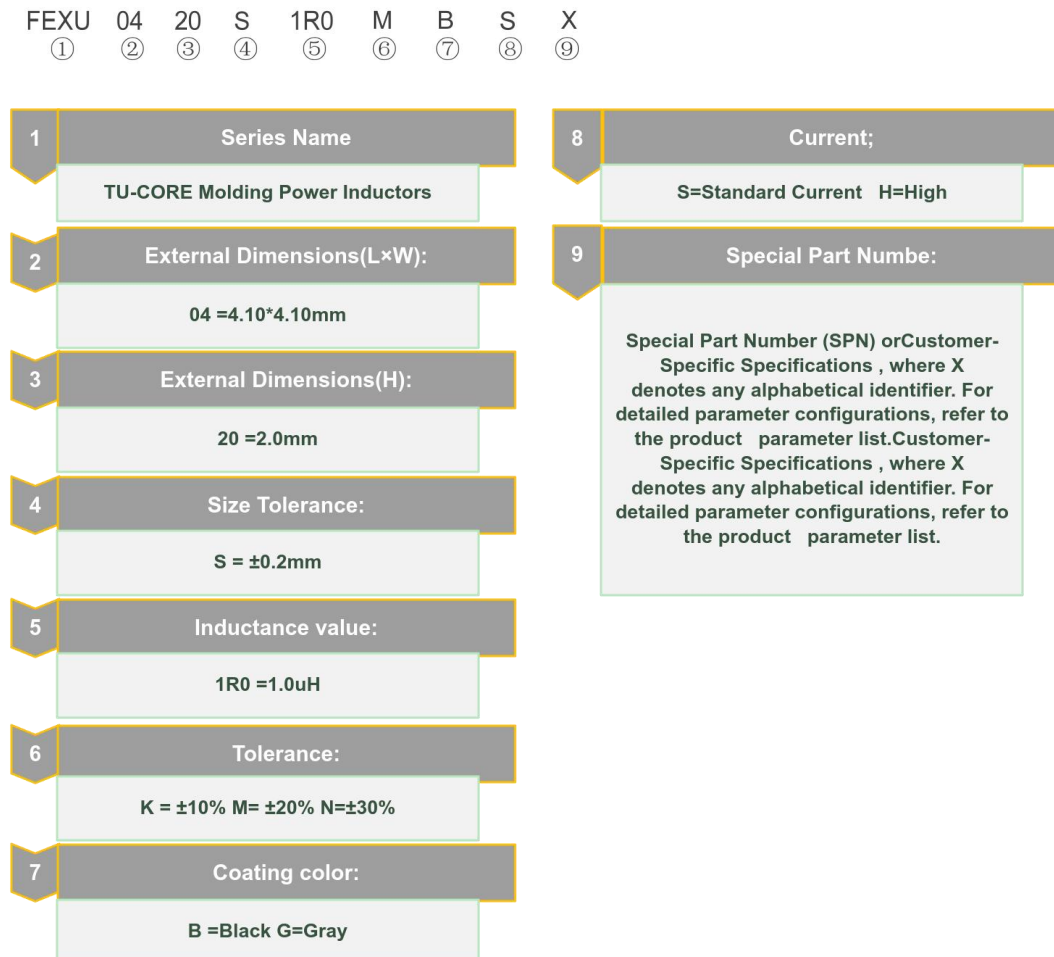
Features

- 1.1 Metal material for large current and low loss.
- 1.2 High performance (Isat) realized by metal dust core.
- 1.3 Low loss realized with low Rdc.
- 1.4 Closed magnetic circuit design reduces leakage flux.
- 1.5 Vinyl thermal spray, better surface compactness.
- 1.6 Environmental requirements must comply with the QESP-44 document
- 1.7 100% lead (Pb) free meet RoHS2.0 and Halogen , Reach and other legal and regulatory requirements standard.

Application

- 2.1 DC/DC converters.
- 2.2 Pad,Smart phone.
- 2.3 Portable gaming devices, Smart wear, Wi-Fi module.
- 2.4 Notebooks, VR, AR.
- 2.5 LCD displays, HDDs, DVCs, DSCs, etc.
- 2.6 Baseband power supply, Amplifier, Power management, Module power supply, Camera power manageme.

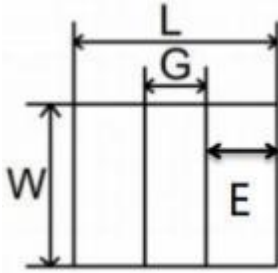
2. Ordering Procedure



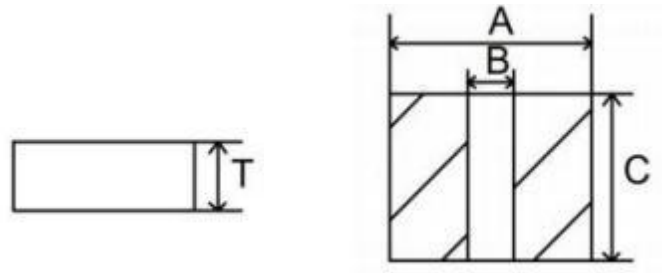
For customized inductance values beyond standard specifications or special requirements regarding DC Resistance (DCR), saturation current (Isat), and temperature rise current , contact our engineering team at:
 E-mail: RD@Cjiang.com.cn
 or visit our official website to contact customer service representatives at: www.cjiang.com.cn

