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With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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Notice for TAIYO YUDEN Products

Please read this notice before using the TAIYO YUDEN products.

REMINDERS

Product information in this catalog is as of October 2017. All of the contents specified herein are subject to change without notice due to technical improvements, etc. Therefore, please check for the latest information carefully before practical application or use of our products.

Please note that TAIYO YUDEN shall not be in any way responsible for any damages and defects in products or equipment incorporating our products, which are caused under the conditions other than those specified in this catalog or individual product specification sheets.

- Please contact TAIYO YUDEN for further details of product specifications as the individual product specification sheets are available.
- Please conduct validation and verification of our products in actual condition of mounting and operating environment before using our products.
- The products listed in this catalog are intended for use in general electronic equipment (e.g., AV equipment, OA equipment, home electric appliances, office equipment, information and communication equipment including, without limitation, mobile phone, and PC) and medical equipment classified as Class I or II by IMDRF. Please be sure to contact TAIYO YUDEN for further information before using the products for any equipment which may directly cause loss of human life or bodily injury (e.g., transportation equipment including, without limitation, automotive powertrain control system, train control system, and ship control system, traffic signal equipment, disaster prevention equipment, medical equipment classified as Class III by IMDRF, highly public information network equipment including, without limitation, telephone exchange, and base station).

Please do not incorporate our products into any equipment requiring high levels of safety and/or reliability (e.g., aerospace equipment, aviation equipment*, medical equipment classified as Class IV by IMDRF, nuclear control equipment, undersea equipment, military equipment).

*Note: There is a possibility that our products can be used only for aviation equipment that does not directly affect the safe operation of aircraft (e.g., in-flight entertainment, cabin light, electric seat, cooking equipment) if such use meets requirements specified separately by TAIYO YUDEN. Please be sure to contact TAIYO YUDEN for further information before using our products for such aviation equipment.

When our products are used even for high safety and/or reliability-required devices or circuits of general electronic equipment, it is strongly recommended to perform a thorough safety evaluation prior to use of our products and to install a protection circuit as necessary.

Please note that unless you obtain prior written consent of TAIYO YUDEN, TAIYO YUDEN shall not be in any way responsible for any damages incurred by you or third parties arising from use of the products listed in this catalog for any equipment requiring inquiry to TAIYO YUDEN or prohibited for use by TAIYO YUDEN as described above.

- Information contained in this catalog is intended to convey examples of typical performances and/or applications of our products and is not intended to make any warranty with respect to the intellectual property rights or any other related rights of TAIYO YUDEN or any third parties nor grant any license under such rights.
- Please note that the scope of warranty for our products is limited to the delivered our products themselves and TAIYO YUDEN shall not be in any way responsible for any damages resulting from a fault or defect in our products. Notwithstanding the foregoing, if there is a written agreement (e.g., supply and purchase agreement, quality assurance agreement) signed by TAIYO YUDEN and your company, TAIYO YUDEN will warrant our products in accordance with such agreement.
- The contents of this catalog are applicable to our products which are purchased from our sales offices or authorized distributors (hereinafter "TAIYO YUDEN's official sales channel"). Please note that the contents of this catalog are not applicable to our products purchased from any seller other than TAIYO YUDEN's official sales channel.
- Caution for Export

Some of our products listed in this catalog may require specific procedures for export according to "U.S. Export Administration Regulations", "Foreign Exchange and Foreign Trade Control Law" of Japan, and other applicable regulations. Should you have any questions on this matter, please contact our sales staff.

MULTILAYER COMMON MODE CHOKE COILS(MC SERIES F TYPE)



REFLOW

■PARTS NUMBER

* Operating Temp.: -40~+85°C



△=Blank space

	nam	

Code	Series name
MCF	Multilayer common mode choke coil

2Dimensions

9						
Code	Dimensions [mm]					
0605	0.65 × 0.50					
0806	0.85 × 0.65					
1210	1.25 × 1.0					
2010	2.0 × 1.0					

3No. of Lines

Code	No. of Lines
2	2 lines
4	4 lines

4 Material

Code	Material
G	Defends invadence comme
E	Refer to impedance curves for material differences
Н	for material differences

5Nominal common impedance

Code (example)	Nominal common impedance[Ω]
120	12
900	90

6 Packaging

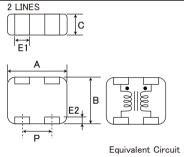
OFackaging	
Code	Packaging
-T	Taping

7Internal code

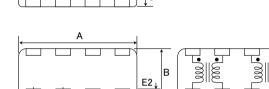
Officer liai code	
Code	Internal code
Δ	Standard

