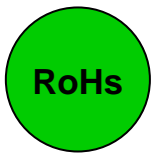


SPECIFICATION FOR APPROVAL



CUSTOMER

CUSTOMER'S DWG NO.

REVISION NO.

CUSTOMER'S PART NO.

TECSTAR'S PART NO.

TL201212-3R3K

QUANTITY

PCS

ITEM

DATE

SEP/03/2009

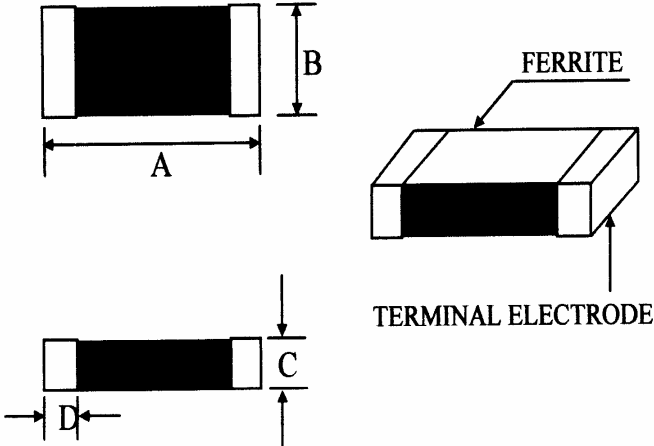
	“√”	CUSTOMER'S SIGNATURE	NOTE
FULL APPROVED			
CONDITONAL APPROVED			
REJECTED			



TECSTAR TECHNOLOGY CO., LTD.

NO. 820-1 Kou Shih Rd. Yang Mei Chen
Taoyuan Hsien, Taiwan, R.O.C.
TEL : 886-3-4788701
FAX : 886-3-4788702
www tecstar.com.tw

SPECIFICATION FOR APPROVAL

CUSTOMER:			CUSTOMER'S P/N:		
VENDOR'S P/N:			TL201212-3R3K		
<p>DIMENSION:(m/m)</p> 			A	2.0 ± 0.2	m/m
			B	1.2 ± 0.2	m/m
			C	1.2 ± 0.2	m/m
			D	0.5 ± 0.3	m/m
			E		m/m
			F		m/m
			G		m/m
			H		m/m
			I		m/m
			J		m/m
			K		m/m
			L		m/m
			M		m/m
			N		m/m
O		m/m			
ELECTRICAL REQUIREMENTS			TEST INSTRUMENTS		
L	3.3 ± 10% μH	TEST FREQ.	10MHz/100mV		
Q	45 MIN.	TEST FREQ.	10MHz/100mV		
Srf	41 MHz MIN.	TEST FREQ.	MHz		
Rdc	0.80 OHM. MAX.	TEST FREQ.	MHz		
Idc	30 mA MAX.	TEST FREQ.	MHz		
			<ul style="list-style-type: none"> ● HP 4338A MILLIOHMMETER ○ HP 4195A NETWORK/SPECTRUM ANALYZER ○ HP 4284A BIAS CURRENT SOURCE ○ HP 4285A PRECISION LCR METER ○ HP 4286A PRECISION LCR METER ● HP 4291B RF IMPEDANCE /MATERIAL ANALYZER ○ HP 6632A DC POWER SUPPLY 		
DRAWN BY		CHECKED BY		APPROVED BY	
Juli Wang		John Chuang		Lionel Lin	