3. SHAPE AND DIMENSIONS

Outline Dimensions



Recommend Land Pattern Dimensions



Units:mm

Series	L	G	W	E	T	A	B	C
FEXU0412S	4.1±0.2	1.3±0.2	4.1±0.2	1.40±0.2	1.20Max.	4.10	1.10	4.10
FEXU0415S	4.1±0.2	1.3±0.2	4.1±0.2	1.40±0.2	1.50Max.	4.10	1.10	4.10
FEXU0420S	4.1±0.2	1.3±0.2	4.1±0.2	1.40±0.2	2.00Max.	4.10	1.10	4.10
FEXU0430S	4.1±0.2	1.3±0.2	4.1±0.2	1.40±0.2	3.00Max.	4.10	1.10	4.10
FEXU0512S	5.2±0.2	2.0±0.2	5.0±0.2	1.60±0.2	1.20Max.	5.50	1.60	5.30
FEXU0520S	5.2±0.2	2.0±0.2	5.0±0.2	1.60±0.2	2.00Max.	5.50	1.60	5.30
FEXU0528S	5.2±0.2	2.0±0.2	5.0±0.2	1.60±0.2	2.80Max.	5.50	1.60	5.30
FEXU0530S	5.2±0.2	2.0±0.2	5.0±0.2	1.60±0.2	3.00Max.	5.50	1.60	5.30
FEXU0501S	5.2±0.2	2.0±0.2	5.0±0.2	1.60±0.2	3.10Max.	5.50	1.60	5.30
FEXU0540S	5.2±0.2	2.0±0.2	5.0±0.2	1.60±0.2	4.00Max.	5.50	1.60	5.30
FEXU0631S	6.2±0.2	2.6±0.2	6.0±0.2	1.80±0.2	3.10Max.	6.50	2.00	6.30
FEXU0640S	6.2±0.2	2.6±0.2	6.0±0.2	1.80±0.2	4.00Max.	6.50	2.00	6.30
FEXU0650S	6.2±0.2	2.6±0.2	6.0±0.2	1.80±0.2	5.00Max.	6.50	2.00	6.30
FEXU0660S	6.2±0.2	2.6±0.2	6.0±0.2	1.80±0.2	6.00Max.	6.50	2.00	6.30
FEXU0715S	7.2±0.2	2.6±0.2	7.0±0.2	2.30±0.2	1.50Max.	7.50	2.40	7.30
FEXU0720S	7.2±0.2	2.6±0.2	7.0±0.2	2.30±0.2	2.00Max.	7.50	2.40	7.30
FEXU0730S	7.2±0.2	2.6±0.2	7.0±0.2	2.30±0.2	3.00Max.	7.50	2.40	7.30
FEXU0740S	7.2±0.2	2.6±0.2	7.0±0.2	2.30±0.2	4.00Max.	7.50	2.40	7.30
FEXU0750S	7.2±0.2	2.6±0.2	7.0±0.2	2.30±0.2	5.00Max.	7.50	2.40	7.30
FEXU1030S	10.2±0.2	3.6±0.2	10.0±0.2	3.30±0.2	3.00Max.	10.50	3.20	10.30
FEXU1040S	10.2±0.2	3.6±0.2	10.0±0.2	3.30±0.2	4.00Max.	10.50	3.20	10.30
FEXU1050S	10.2±0.2	3.6±0.2	10.0±0.2	3.30±0.2	5.00Max.	10.50	3.20	10.30
FEXU1060S	10.2±0.2	3.6±0.2	10.0±0.2	3.30±0.2	6.00Max.	10.50	3.20	10.30
FEXU1230S	12.2±0.2	4.6±0.2	12.0±0.2	3.8±0.2	3.00Max.	12.50	3.60	12.30
FEXU1260S	12.2±0.2	4.6±0.2	12.0±0.2	3.8±0.2	6.00Max.	12.50	3.60	12.30

4. Marking(Black)

Note 1.: The inductor is marked with a 3-digit code Example -- 1.0μH → 1R0

Note 2.: The point on the top surface represents winding direction of choke

5. Specifications

1>0412 Series

FEXU0412(4.0*4.0*1.2mm)

P/N	L0(μH) @ (0A) 1MHz	Rdc(mΩ)		Heat rating current I _{rms} (A)		Saturation current I _{sat} (A)	
		Typical	Max	Typical	Max	Typical	Max
FEXU0412SR22MBS	0.22	6.5	7.5	14.0	13.0	15.0	14.0
FEXU0412SR47MBH	0.47	7.5	8.5	12.0	11.0	11.0	10.0

FEXU0415(4.0*4.0*1.5mm)

P/N	L0(μH) @ (0A) 1MHz	Rdc(mΩ)		Heat rating current I _{rms} (A)		Saturation current I _{sat} (A)	
		Typical	Max	Typical	Max	Typical	Max
FEXU0415SR10MGS	0.10	1.8	2.2	19.0	25.9	16	24.5
FEXU0415SR47MBS	0.47	5.8	7.0	13.0	12.0	13.0	12.0
FEXU0415S1R0MBS	1.0	12.5	15	11.0	10.0	9.0	8.0

FEXU0420(4.0*4.0*2.0mm)

P/N	L0(μH) @ (0A) 1MHz	Rdc(mΩ)		Heat rating current I _{rms} (A)		Saturation current I _{sat} (A)	
		Typical	Max	Typical	Max	Typical	Max
FEXU0420SR10MBS	0.10	1.2	1.6	34.0	30.5	35.0	30.0
FEXU0420SR12MBS	0.12	1.3	1.7	34.0	30.5	31.0	29.0
FEXU0420SR15MBH	0.15	1.8	2.2	28.5	25.5	28.0	24.0
FEXU0420SR22MBS	0.22	2.0	2.7	20.0	19.0	20.0	19.0
FEXU0420SR33MBH	0.33	3.2	3.85	18.0	17.5	18.0	17.0
FEXU0420SR33MBHCB	0.33	2.8	3.3	23.0	20.5	19.0	18.0
FEXU0420SR47MBHCB	0.47	4.0	4.8	17.0	16.0	15.2	14.2
FEXU0420SR47MBH	0.47	4.1	4.9	17.0	16.0	15.0	14.0
FEXU0420SR56MBS	0.56	4.7	5.6	18.5	16.5	14.0	13.0
FEXU0420SR68MBS	0.68	5.5	6.2	14.0	13.0	13.0	12.0
FEXU0420SR82MBS	0.82	6.8	8.0	13.0	12.0	12.0	11.0
FEXU0420S1R0MBH	1.0	7.5	9.0	12.5	11.5	10.0	9.0
FEXU0420S1R2MBS	1.2	10.5	12.0	10.0	9.0	10.0	9.0
FEXU0420S3R3MBS	3.3	24	28	8.0	6.5	5.6	4.7
FEXU0421S1R0MBS	1.0	7.5	8.5	12.5	11.5	11.5	11.0