■ STANDARD EXTERNAL DIMENSIONS / STANDARD QUANTITY / EQUIVALENT CIRCUIT

4 LINES







Equivalent Circuit
No polarity

Туре	А	В	С	E1 E2		Р	Standard quantity [pcs] Taping
MCF0605	0.65±0.05 (0.026±0.002)	0.50 ± 0.05 (0.020 \pm 0.002)	0.30±0.05 (0.012±0.002)	0.15±0.1 (0.006±0.004)	0.12±0.1 (0.005±0.004)	0.40±0.10 (0.016±0.004)	15000
MCF0806	0.85±0.05 (0.033±0.002)	-		0.27±0.1 (0.011±0.004)	0.2 +0.05/-0.1 (0.008 +0.002/-0.004)	0.50±0.10 (0.020±0.004)	10000
MCF1210	1.0±0.15 (0.039±0.006)	1.25±0.15 (0.049±0.006)	0.55±0.1 (0.022±0.004)	0.3±0.1 (0.012±0.004)	0.2±0.1 (0.008±0.004)	0.55±0.10 (0.022±0.004)	5000
MCF2010	2.0±0.15 (0.079±0.006)	1.0±0.15 (0.039±0.006)	0.45±0.1 (0.018+0.004)	0.25 +0.15/-0.1 (0.010 +0.006/-0.004)	0.25±0.15 (0.010±0.006)	0.50±0.10 (0.020±0.004)	4000

Unit:mm(inch)

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MCF0605 type

Parts number	EHS	No. of Lines	Common mode impedance $\left[\ \Omega \ \right]$	Measuring frequency [MHz]	DC Resistance [Ω](max.)	Rated current [A] (max.)	Rated voltage [V]	Insulation resistance $[M\Omega]$ (min.)
MCF0605 2G120-T	RoHS	2	12±5	100	2.5	0.05	5	100
MCF0605 2G350-T	RoHS	2	35±20%	100	5.0	0.05	5	100
MCF0605 2E600-T	RoHS	2	60±25%	100	3.5	0.05	5	100
MCF0605 2E900-T	RoHS	2	90±20%	100	3.9	0.05	5	100

MCF0806 type

Parts number	EHS	No. of Lines	Common mode impedance $\left[\ \Omega \ \right]$	Measuring frequency [MHz]	DC Resistance [Ω] (max.)	Rated current [A] (max.)	Rated voltage [V]	Insulation resistance [MΩ] (min.)
MCF0806 2G120-T	RoHS	2	12±5	100	2.5	0.13	5	100
MCF0806 2G470-T	RoHS	2	47±20%	100	4.0	0.10	5	100
MCF0806 2G900-T	RoHS	2	90±20%	100	5.0	0.10	5	100
MCF0806 2E300-T	RoHS	2	30±25%	100	1.5	0.15	5	100

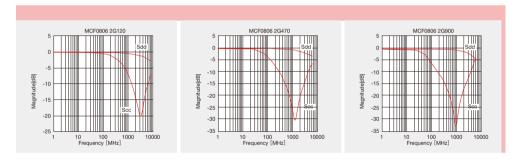
MCF1210 type

Parts number	EHS	No. of Lines	Common mode impedance $\left[\ \Omega \ \right]$	Measuring frequency [MHz]	DC Resistance [Ω] (max.)	Rated current [A] (max.)	Rated voltage [V]	Insulation resistance [MΩ] (min.)
MCF1210 2G400-T	RoHS	2	40±25%	100	2.5	0.10	5	100
MCF1210 2G900-T	RoHS	2	90±25%	100	4.5	0.10	5	100
MCF1210 2H500-T	RoHS	2	50±25%	100	1.5	0.16	5	100
MCF1210 2H900-T	RoHS	2	90±20%	100	2.5	0.15	5	100

MCF2010 type

Parts number	EHS	No. of Lines	Common mode impedance $\left[\ \Omega \ \right]$	Measuring frequency [MHz]	DC Resistance [Ω] (max.)	Rated current [A] (max.)	Rated voltage [V]	Insulation resistance [MΩ] (min.)
MCF2010 4G900-T	R₀HS	4	90±25%	100	4.5	0.10	5	100

■ ELECTRICAL CHARACTERISTICS



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Multilayer chip inductors

Multilayer chip inductors for high frequency, Multilayer chip bead inductors

Multilayer common mode choke coils (MC series F type)

Metal Multilayer Chip Power Inductors (MCOIL™ MC series)