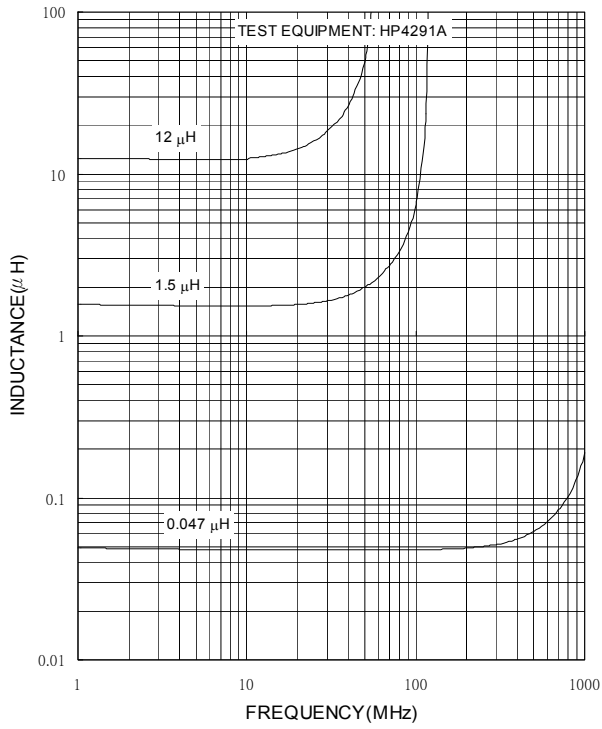
TEST DATA

CUSTOMER:							
CUSTOMER'S P/N:						SERIES NO:	TL2474
VENDOR'S P/N:		TL201212-3R3K				DATE:	03-SEP-2009
MEAS	A	B	C	D	L	Q	Rdc
ITEM	(m/m)	(m/m)	(m/m)	(m/m)	(μ H)		(Ω)
SPEC	2.0 ± 0.2	1.2 ± 0.2	1.2 ± 0.2	0.5 ± 0.3	$3.3 \pm 10\%$	45 MIN.	0.80 MAX.
TEST FREQ.					10 MHz	10 MHz	
1	2.00	1.22	1.21	0.50	3.44	68.7	0.499
2	1.99	1.19	1.21	0.48	3.22	70.2	0.483
3	2.03	1.21	1.20	0.48	3.33	69.1	0.519
4	1.98	1.22	1.21	0.51	3.40	64.3	0.483
5	1.99	1.21	1.21	0.51	3.46	69.3	0.492
6	1.99	1.19	1.22	0.51	3.36	59.7	0.476
7	2.00	1.20	1.21	0.49	3.46	58.8	0.520
8	2.02	1.22	1.20	0.50	3.39	69.2	0.500
9	2.01	1.21	1.20	0.51	3.32	58.5	0.512
10	2.00	1.19	1.20	0.51	3.21	70.3	0.490
AVG.	2.00	1.21	1.21	0.50	3.36	65.8	0.497
R	0.05	0.03	0.02	0.03	0.25	11.8	0.044
DRAWN BY			CHECKED BY			APPROVED BY	
Juli Wang			John Chuang			Lionel Lin	

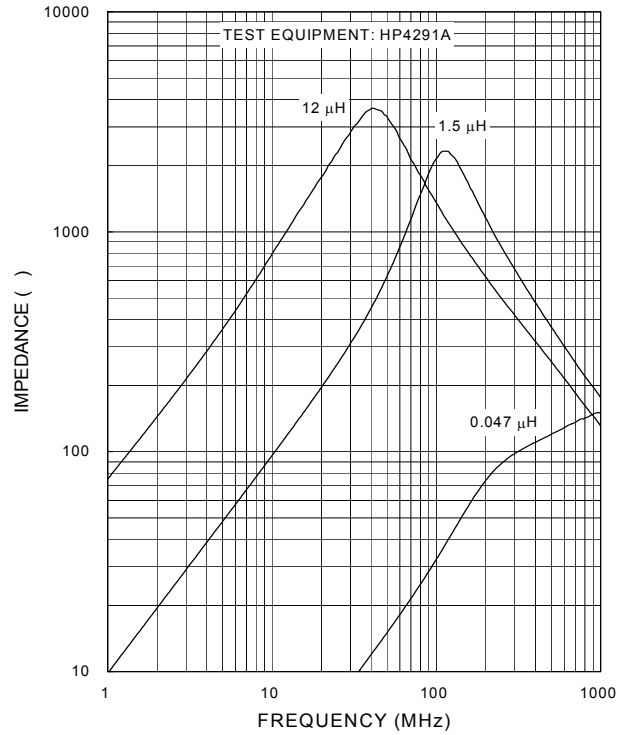
TYPICAL ELECTRICAL CHARACTERISTICS CURVE