FEXU0430(4.0*4.0*3.0mm)

P/N	L0(μH) @ (0A) 1MHz	Rdc(mΩ)		Heat rating current I _{rms} (A)		Saturation current I _{sat} (A)	
		Typical	Max	Typical	Max	Typical	Max
FEXU0430S4R7MBS	4.70	27.0	32.4	6.6	5.9	5.8	5.1

2>5050 Series

FEXU0512(5.2*5.0*1.2mm)

P/N	L0(μH) @ (0A) 1MHz	Rdc(mΩ)		Heat rating current Irms(A)		Saturation current Isat(A)	
		Typical	Max	Typical	Max	Typical	Max
FEXU0512S1R0MGS	1.0	16	18	8.5	7.5	9.5	8.5

FEXU0520(5.2*5.0*2.0mm)

P/N	L0(μH) @ (0A) 1MHz	Rdc(mΩ)		Heat rating current Irms(A)		Saturation current Isat(A)	
		Typical	Max	Typical	Max	Typical	Max
FEXU0520S1R0MGS	1.0	7.0	8.4	14.0	13.0	16.0	14.0
FEXU0520S1R5MGS	1.5	13	17	13.0	10.0	12.0	10.0
FEXU0520S2R2MGS	2.2	24	29	7.0	6.5	9.5	8.5

FEXU0528(5.2*5.0*2.8mm)

P/N	L0(μH) @ (0A) 1MHz	Rdc(mΩ)		Heat rating current Irms(A)		Saturation current Isat(A)	
		Typical	Max	Typical	Max	Typical	Max
FEXU0528S1R5MGS	1.5	9.0	11.2	12.0	10.6	14.0	12.6
FEXU0528S3R3MGS	3.3	25	30	6.5	5.5	5.7	5.0

FEXU0530(5.2*5.0*3.0mm)

P/N	L0(μH) @ (0A) 1MHz	Rdc(mΩ)		Heat rating current Irms(A)		Saturation current Isat(A)	
		Typical	Max	Typical	Max	Typical	Max
FEXU0530SR15MGS	0.15	1.05	1.45	25	24	43	41
FEXU0530SR16MGS	0.16	1.1	1.5	24	23	42	40
FEXU0530SR30MGS	0.30	1.5	1.8	22	21	29	27
FEXU0530SR33MGS	0.33	1.6	2.0	21	19	28	26
FEXU0530SR47MGS	0.47	2.5	3.0	21	18	26	23
FEXU0530SR56MGS	0.56	3.0	3.6	20	18	24	21
FEXU0530SR68MGS	0.68	3.8	4.6	19	16	21	18.5
FEXU0530S1R0MGS	1.0	6.0	7.6	12.2	10.0	19.0	16.5
FEXU0530S1R2MGS	1.2	5.2	6.0	13.0	11.0	15.0	13.5
FEXU0530S3R3MGS	3.3	24	27	7.3	6.5	7.2	6.0

FEXU0531(5.2*5.0*3.1mm)

P/N	L0(μH) @ (0A) 1MHz	Rdc(mΩ)		Heat rating current Irms(A)		Saturation current Isat(A)	
		Typical	Max	Typical	Max	Typical	Max
FEXU0531S1R5MGS	1.5	9.8	11.0	14.0	12.6	11.0	10.6

FEXU0540(5.2*5.0*4.0mm)

P/N	L0(μH) @ (0A) 1MHz	Rdc(mΩ)		Heat rating current I _{rms} (A)		Saturation current I _{sat} (A)	
		Typical	Max	Typical	Max	Typical	Max
FEXU0540S4R7MGS	4.7	32	36	7.0	5.5	8.5	7.0
FEXU0540S6R8MGS	6.8	40	44	7.0	5.0	9.0	7.0

FEXU0631(6.2*6.0*3.1mm)

P/N	L0(μH) @ (0A) 1MHz	Rdc(mΩ)		Heat rating current I _{rms} (A)		Saturation current I _{sat} (A)	
		Typical	Max	Typical	Max	Typical	Max
FEXU0631S2R2MGS	2.2	9.0	10.0	12.0	11.0	14	12.2

FEXU0640(6.2*6.0*4.0mm)

P/N	L0(μH) @ (0A) 1MHz	Rdc(mΩ)		Heat rating current I _{rms} (A)		Saturation current I _{sat} (A)	
		Typical	Max	Typical	Max	Typical	Max
FEXU0640SR15MGS	0.15	1.12	1.32	35.0	30.0	65.0	60.0
FEXU0640S1R0MGS	1.0	4.5	5.8	16.0	14.0	20.0	18.0
FEXU0640S4R7MGS	4.7	15.0	18.0	9.5	8.0	10.5	8.5

FEXU0650(6.2*6.0*5.0mm)

P/N	L0(μH) @ (0A) 1MHz	Rdc(mΩ)		Heat rating current I _{rms} (A)		Saturation current I _{sat} (A)	
		Typical	Max	Typical	Max	Typical	Max
FEXU0650S1R5MGS	1.5	5.0	6.3	18.0	16.0	21.0	19.0

FEXU0660(6.2*6.0*6.0mm)

P/N	L0(μH) @ (0A) 1MHz	Rdc(mΩ)		Heat rating current I _{rms} (A)		Saturation current I _{sat} (A)	
		Typical	Max	Typical	Max	Typical	Max
FEXU0660S3R3MGS	15.0	7.0	8.4	13	12	14	13
FEXU0660S150MGS	15.0	38.0	43.5	6.0	4.5	5.8	5.0
FEXU0660S220MGS	22.0	52.0	60.0	5.0	3.8	5.6	4.8

FEXU0715(7.2*7.0*1.5mm)