PACKAGING

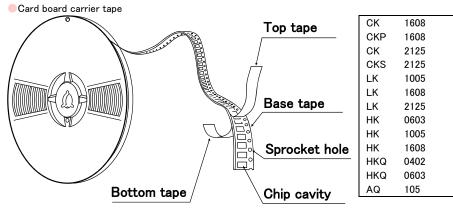
1 Minimum Quantity

Tape & Reel Packaging

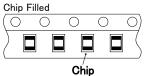
Tape & Reel Packaging		T	
Туре	Thickness	Standard Q	uantity [pcs]
	mm (inch)	Paper Tape	Embossed Tape
CK1608 (0603)	0.8 (0.031)	4000	_
CK2125 (0805)	0.85 (0.033)	4000	_
	1.25(0.049)	_	2000
CKS2125(0805)	0.85 (0.033)	4000	_
	1.25 (0.049)	_	2000
CKP1608 (0603)	0.8 (0.031)	4000	_
CKP2012 (0805)	0.9 (0.035)	_	3000
CKP2016 (0806)	0.9 (0.035)	_	3000
	0.7 (0.028)	_	3000
CKP2520(1008)	0.9 (0.035)	_	3000
	1.1 (0.043)	_	2000
NM2012 (0805)	0.9 (0.035)	_	3000
NM2520(1008)	0.9 (0.035)	_	3000
	1.1 (0.043)	_	2000
LK1005(0402)	0.5 (0.020)	10000	_
LK1608 (0603)	0.8 (0.031)	4000	_
LK2125(0805)	0.85 (0.033)	4000	_
	1.25 (0.049)	_	2000
HK0603 (0201)	0.3 (0.012)	15000	_
HK1005 (0402)	0.5 (0.020)	10000	_
HK1608 (0603)	0.8 (0.031)	4000	_
HK2125 (0805)	0.85 (0.033)	_	4000
	1.0 (0.039)	_	3000
HKQ0402 (01005)	0.2 (0.008)	20000	40000
HKQ0603W(0201)	0.3 (0.012)	15000	_
HKQ0603S (0201)	0.3 (0.012)	15000	_
HKQ0603U(0201)	0.3 (0.012)	15000	_
AQ105(0402)	0.5 (0.020)	10000	_
BK0402 (01005)	0.2 (0.008)	20000	_
BK0603(0201)	0.3 (0.012)	15000	_
BK1005 (0402)	0.5 (0.020)	10000	_
BKH0603(0201)	0.3 (0.012)	15000	_
BKH1005 (0402)	0.5 (0.020)	10000	_
BK1608(0603)	0.8 (0.031)	4000	_
BK2125 (0805)	0.85 (0.033)	4000	_
	1.25 (0.049)	_	2000
BK2010 (0804)	0.45 (0.018)	4000	_
BK3216(1206)	0.8 (0.031)	_	4000
BKP0402 (01005)	0.2 (0.008)	20000	_
BKP0603 (0201)	0.3 (0.012)	15000	_
BKP1005 (0402)	0.5 (0.020)	10000	_
BKP1608 (0603)	0.8 (0.031)	4000	_
BKP2125 (0805)	0.85 (0.033)	4000	_
MCF0605 (0202)	0.3 (0.012)	15000	_
MCF0806 (0302)	0.4 (0.016)	_	10000
MCF1210 (0504)	0.55 (0.022)	_	5000
MCF2010 (0804)	0.45 (0.018)	_	4000
MCFK1608(0603)	0.6 (0.024)	4000	_
MCFE1608 (0603)	0.65 (0.026)	4000	_
MCKK1608 (0603)	1.0 (0.039)		3000
MCHK2012(0806)	0.8 (0.031)	4000	_
MCKK2012 (0805)	1.0(0.039)	-	3000

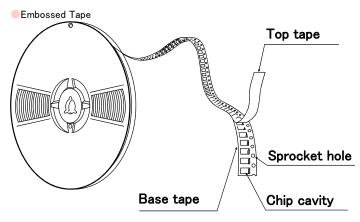
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2Taping material



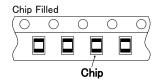
BK	0402
BK	0603
BK	1005
BK	1608
BK	2125
BK	2010
BKP	0402
BKP	0603
BKP	1005
BKP	1608
BKP	2125
BKH	0603
BKH	1005
MCF	0605
MC	1608
MC	2012