TL2012 Type

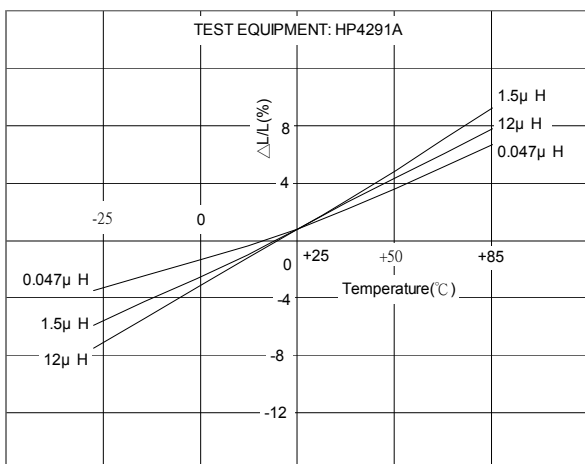
Inductance VS. Frequency



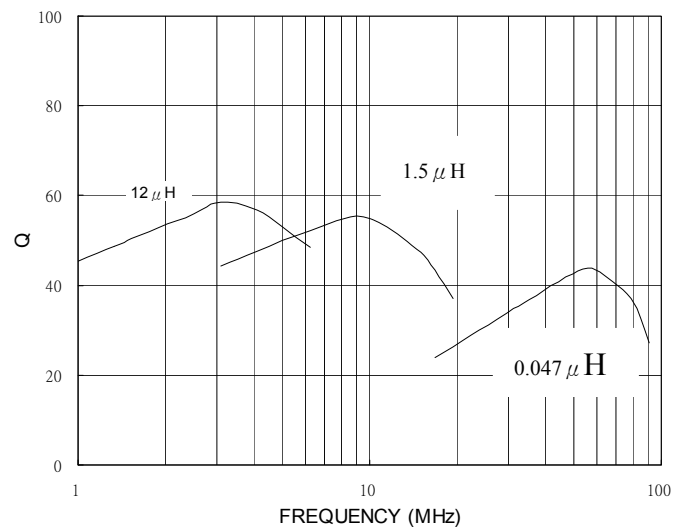
Impedance VS. Frequency



Inductance VS. Temperature

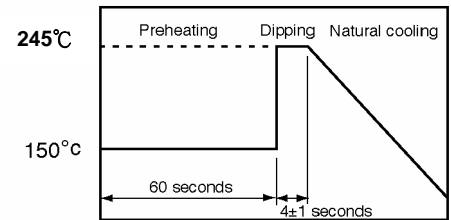
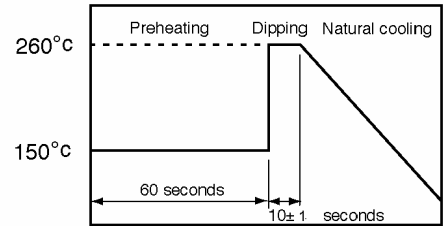


Q VS. Frequency



RELIABILITY TEST

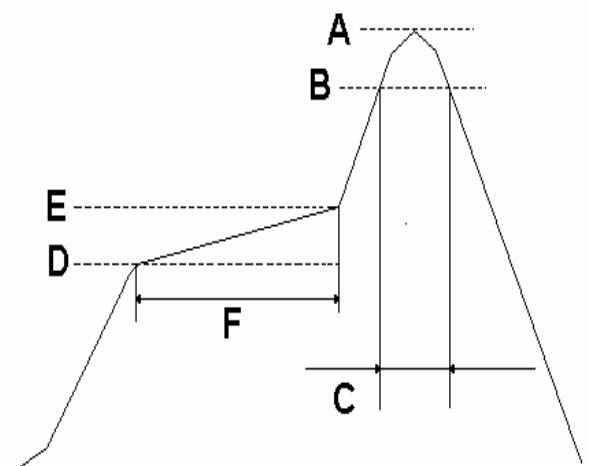
Item	Performance	Test condition
Operating temperature range	-55 °C to + 125 °C	
Storage temperature and umidity ranges	40 °C MAX., 70% RH MAX.	
Soldering heat resistance	The chip shall not be cracks. More than 75% of terminal electrode shall be covered with solder.	Preheat: 150 °C, 60 seconds Solder temperature : 260 ± 5 °C Flux: Rosin Dip time: 10 ± 1 seconds
Solderability	More than 90% of the terminal electrode shall be covered with new solder.	Preheat: 150 °C, 60 seconds Solder temperature: 245 ± 5 °C Flux: Rosin Dip time: 4 ± 1 seconds