P/N	L0(μH) @ (0A) 1MHz	Rdc(mΩ)		Heat rating current I _{rms} (A)		Saturation current I _{sat} (A)	
		Typical	Max	Typical	Max	Typical	Max
FEXU0715S2R2MGS	2.20	30	36	5.5	5.0	6.8	6.3
FEXU0715S100MGH	10.0	132	145	3.0	2.5	3.8	3.5

FEXU0720(7.2*7.0*2.0mm)

P/N	L0(μH) @ (0A) 1MHz	Rdc(mΩ)		Heat rating current I _{rms} (A)		Saturation current I _{sat} (A)	
		Typical	Max	Typical	Max	Typical	Max
FEXU0720S2R2MGS	2.2	12	15	11	9	12	10.5

FEXU0730(7.2*7.0*3.0mm)

P/N	L0(μH) @ (0A) 1MHz	Rdc(mΩ)		Heat rating current I _{rms} (A)		Saturation current I _{sat} (A)	
		Typical	Max	Typical	Max	Typical	Max
FEXU0730SR47MGS	0.47	2.6	3.2	28	27	33	31
FEXU0730SR68MBS	0.68	3.3	4.0	24	23	28	26
FEXU0730S1R5MGS	1.5	6.9	8.3	15	12	22	19
FEXU0730S2R2MGS	2.2	11	13	13	10	21	18

FEXU0740(7.2*7.0*4.0mm)

P/N	L0(μH) @ (0A) 1MHz	Rdc(mΩ)		Heat rating current I _{rms} (A)		Saturation current I _{sat} (A)	
		Typical	Max	Typical	Max	Typical	Max
FEXU0740S4R7MBS	4.7	14.0	16.5	9.0	8.0	14.5	13.5

FEXU0750(7.2*7.0*5.0mm)

P/N	L0(μH) @ (0A) 1MHz	Rdc(mΩ)		Heat rating current I _{rms} (A)		Saturation current I _{sat} (A)	
		Typical	Max	Typical	Max	Typical	Max
FEXU0750S220MBS	22.0	55	60.5	5.0	4.5	7.5	6.5
FEXU0750S470MGS	47	120	140	3.3	3.0	5.3	4.5

FEXU0760(7.2*7.0*6.0mm)

P/N	L0(μH) @ (0A) 1MHz	Rdc(mΩ)		Heat rating current I _{rms} (A)		Saturation current I _{sat} (A)	
		Typical	Max	Typical	Max	Typical	Max
FEXU07060S4R7MGS	4.7	12	14.5	13	12	18	16

FEXU1030(10.2*10.0*3.0mm)

P/N	L0(μH) @ (0A) 1MHz	Rdc(mΩ)		Heat rating current I _{rms} (A)		Saturation current I _{sat} (A)	
		Typical	Max	Typical	Max	Typical	Max
FEXU1030S3R3MGS	3.3	10	12	16	15	16	15
FEXU1030S4R7MGS	4.7	15	18	13	12	14	13
FEXU1030S6R8MGS	6.8	21	25	11	10	11	10
FEXU1030S100MGS	10.0	33	38	8.0	7.0	10.0	9.0

FEXU1040(10.2*10.0*4.0mm)

P/N	L0(μH) @ (0A) 1MHz	Rdc(mΩ)		Heat rating current I _{rms} (A)		Saturation current I _{sat} (A)	
		Typical	Max	Typical	Max	Typical	Max
FEXU1040SR47MGS	0.47	0.8	1.3	32	30	42	40
FEXU1040S1R0MGS	1.0	2.2	3.0	26	24	32	30
FEXU1040S2R2MGS	2.2	4.7	6.0	17	16	25	23
FEXU1040S3R3MGS	3.3	6.5	7.8	16	15	21	19
FEXU1040S4R7MGS	4.7	10.5	12.5	14	13	19	17
FEXU1040S6R8MGS	6.8	13.5	16	12	11	15	14
FEXU1040S100MGS	10.0	16	19.5	11.0	9.0	13	10

FEXU1050(10.2*10.0*5.0mm)

P/N	L0(μH) @ (0A) 1MHz	Rdc(mΩ)		Heat rating current I _{rms} (A)		Saturation current I _{sat} (A)	
		Typical	Max	Typical	Max	Typical	Max
FEXU1050S1R0MBS	1.0	1.5	2.2	28	26	34	32
FEXU1050S3R3MGS	3.3	5.0	6.5	18	17	24	22
FEXU1050S4R7MGS	4.7	6	8	16	15	21	19
FEXU1050S100MBS	10.0	17	20	12	11	11	10

FEXU1060(10.2*10.0*6.0mm)

P/N	L0(μH) @ (0A) 1MHz	Rdc(mΩ)		Heat rating current I _{rms} (A)		Saturation current I _{sat} (A)	
		Typical	Max	Typical	Max	Typical	Max
FEXU1060S100MBS	10.0	14	15	14	12	20	16
FEXU1060S100MGS	10.0	14	15	14	12	20	16

FEXU1230(12.2*12.0*3.0mm)

P/N	L0(μH) @ (0A) 1MHz	Rdc(mΩ)		Heat rating current I _{rms} (A)		Saturation current I _{sat} (A)	
		Typical	Max	Typical	Max	Typical	Max
FEXU1230S1R0MGS	1.0	2.4	3.0	28.0	24.0	35.0	32.0
FEXU1230S1R5MGS	1.5	3.8	4.2	23.0	21.0	28.0	25.0
FEXU1230S2R2MGS	2.2	5.0	5.5	20.0	18.0	28.0	25.0

FEXU1260(12.2*12.0*6.0mm)

P/N	L0(μH) @ (0A) 1MHz	Rdc(mΩ)		Heat rating current I _{rms} (A)		Saturation current I _{sat} (A)	
		Typical	Max	Typical	Max	Typical	Max
FEXU1260S100MGS	10.0	10.0	12.0	15.0	12.0	15.0	13.0

Test remarks

Note 1.: All test data is referenced to 25 °C aMBSient.