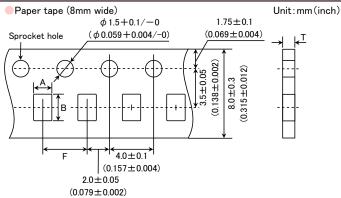


CK	2125
CKS	2125
CKP	2012
CKP	2016
CKP	2520
NM	2012
NM	2520
LK	2125
HKQ	0402
HK	2125

BK	2125	
BK	3216	
MCF	0806	
MCF	1210	
MCF	2010	
MC	1608	
MC	2012	



3Taping Dimensions

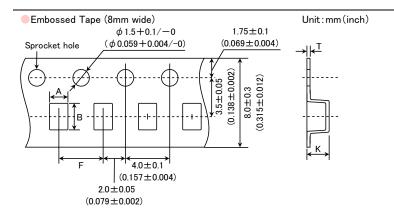


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Dec	_	Thickness	Chip	cavity	Insertion Pitch	Tape Thickness
CK1285 (19805)	Туре	mm(inch)	А	В	F	Т
CK2125 (0805)	CK1608 (0603)	0.8 (0.031)				
06/2187.08051		(,				
CKS2125 (0806) 0.85 (0.033) (0.695 ± 0.086) 2.3 ± 0.2 (0.091 ± 0.006) (0.071 ± 0.004) (0.043max) CKP1508 (0803) 0.8 (0.031) (0.393 ± 0.006) (1.87 ± 0.004) (0.043max) (0.071 ± 0.006) (CK2125 (0805)	0.85(0.033)				
OKS_212S_08896) 0.88 (0.033) (0.099±0.008) (0.019±0.008) (0.157±0.004) (0.043max) CKP1608 (06603) 0.8 (0.031) (1.0±0.2) (1.0±0.2) (4.0±0.1) (1.1max) LK1005 (0402) 0.5 (0.070) (0.65±0.1) (1.15±0.1) 2.0±0.05 (0.078±0.004) (0.079±0.002) (0.031max) LK1080 (0603) 0.8 (0.031) (1.0±0.2) (1.8±0.2) 4.0±0.1 (1.1max) LK11808 (0603) 0.8 (0.031) (1.0±0.2) (1.8±0.2) 4.0±0.1 (1.1max) LK2125 (0805) 0.85 (0.033) (1.5±0.2) 2.3±0.2 4.0±0.1 (1.1max) LK2125 (0805) 0.85 (0.033) (1.05±0.2) (0.03±0.006) (0.09±0.002) (0.043max) HK06080 (0201) 0.3 (0.012) (0.040-006) (0.09±0.002) (0.05±0.002) (0.03±0.0002) (0.07±0.0002) (0.07±0.0002) (0.07±0.0002) (0.07±0.0002) (0.07±0.0002) (0.07±0.0002) (0.07±0.0002) (0.07±0.0002) (0.07±0.0002) (0.07±0.0002) (0.07±0.0002) (0.07±0.0002) (0.07±0.0002) (0.07±0.0002) (0.07±0.0002)						
CKP1606(0600) 0.8 (0.031) (0.039±-0.008) (0.071±-0.008) (0.157±-0.004) (0.045max)	CKS2125 (0805)	0.85 (0.033)				
LK1005(0402)	CKD1600 (0603)	0.9 (0.021)	1.0±0.2	1.8±0.2	4.0±0.1	1.1max
LK1096 (0092)		0.6 (0.031)	(0.039 ± 0.008)	(0.071 ± 0.008)	(0.157±0.004)	(0.043max)
LK1698 (0693) 0.8 (0.031) 1.0 ± 0.2 (0.033±-0.008) (0.071±-0.008) (0.157±-0.004) (0.018±-0.008) (0.071±-0.008) (0.157±-0.004) (0.043max) (0.043max) (0.058±-0.008) (0.059±-0.008) (0.059±-0.008) (0.059±-0.008) (0.059±-0.008) (0.059±-0.008) (0.059±-0.008) (0.059±-0.008) (0.059±-0.002) (0.028±-0.002) (0.018	LK1005(0402)	0.5 (0.020)				
LK1988(9893) 0.8 (0.031) (0.033±0.068) (0.071±0.008) (0.015±0.004) (0.043max) (0.053±0.008) (0.091±0.008) (0.091±0.008) (0.015±0.004) (0.043max) (0.043max) (0.053±0.008) (0.091±0.008) (0.071±0.004) (0.043max) (0.043max) (0.053±0.008) (0.023±0.002) (0.073±0.002)						
LK2125 (8865) 0.85 (0.033) 1.5±0.2 (0.039±0.008) 0.031±0.004) 0.043max (0.039±0.008) 0.031±0.004) 0.043max (0.031±0.002) 0.037±0.004 0.043max (0.031±0.002) 0.037±0.002 0.037±0.	LK1608(0603)	0.8 (0.031)		l		
HK0603(0201)			·			
HK0060(0021)	LK2125 (0805)	0.85(0.033)	(0.059 ± 0.008)	(0.091 ± 0.008)	(0.157 ± 0.004)	(0.043max)
HK1095(0402)	HK0603(0201)	0.3 (0.012)	0.40±0.06	0.70±0.06	2.0±0.05	0.45max