Recommended Soldering Conditions

(REFLOW TEMPERATURE PROFILE) Lead-Free

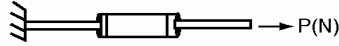
A	$260 \pm 5^{\circ}\text{C}$
B	$230 \pm 5^{\circ}\text{C}$
C	$30 \pm 10 \text{ sec}$
D	150°C
E	180°C
F	$90 \pm 30 \text{ sec}$



RELIABILITY TEST

Terminal strength

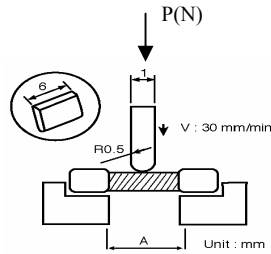
The terminal electrode and the body shall not be damaged by the forces applied on the right conditions.



Type	P (kgf)	Time (s)
T□100505	0.3	
T□160808	0.5	
T□201209	0.6	
T□201212	0.8	
T□321611	1.0	
T□322513	1.0	30 ± 5
T□451616	1.0	
T□453215	1.5	
TA3216M4	0.5	

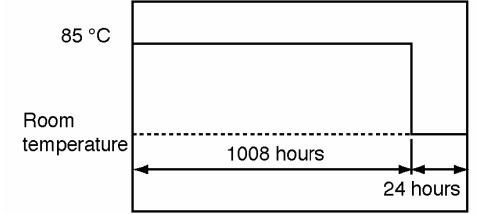
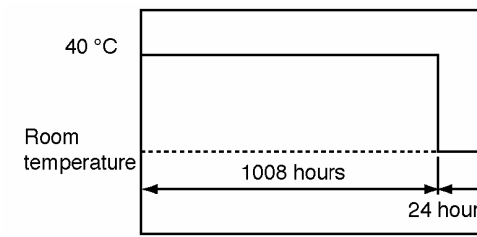
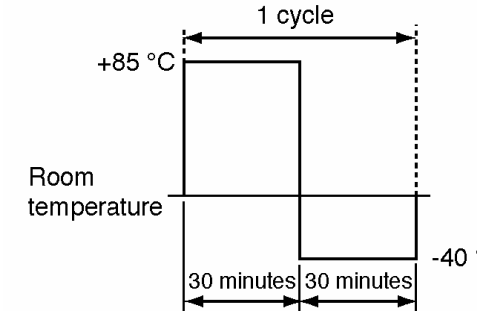
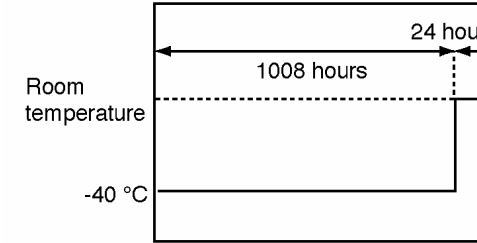
Bending strength

The body shall not be damaged by the forces applied on the right conditions.