Note 2.: Test Condition:1MHz, 1.0Vrms.

Note 3.: Irms:DC current (A) that will cause an approximate ΔT of 40 °C .

Note 4.: Isat:DC current (A) that will cause L0 to drop approximately 30%.

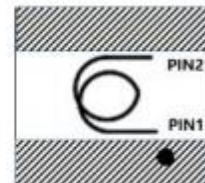
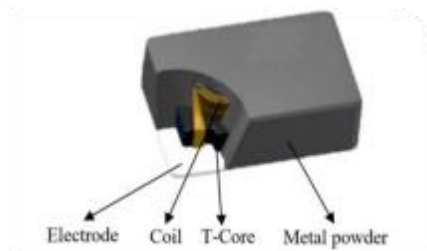
Note 5.: Operating Temperature Range -55°C to + 125°C .

Note 6.: The part temperature (ambient + temp rise) should not exceed 125 under °C the worst case operating conditions. Circuit design, component placement, PCB trace size and thickness, airflow and other cooling provision all affect the part temperature. Part temperature should be verified in the end application.

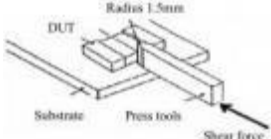
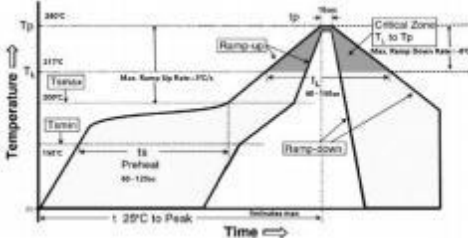
Note 7.: The rated current as listed is either the saturation current or the heating current depending on which value is lower.

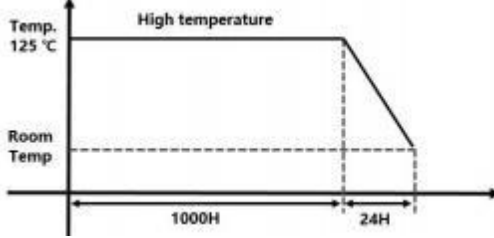
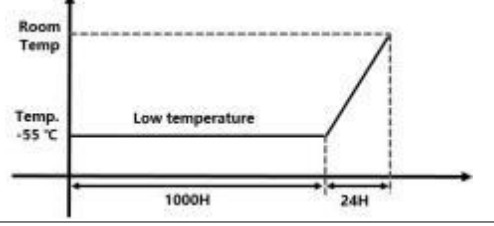
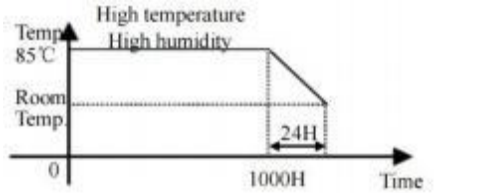
Note8: For FEXU series inductors,absolute maximum voltage:DC50V.

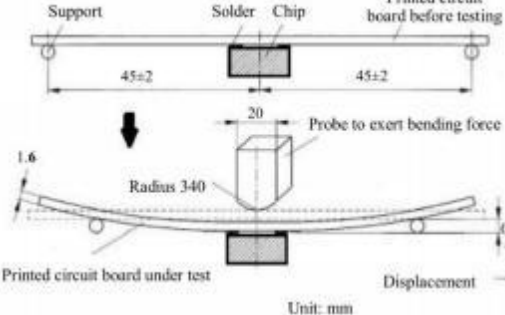
6. Structure



8. Reliability

No.	Item	Requirements	Test Methods and Remarks	Reference	Sample Size								
1	Solderability	(1) No case deformation or change in appearance. (2) Terminal area must have 95% min. Solder coverage.	①Temperature:245± 5℃ . ②Solder Composition: Sn/Ag3.0/Cu0.5(Pb-Free). ③Sample immersion tin furnace 5 ±0.5s.	AEC-Q200 (J-STD 002)	32								
2	Adhesion of teral electrode	(1)Strong bond between the pad and the core, without come off PCB.	①Preconditioning: 245℃Reflow 3 times ②Inductors shall be subjected to (260+0/-5℃ .)℃ for (10±5)s Soldering in the base whit 0.3mm solder. ③Aplombelectrode way plus tax X N for (10±1) seconds. <table><tr><td>series</td><td>"X" N</td></tr><tr><td>1008</td><td>6</td></tr><tr><td>1210~1608</td><td>8</td></tr><tr><td>2012</td><td>12</td></tr></table>	series	"X" N	1008	6	1210~1608	8	2012	12	AEC-Q200 (AEC-Q200-006)	32
series	"X" N												
1008	6												
1210~1608	8												
2012	12												
3	Reflow test	(1) No physical damage. (2) ΔL0/L0 ≤10%	①The peak temperature: 260+0/-5℃ . ②Reflow:3times. ③Temperature curve is as below 	AEC-Q200 (MIL-STD-202 Method 210)	32								
4	High temperature	(1) No physical damage. (2) ΔL0/L0 ≤10%	①Preconditioning: Bake at 125+5℃for 24±0.5H , 245℃Reflow 3 times ②Temperature: 125±2℃ . ③Time : 1000 hours.	AEC-Q200 (MIL-STD -202 Method 108)	77								