HK1608 (0402) 0.5 (0.020) (0.028 ± 0.004) (0.079 ± 0.002) (0.031 max) HK1608 (0603) 0.8 (0.031) 1.0±0.2 1.8±0.2 4.0±0.1 1.1 max HK20402 (01005) 0.2 (0.008) 0.25 ± 0.04 0.45 ± 0.04 2.0 ± 0.05 0.36 max HK20402 (01005) 0.3 (0.012) 0.40 ± 0.002 (0.018 ± 0.002) (0.018 ± 0.		0.0 (0.012)				
HK1608(0603)	HK1005(0402)	0.5 (0.020)				
HR 1698 (1693) 0.8 (1093) (0.033 ± 0.008) (0.071 ± 0.008) (0.157 ± 0.004) (0.043 max)						
HRC0002(01005) 02 (0.008) (0.010±0.002) (0.018±0.002) (0.079±0.002) (0.014max)	HK1608 (0603)	0.8 (0.031)				
HKQ0863W(0201)	HKUUNU3 (U100E)	0.2 (0.000)	0.25±0.04			0.36max
HRC00603W (0201) 0.3 (0.012) (0.018±0.002) (0.028±0.002) (0.079±0.002) (0.018max) HKQ0603U (0201) 0.3 (0.012) 0.40±0.006 0.70±0.006 0.029±0.002) (0.018max) HKQ0603U (0201) 0.3 (0.012) 0.40±0.006 0.70±0.006 0.20±0.005 0.45max HKQ0603U (0201) 0.3 (0.012) 0.40±0.006 0.70±0.006 0.20±0.005 0.018max HKQ0603U (0201) 0.5 (0.020) 0.039±0.002) (0.079±0.002) (0.018max) HKQ0603U (0201) 0.5 (0.020) 0.039±0.002) (0.039±0.002) (0.079±0.002) (0.031max) HKQ0603U (0201) 0.5 (0.020) 0.039±0.002) (0	HNQ0402 (01005)	0.2 (0.006)	(0.010±0.002)	(0.018±0.002)	(0.079 ± 0.002)	(0.014max)
HKQ0603S(0201) 0.3 (0.012) 0.40±0.06 0.70±0.06 0.079±0.002) 0.018max HKQ0603U(0201) 0.3 (0.012) 0.40±0.06 0.70±0.06 0.20±0.05 0.45max (0.016±0.002) (0.028±0.002) (0.079±0.002) (0.018max) AG105(0402) 0.5 (0.020) 0.75±0.1 1.15±0.1 2.0±0.05 0.36max (0.030±0.004) 0.048±0.004) (0.079±0.002) (0.031max) BKQ0603(0201) 0.2 (0.008) 0.25±0.04 0.45±0.04 0.20±0.05 0.36max BK0603(0201) 0.3 (0.012) 0.40±0.06 0.70±0.06 0.20±0.002 (0.079±0.002) (0.018max) BK1005(0402) 0.5 (0.020) 0.65±0.1 1.15±0.1 2.0±0.05 0.36max BK1005(0402) 0.5 (0.020) 0.65±0.1 1.15±0.1 2.0±0.05 0.36max BK1608(0603) 0.8 (0.031) 1.0±0.2 1.3±0.2 4.0±0.1 1.1max BK2125(0805) 0.85(0.033) 1.5±0.2 2.3±0.2 4.0±0.1 1.1max BK2010(0804) 0.45(0.018) 1.2±0.1 2.1±0.1 4.0±0.1 0.08max BK2010(0804) 0.45(0.018) 1.2±0.1 2.1±0.1 4.0±0.1 0.08max BK2010(0804) 0.45(0.018) 1.2±0.1 2.1±0.1 4.0±0.1 0.8max BK2010(0804) 0.45(0.018) 0.25±0.04 0.45±0.004 (0.157±0.004) (0.031max) BK2010(0804) 0.3 (0.012) 0.40±0.002 (0.018±0.002) (0.019±0.002) (0.018±0.002) BK2010(0804) 0.3 (0.012) 0.40±0.002 (0.018±0.002) (0.019±0.002) (0.018±0.002) BK2010(0804) 0.3 (0.012) 0.40±0.002 (0.018±0.002) (0.019±0.002) (0.018±0.002) BK2010(0804) 0.3 (0.012) 0.40±0.002 (0.018±0.002) (0.019±0.002) (0.018±0.002)	HKQ0603W(0201)	0.3 (0.012)				
HRC0603S(0201) 0.3 (0.012) (0.016±0.002) (0.028±0.002) (0.079±0.002) (0.018max)						
HKQ0603U(0201)	HKQ0603S(0201)	0.3 (0.012)				
AQ105 (0402)						
BK0402(01005) 0.5 (0.020) (0.030±0.004) (0.045±0.004) (0.079±0.002) (0.031max)	HKQ0603U(0201)	0.3 (0.012)				
BK0402 (01005) 0.2 (0.008) 0.25±0.04 0.45±0.04 0.007±0.002) (0.018 max)	AO105(0402)	0.5 (0.020)	0.75±0.1	1.15±0.1	2.0±0.05	0.8max
BK0402(01005) 0.2 (0.008) (0.010±0.002) (0.018±0.002) (0.079±0.002) (0.014max)	AQ103(0402)	0.5 (0.020)				