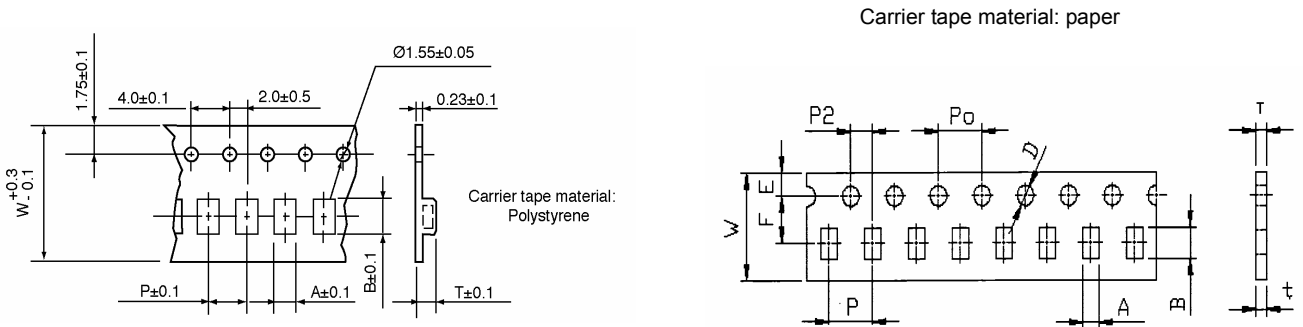
Type	A (mm)	P (kgf)
T□160808	1.0	0.5
T□201209	1.4	1.0
T□201212	1.4	1.2
T□321611	2.0	2.0
T□322513	2.0	2.5
T□451616	2.5	2.5
T□453215	2.7	2.5
TA3216M4	1.4	1.0

RELIABILITY TEST

Item	Performance	Test condition
High temperature resistance	Appearance : Ferrite shall not be damaged. Inductance : Within $\pm 10\%$ of the initial value. Q: Within $\pm 30\%$ of the initial value.	Temperature: $85\pm 2^{\circ}\text{C}$ Testing time: 1008 ± 12 hours Measurement: After placing for 24 hours min 
Humidity resistance	Appearance: Ferrite shall not be damaged. Inductance: Within $\pm 10\%$ of the initial value Q: Within $\pm 30\%$ of the initial value.	Humidity: 90 to 95% RH Temperature: $40\pm 2^{\circ}\text{C}$ Testing time: 1008 ± 12 hours Measurement: After placing for 24 hours min 
Thermal Shock	Appearance: Cracking, chipping or any other defects harmful to the characteristics shall not be allowed. Inductance: Within $\pm 10\%$ of the initial value Q: Within $\pm 30\%$ of the initial value.	Temperature: -40°C , $+85^{\circ}\text{C}$, kept stabilized for 30 minutes each Cycle: 100 cycles Measurement: After placing for 24 hours min 
Low temperature storage life test	Appearance: Cracking, chipping or any other defects harmful to the characteristics shall not be allowed. Inductance: Within $\pm 10\%$ of the initial value. Q: Within $\pm 30\%$ of the initial value.	Temperature: $-40\pm 2^{\circ}\text{C}$ Testing time: 1008 ± 12 hours Measurement: After placing for 24 hours min 

PACKAGING

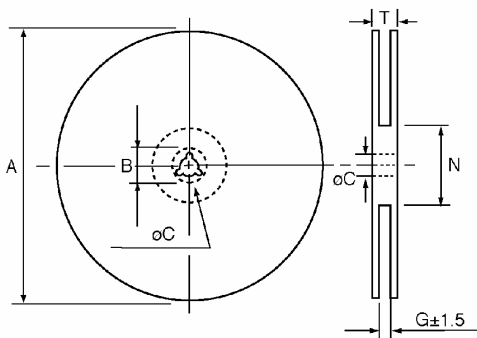
- Tape dimensions and packaging quantities



material: Paper (Dimensions in mm)						
TYPE	A	B	W	P	T	CHIPS / REEL
100505	0.62	1.12	8	2	0.60	10000
160808	1.10	1.90	8	4	0.95	4000
201209	1.50	2.30	8	4	0.95	4000
material: Polystyrene (Dimensions in mm)						
TYPE	A	B	W	P	T	CHIPS / REEL
160808	1.01	1.80	8	4	1.02	4000
201209	1.42	2.25	8	4	1.04	4000
201212	1.50	2.35	8	4	1.45	2000
321611	1.88	3.50	8	4	1.27	3000

- Reel dimensions

Material: Paper, Plastic



Dimensions in mm

TYPE	8mm	12mm
A	178±2	178±2
B	21.0±0.8	21.0±0.8
C	13.0±0.8	13.0±0.8
G	10.0	14.0
N	75	75
T	12.5	16.5