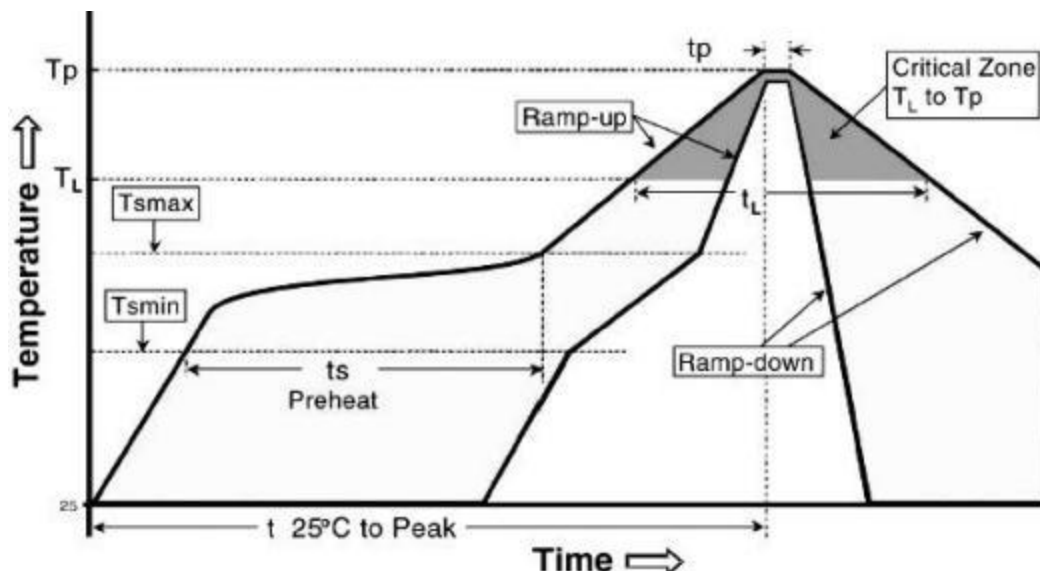
			④Measurement at 24±4 hours after test conclusion 		
5	Low temperature	(1) No physical damage. (2) $ \Delta L_0/L_0 \leq 10\%$	①Preconditioning: Bake at 125+5°C for 24±0.5H , 245°CReflow 3 times ②Temperature: -55±2°C . ③Time : 1000 hours. ④Measurement at 24±4 hours after test conclusion 	JESD22-A119A	77
6	Thermal shock	(1) No physical damage. (2) $ \Delta L_0/L_0 \leq 10\%$	①Preconditioning: Bake at 125+5°C for 24±0.5H , 245°CReflow 3 times ②Repeat 500 cycle as follow : (-55±2 °C,30±3minutes) 、(Room temperature, 5 minutes)、(+125±2 °C,30±3minutes)、(Room temperature, 5 minutes) ③Measurement at 24±4 hours after test conclusion	MIL-STD-202 Method 107	77
No.	Item	Requirements	Test Methods and Remarks	Reference	Sample Size
7	Resistance to Soldering Heat	(1) No physical damage. (2) $ \Delta L_0/L_0 \leq 10\%$	①Solder Composition: Sn/Ag3.0/Cu0.5(Pb-Free). ②Solder Temperature: 260±5°C . ③Immersion Time: 10±1sec.	AEC-Q200 (MIL-STD-202 Method 210)	32
8	Static Humidity	(1) No physical damage. (2) $ \Delta L_0/L_0 \leq 10\%$	①Preconditioning: Bake at 125+5°C for 24±0.5H , 245°CReflow 3 times ②1000 hours, 85°C/85%RH. ③Unpowered. ④Measurement at 24±4 hours after test conclusion 	AEC-Q200 (MIL-STD-202 Method 103)	77
9	Board Flex	(1) No physical damage. (2) $ \Delta L_0/L_0 \leq 10\%$	①Preconditioning: 245°CReflow 3 times ②Part mounted on a 100mm*40mm FR4 PCB board, which is 1.6±0.2 mm thick and as a Layer-thickness 35 μm ± 10 μm. ③ Bending speed is 1mm/s.	AEC-Q200 (AEC-Q200-005)	30

			④ Keeping the P.C Board 2 mm minimum for 60 seconds. 		
10	Vibration	(1) No physical damage. (2) $\Delta L_0/L_0 \leq 10\%$	①Preconditioning: 245℃Reflow 3 times ②Frequency range : 10~2000Hz. ③Amplitude: 1.5mm or 20g. ④ Sweep time and duration: 10~2000~10Hz for 20 minutes. ⑤ Each four hours in X,Y,Z direction, 12hours in total.	AEC-Q200 (MIL-STD-202 Method 204)	32
11	Mechanical Shock	(1) No physical damage. (2) $\Delta L_0/L_0 \leq 10\%$	①Preconditioning: 245℃Reflow 3 times ②Peak acceleration:100G/S ③Duration of pulse:6ms ④3times in each of 6(±X, ±Y, ±Z) axes.	AEC-Q200 (MIL-STD-202 Method 213)	32
12	Loading at High Temperature	(1) No physical damage. (2) $\Delta L_0/L_0 \leq 10\%$	①Preconditioning: Bake at 125+5℃ for 24±0.5H , 245℃Reflow 3 times ②Temperature: 85±2℃ . ③Time : 1000 hours. ④Applied Current : Rated current. ⑤Measurement at 24±4 hours after test conclusion	AEC-Q200 (MIL-STD-202 Method 108)	77

9. Soldering Condition

(This is for recommendation, please customer perform adjustment according to actual application) Recommend

Reflow Soldering Profile : (solder : Sn96.5 / Ag3 / Cu0.5)



Profile Feature	Lead (Pb)-Free solder
Preheat:	
Temperature Min	150℃
(Ts _{min}) Temperature	200℃
Max (Ts _{max}) Time	60 -120 seconds
(Ts _{min} to Ts _{max}) (ts)	

Average ramp-up rate : (Ts max to Tp)	3°C / second max.
Time maintained above : Temperature (T _L) Time (t _L)	217°C 60-150 seconds
Peak Temperature (Tp)	260°C
Time within $+0^{\circ}\text{C}$ of actual peak Temperature (tp) ² -5°C	10 seconds
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8minutes max.