BK0603(0201) 0.3 (0.012) 0.40±0.06 (0.016±0.002) (0.028±0.002) (0.079±0.002) (0.018max) (0.016±0.002) (0.028±0.004) (0.079±0.002) (0.018max) (0.026±0.004) (0.026±0.004) (0.045±0.004) (0.079±0.002) (0.031max) (0.036±0.008) (0.071±0.008) (0.017±0.008) (0.017±0.008) (0.0157±0.004) (0.043max) (0.043max) (0.039±0.008) (0.071±0.008) (0.0157±0.004) (0.043max) (0.043max) (0.059±0.008) (0.071±0.008) (0.0157±0.004) (0.043max) (0.047±0.004) (0.085±0.004) (0.059±0.008) (0.079±0.002) (0.014max) (0.031max) (0.059±0.002) (0.014max) (0.014max) (0.031max) (0.059±0.002) (0.014max) (0.014max) (0.031max) (0.059±0.004) (0.045±0.004) (0.079±0.002) (0.014max) (0.014max) (0.025±0.004) (0.045±0.004) (0.079±0.002) (0.031max) (0.059±0.008) (BK0402(01005)	0.2 (0.008)				
BK1005(0402)						
BK1005(0402)	BK0603(0201)	0.3 (0.012)				
BK1608(0603) 0.8 (0.031) 1.0±0.2 1.8±0.2 4.0±0.1 1.1 max	DI(1005 (0400)	0.5 (0.000)		1.15±0.1		0.8max
BK1608(0603) 0.8 (0.031) (0.039±0.008) (0.071±0.008) (0.157±0.004) (0.043max)	BK1005(0402)	0.5 (0.020)	(0.026 ± 0.004)	(0.045 ± 0.004)	(0.079 ± 0.002)	(0.031max)
BK2125(0805) 0.85(0.033) 1.5±0.2 (0.091±0.008) (0.157±0.004) (0.043max)	BK1608(0603)	0.8 (0.031)		l		
BK2125 (0805) 0.85 (0.033) (0.059 ± 0.008) (0.091 ± 0.008) (0.157 ± 0.004) (0.043 max) BK2010 (0804) 0.45 (0.018) (1.2 ± 0.1						
BK2010(0804) 0.45(0.018) 1.2±0.1 2.17±0.1 4.0±0.1 0.8max	BK2125(0805)	0.85(0.033)				
BKP0402 (01005)		/ >	, ,	, ,	· · · · · · · · · · · · · · · · · · ·	(,
BKP0402 (01005) 0.2 (0.008) (0.010±0.002) (0.018±0.002) (0.079±0.002) (0.014max) BKP0603 (0201) 0.3 (0.012) 0.40±0.06 (0.028±0.002) 0.70±0.06 (0.079±0.002) 0.45max (0.018max) BKP1005 (0402) 0.5 (0.020) 0.65±0.1 (0.026±0.004) 1.15±0.1 (0.079±0.002) 0.031max) BKP1608 (0603) 0.8 (0.031) 1.0±0.2 (0.039±0.008) 1.8±0.2 (0.079±0.002) 4.0±0.1 (0.043max) BKP2125 (0805) 0.85 (0.033) 1.5±0.2 (0.039±0.008) 2.3±0.2 (0.0157±0.004) 4.0±0.1 (0.043max) BKH0603 (0201) 0.3 (0.012) 0.40±0.06 (0.091±0.008) 0.157±0.004) (0.043max) BKH1005 (0402) 0.3 (0.012) 0.40±0.06 (0.028±0.002) 0.070±0.06 (0.079±0.002) 0.018max) BKH1005 (0402) 0.5 (0.020) 0.65±0.1 (0.026±0.004) 1.15±0.1 (0.045±0.004) 2.0±0.05 (0.031max) MCF0605 (0202) 0.3 (0.012) 0.62±0.03 (0.077±0.03 (0.045±0.004) 2.0±0.05 (0.031max) 0.45max MCFK1608 (0603) 0.6 (0.024) 1.1±0.05 (0.075±0.002) 1.9±0.05 (0.075±0.002) 4.0±0.1 (0.035max) MCFE1608 (0603) 0.65 (0.026) 1.1±0.05 (0.043±0.002) <td>BK2010(0804)</td> <td>0.45(0.018)</td> <td></td> <td></td> <td>(0.157 ± 0.004)</td> <td></td>	BK2010(0804)	0.45(0.018)			(0.157 ± 0.004)	
BKP0603 (0201) 0.3 (0.012) 0.40±0.06 0.70±0.06 2.0±0.05 0.45max	BKP0402 (01005)	0.2 (0.008)	0.25±0.04	0.45±0.04		0.36max
BKP0603 (0201) 0.3 (0.012) (0.016±0.002) (0.028±0.002) (0.079±0.002) (0.018max) BKP1005 (0402) 0.5 (0.020) 0.65±0.1 (0.026±0.004) 1.15±0.1 (0.079±0.002) (0.031max) BKP1608 (0603) 0.8 (0.031) 1.0±0.2 (0.039±0.008) 1.8±0.2 (0.071±0.004) 4.0±0.1 (0.043max) BKP2125 (0805) 0.85 (0.033) 1.5±0.2 (0.059±0.008) 2.3±0.2 (0.0157±0.004) 4.0±0.1 (0.043max) BKH0603 (0201) 0.3 (0.012) 0.40±0.06 (0.079±0.006) 0.70±0.06 (0.028±0.002) 0.045max BKH1005 (0402) 0.5 (0.020) 0.65±0.1 (0.028±0.002) (0.079±0.002) (0.018max) MCF0605 (0202) 0.3 (0.012) 0.62±0.03 (0.077±0.03 (0.079±0.002) 0.051max) MCFK1608 (0603) 0.6 (0.024) 1.1±0.05 (0.030±0.001) (0.079±0.002) (0.018max) MCFE1608 (0603) 0.65 (0.026) 1.1±0.05 (0.043±0.002) 1.9±0.05 (0.0157±0.002) 4.0±0.1 (0.028max) MCHK2012 (0805) 0.8 (0.031) 1.55±0.2 (0.061±0.008) 2.3±0.2 (0.0157±0.004) 4.0±0.1 (0.035max)		0.2 (0.000)				
BKP1005 (0402) 0.5 (0.020) 0.65±0.1 (0.026±0.004) (0.045±0.004) (0.079±0.002) (0.031max) 0.8 max (0.031max) BKP1608 (0603) 0.8 (0.031) 1.0±0.2 (0.039±0.008) (0.071±0.008) (0.071±0.008) (0.157±0.004) (0.043max) 1.1max (0.043max) BKP2125 (0805) 0.85 (0.033) 1.5±0.2 (0.059±0.008) (0.091±0.008) (0.157±0.004) (0.043max) 1.1max (0.040±0.006) (0.091±0.008) (0.157±0.004) (0.043max) BKH0603 (0201) 0.3 (0.012) 0.40±0.06 (0.070±0.006) (0.028±0.002) (0.079±0.002) (0.018max) 0.45max (0.016±0.002) (0.028±0.002) (0.079±0.002) (0.031max) BKH1005 (0402) 0.5 (0.020) 0.65±0.1 (0.026±0.004) (0.045±0.004) (0.079±0.002) (0.031max) 0.60±0.004 (0.024±0.001) (0.030±0.001) (0.079±0.002) (0.018max) MCF0605 (0202) 0.3 (0.012) (0.024±0.001) (0.030±0.001) (0.079±0.002) (0.018max) 0.07±0.002 (0.018max) (0.018max) MCFK1608 (0603) 0.6 (0.024) (0.043±0.002) (0.075±0.002) (0.157±0.004) (0.028max) 0.09max (0.043±0.002) (0.075±0.002) (0.157±0.004) (0.035max) MCHK2012 (0805) 0.8 (0.031) (0.061±0.008) (0.001±0.008) (0.091±0.008) (0.0157±0.004) (0.035max)	BKP0603(0201)	0.3 (0.012)				
BKP1005 (0402)						
BKP1608 (0603)	BKP1005 (0402)	0.5 (0.020)				
BKP2125 (0805) 0.85 (0.033) 1.5 ± 0.2 2.3 ± 0.2 4.0 ± 0.1 1.1 max	BKD1608 (0603)	0.8 (0.031)	1.0±0.2	1.8±0.2	4.0±0.1	1.1max
BKP2125 (0805) 0.85 (0.033) (0.059 ± 0.008) (0.091 ± 0.008) (0.157 ± 0.004) (0.043max) BKH0603 (0201) 0.3 (0.012) 0.40 ± 0.06 (0.016 ± 0.002) 0.70 ± 0.06 (0.028 ± 0.002) 0.079 ± 0.002) 0.45 max (0.018 max) BKH1005 (0402) 0.5 (0.020) 0.65 ± 0.1 (0.026 ± 0.004) 1.15 ± 0.1 (0.045 ± 0.004) 2.0 ± 0.05 (0.031 max) 0.8 max (0.031 max) MCF0605 (0202) 0.3 (0.012) 0.62 ± 0.03 (0.024 ± 0.001) 0.77 ± 0.03 (0.079 ± 0.002) 2.0 ± 0.05 (0.018 max) 0.45 max (0.024 ± 0.001) MCFK1608 (0603) 0.6 (0.024) 1.1 ± 0.05 (0.043 ± 0.002) 1.9 ± 0.05 (0.075 ± 0.002) 4.0 ± 0.1 (0.028 max) 0.09 max (0.043 ± 0.002) MCFE1608 (0603) 0.65 (0.026) 1.1 ± 0.05 (0.043 ± 0.002) 1.9 ± 0.05 (0.057 ± 0.004) 4.0 ± 0.1 (0.035 max) 0.9 max (0.035 max) MCHK2012 (0805) 0.8 (0.031) 1.55 ± 0.2 (0.061 ± 0.008) 2.3 ± 0.2 (0.0157 ± 0.004) 4.0 ± 0.1 (0.035 max) 0.9 max (0.035 max)		0.0 (0.001)				