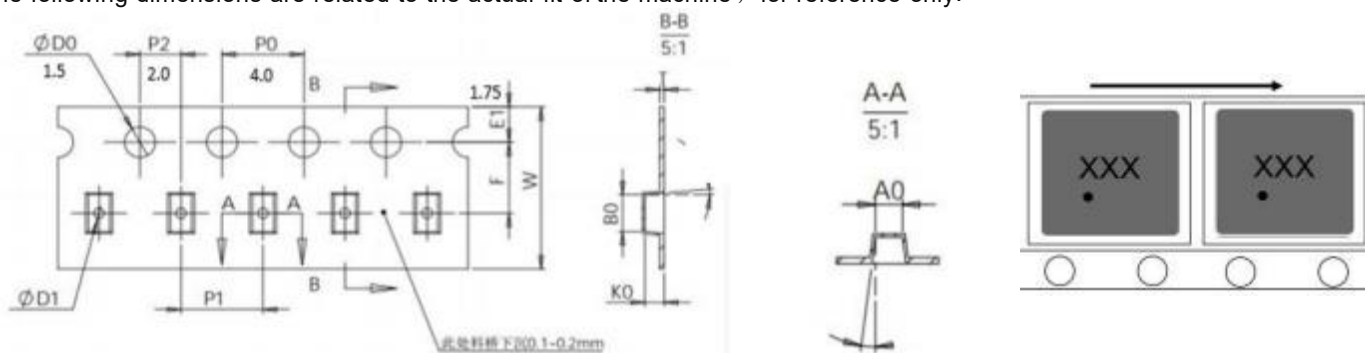
Allowed Re-flow times : 2 times

Remark : To avoid discoloration phenomena of chip on terminal electrodes, please use N₂ Re-flow furnace .

10. Packing

10.1 Dimension of plastic taping: (Unit: mm)

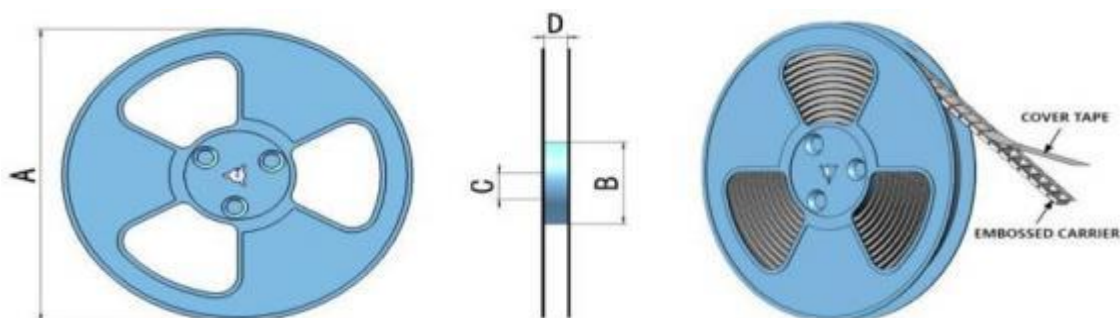
The following dimensions are related to the actual fit of the machine , for reference only.



Series/mm	W	A0	B0	D1	F	K0	P1	T
公差	/	/	/	± 0.20	± 0.10	/	± 0.10	± 0.05
0412	12.0 $\pm$ 0.30	4.40 $\pm$ 0.10	4.40 $\pm$ 0.10	1.5	5.5	1.30 $\pm$ 0.10	8.0	0.30
0420	12.0 $\pm$ 0.30	4.40 $\pm$ 0.10	4.40 $\pm$ 0.10	1.5	5.5	2.20 $\pm$ 0.10	8.0	0.30
0430	12.0 $\pm$ 0.30	4.40 $\pm$ 0.10	4.40 $\pm$ 0.10	1.5	5.5	3.20 $\pm$ 0.10	8.0	0.35
0520	12.0 $\pm$ 0.30	5.20 $\pm$ 0.10	5.40 $\pm$ 0.10	1.5	5.5	2.25 $\pm$ 0.10	8.0	0.35
0528	12.0 $\pm$ 0.30	5.20 $\pm$ 0.10	5.40 $\pm$ 0.10	1.5	5.5	3.05 $\pm$ 0.10	8.0	0.35
0530	12.0 $\pm$ 0.30	5.20 $\pm$ 0.10	5.40 $\pm$ 0.10	1.5	5.5	3.25 $\pm$ 0.10	8.0	0.35
0540	12.0 $\pm$ 0.30	5.20 $\pm$ 0.10	5.40 $\pm$ 0.10	1.5	5.5	4.25 $\pm$ 0.10	8.0	0.35
0631	16.0 $\pm$ 0.30	6.20 $\pm$ 0.10	6.40 $\pm$ 0.10	1.5	7.5	3.35 $\pm$ 0.10	12.0	0.35
0640	16.0 $\pm$ 0.30	6.20 $\pm$ 0.10	6.40 $\pm$ 0.10	1.5	7.5	4.25 $\pm$ 0.10	12.0	0.40
0660	16.0 $\pm$ 0.30	6.20 $\pm$ 0.10	6.40 $\pm$ 0.10	1.5	7.5	6.25 $\pm$ 0.10	12.0	0.50

0715	16.0±0.30	7.20±0.10	7.40±0.10	1.5	7.5	1.7±0.10	12.0	0.40
0730	16.0±0.30	7.20±0.10	7.40±0.10	1.5	7.5	3.20±0.10	12.0	0.40
0740	16.0±0.30	7.20±0.10	7.40±0.10	1.5	7.5	4.20±0.10	12.0	0.40
0750	16.0±0.30	7.20±0.10	7.40±0.10	1.5	7.5	5.20±0.10	12.0	0.40
0760	16.0±0.30	7.20±0.10	7.40±0.10	1.5	7.5	6.20±0.10	12.0	0.50
1040	24.0±0.30	10.50±0.10	10.50±0.10	1.5	11.5	4.20±0.10	16.0	0.40
1050	24.0±0.30	10.20±0.10	10.40±0.10	1.5	11.5	5.20±0.10	16.0	0.40
1230	24.0±0.30	12.20±0.10	12.40±0.10	1.5	11.5	3.20±0.10	16.0	0.40
1260	24.0±0.30	12.20±0.10	12.40±0.10	1.5	11.5	6.20±0.10	16.0	0.50

10.2 Dimension of Reel : (Unit: mm)



Series/mm	A	B	C	D	QTY/Reel
公差	±2.0	±1.0	±1.0	±1.0	/
0412	330	100	13.5	12.5	3000pcs
0420	330	100	13.5	12.5	3000pcs
0430	330	100	13.5	12.5	2000pcs
0512	330	100	13.5	12.5	3000pcs
0520	330	100	13.5	12.5	2000pcs
0528	330	100	13.5	12.5	2000pcs
0530	330	100	13.5	12.5	2000pcs
0540	330	100	13.5	12.5	1500pcs
0631	330	100	13.5	16.5	1000pcs
0640	330	100	13.5	16.5	1000pcs
0650	330	100	13.5	16.5	800pcs
0660	330	100	13.5	16.5	600pcs
0715	330	100	13.5	16.5	2000pcs

0730	330	100	13.5	16.5	1000pcs
0740	330	100	13.5	16.5	1000pcs
0750	330	100	13.5	16.5	800pcs
0760	330	100	13.5	16.5	500pcs
1040	330	100	13.5	24.5	500pcs
1050	330	100	13.5	24.5	500pcs
1060	330	100	13.5	24.5	500pcs
1230	330	100	13.5	24.5	500pcs
1260	330	100	13.5	24.5	500pcs

11. Note

11.1 Storage Period

To maintain the solderability of terminal electrodes and to keep the packing material in good condition, product should be used within 12 months from the time of delivery. And the solderability of products electrodes may decrease as time passes, so in case of storage over 12 months, solderability shall be checked before actual usage.

11.2 Storage Conditions

Store products in a warehouse in compliance with the following condition:

Temperature: Inductors (product with taping) +15 to +35℃; Humidity: 25~70%RH.

If the product is not used up 24H after opening, desiccant should be placed in the package and sealed

11.3 Do not subject products to rapid changes in temperature and humidity.

11.4 Do not store the products in chemical atmosphere such as one containing sulfurous acid gas or alkaline gas, that will causes poor solderability and corrosion of inductors.

11.5 Do not store products in bulk packaging to prevent collision among inductors which causes core chipping and wire breakage.

11.6 Store products on pallets to protect from humidity, dust, etc.

11.7 Avoid heat shock, vibration, direct sunlight, etc.

11.8 When designing the PCB, please consider the installation position of the non-magnetic shielded components to avoid failures caused by magnetic interference.

11.9 Do not place this product near magnets or objects with magnetic force.

11.10 The product will self-heat (temperature rise) due to power-on, and sufficient margin should be left in thermal design.

11.11 Mounting density

If this product is placed near heat-generating products, be sure to implement sufficient heat-dissipating measures. If this product is subjected to a significant amount of heat from other products, this could adversely affect product quality, resulting in a circuit malfunction or failure of the mounted section. Also, be sure that the product is used in a manner so that the heat that the product is subjected to from other products does not exceed the upper limit of the rated operating temperature for the product.

11.12 Since the static electricity carried by the human body will be transmitted to the ground wire, please use an anti-static wrist strap.

11.13 Grease on human hands may lead to decreased solderability. Please avoid direct contact with the terminals.

11.14 This product refers to the general standard used in audio-visual entertainment, home appliances, computers, office automation, communications, power modules, LED lighting, measuring equipment. Machine tools, industrial control panels and other general electronic equipment. And the general electronic equipment should be used under the usual operation and usage methods.

11.15 When this product is used in occasions other than general electronic equipment, such as: Automotive Electronic products, medical equipment, military equipment, Aerospace equipment, submarine equipment, etc. please be sure to contact the company's sales department, the company will cooperate with customer needs, and negotiate different intended use described in this product

11. 16 Reworking with soldering iron

ITEM	Requirement
Pre-heating	150 °C/approx. 1 min
Tip temperature of soldering iron	350 °C max.
Soldering time	3 s (+1 s, -0 s)
Number of reworking operations	1 times max.
It is recommended to replace the product directly, rework may cause poor appearance	

11. 17 We cannot warrant against failure caused by any use of our product that deviates from the intended use as described in this product specification.

11. 18 Please approve our product specifications or transact the approval sheet for product specifications before ordering.

11. 19 Our specification limits the quality of the component as a single unit. Please ensure the component is thoroughly evaluated in your application circuit.

12. Record

Version	Description	Page	Date	Amended by	Checked by
A0	First version	1~14	Jul.31.2024	Peng.Wu	Hongjun.Yin
A1	newly increased:FEXU0715S2R2MG	1-14	Jul.31.2024	Peng.Wu	Hongjun.Yin
A2	newlyincreased:FEXU0430S4R7 MB/ FEXU0528S1R5MG/ FEXU0540S4R7MG	1~14	Aug.31.2024	Peng.Wu	Hongjun.Yin
A3	newlyincreased:FEXU0631S2R2MG/ FEXU0660S150MG/ FEXU0660S220M G FEXU1050S4R7M G/ FEXU1230S2R2M G	1~15	Sep.30.2024	Peng.Wu	Hongjun.Yin
A4	newlyincreased:FEXU0530SR47 MG/ FEXU0530SR68MG/ FEXU0640S1R0MG FEXU0730S1R5M G/ FEXU1060S100M G	1~15	Oct.31.2024	Peng.Wu	Hongjun.Yin
A5	newlyincreased:FEXU0512S1R0MG/ FEXU0520S1R0MG/ FEXU0650S1R5M G/ FEXU1230S1R0M G/ FEXU1230S1R5MG	1~16	Nov.30.2024	Peng.Wu	Hongjun.Yin
A6	newly increased:FEXU0530SR56MG/ FEXU0715S100MG-TE/ FEXU0720S2R2MG/ FEXU1040S100MG	1~18	Feb.07.2024	Peng.Wu	Hongjun.Yin
A7	newly increased: FEXUU0420S3R3MB FEXU0660S3R3MG/ FEXU0750S470MG/ FEXU1260S100MG	1~19	Mar.05.2024	Peng.Wu	Hongjun.Yin

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Specification herein will be changed at anytime without prior notice.