BKH0603(0201) 0.3 (0.012) 0.40±0.06 (0.016±0.002) 0.70±0.06 (0.028±0.002) 2.0±0.05 (0.079±0.002) 0.45max (0.018max) BKH1005(0402) 0.5 (0.020) 0.65±0.1 (0.026±0.004) 1.15±0.1 (0.045±0.004) 2.0±0.05 (0.079±0.002) 0.8max (0.031max) MCF0605(0202) 0.3 (0.012) 0.62±0.03 (0.024±0.001) 0.77±0.03 (0.079±0.002) 2.0±0.05 (0.018max) 0.45max (0.018max) MCFK1608(0603) 0.6 (0.024) 1.1±0.05 (0.030±0.001) 1.9±0.05 (0.079±0.002) 4.0±0.1 (0.028max) 0.72max (0.043±0.002) MCFE1608(0603) 0.65(0.026) 1.1±0.05 (0.043±0.002) 1.9±0.05 (0.075±0.002) 4.0±0.1 (0.035max) 0.9max (0.035max) MCHK2012(0805) 0.8 (0.031) 1.55±0.2 (0.061±0.008) 2.3±0.2 (0.091±0.008) 4.0±0.1 (0.035max) 0.9max (0.035max)	BKP2125 (0805)	0.85(0.033)				
BKH0603 (0201) 0.3 (0.012) (0.016±0.002) (0.028±0.002) (0.079±0.002) (0.018max) BKH1005 (0402) 0.5 (0.020) 0.65±0.1 (0.026±0.004) 1.15±0.1 (0.045±0.004) 2.0±0.05 (0.031max) 0.8max (0.031max) MCF0605 (0202) 0.3 (0.012) 0.62±0.03 (0.024±0.001) 0.77±0.03 (0.079±0.002) 2.0±0.05 (0.018max) 0.45max (0.018max) MCFK1608 (0603) 0.6 (0.024) 1.1±0.05 (0.043±0.002) 1.9±0.05 (0.075±0.002) 4.0±0.1 (0.028max) 0.72max (0.043±0.002) MCFE1608 (0603) 0.65 (0.026) 1.1±0.05 (0.043±0.002) 1.9±0.05 (0.075±0.002) 4.0±0.1 (0.035max) 0.9max (0.035max) MCHK2012 (0805) 0.8 (0.031) 1.55±0.2 (0.061±0.008) 2.3±0.2 (0.091±0.008) 4.0±0.1 (0.035max) 0.9max (0.035max)						
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	BKH0603(0201)	0.3 (0.012)				
MCF0605 (0202) 0.3 (0.012) 0.62 ± 0.03 (0.024 ± 0.001) 0.77 ± 0.03 (0.030 ± 0.001) 2.0 ± 0.05 (0.079 ± 0.002) 0.45 max (0.018 max) MCFK1608 (0603) 0.6 (0.024) 1.1 ± 0.05 (0.043 ± 0.002) 1.9 ± 0.05 (0.075 ± 0.002) 4.0 ± 0.1 (0.028 max) 0.72 max (0.028 max) MCFE1608 (0603) 0.65 (0.026) 1.1 ± 0.05 (0.043 ± 0.002) 1.9 ± 0.05 (0.075 ± 0.002) 4.0 ± 0.1 (0.035 max) 0.9 max (0.035 max) MCHK2012 (0805) 0.8 (0.031) 1.55 ± 0.2 (0.061 ± 0.008) 2.3 ± 0.2 (0.091 ± 0.008) 4.0 ± 0.1 (0.035 max) 0.9 max (0.035 max)	DKI1100E (0400)	0.5 (0.000)				
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	BKH1005(0402)	0.5 (0.020)	(0.026 ± 0.004)	·	(0.079 ± 0.002)	(0.031max)
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	MCF0605 (0202)	0.3 (0.012)				
$ \frac{\text{MCFK1608}(0603)}{\text{MCFE1608}(0603)} = \frac{0.6 \ (0.024)}{0.65 \ (0.026)} = \frac{(0.043 \pm 0.002)}{(0.043 \pm 0.002)} = \frac{(0.075 \pm 0.002)}{(0.075 \pm 0.002)} = \frac{(0.157 \pm 0.004)}{4.0 \pm 0.1} = \frac{0.9 \text{max}}{(0.035 \text{max})} $ $ \frac{(0.043 \pm 0.002)}{(0.075 \pm 0.002)} = \frac{(0.075 \pm 0.002)}{(0.075 \pm 0.002)} = \frac{(0.157 \pm 0.004)}{(0.157 \pm 0.004)} = \frac{0.9 \text{max}}{(0.035 \text{max})} $ $ \frac{1.55 \pm 0.2}{(0.061 \pm 0.008)} = \frac{2.3 \pm 0.2}{(0.091 \pm 0.008)} = \frac{4.0 \pm 0.1}{(0.157 \pm 0.004)} = \frac{0.9 \text{max}}{(0.035 \text{max})} $,	,,				
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	MCFK1608(0603)	0.6 (0.024)				
$ \frac{\text{MCFE1608}(0603)}{\text{MCHK2012}(0805)} = \frac{0.65(0.026)}{0.8(0.031)} = \frac{(0.043 \pm 0.002)}{(0.043 \pm 0.002)} = \frac{(0.075 \pm 0.002)}{(0.075 \pm 0.002)} = \frac{(0.157 \pm 0.004)}{(0.157 \pm 0.004)} = \frac{(0.035 \text{max})}{(0.091 \pm 0.008)} = \frac{0.035 \text{max}}{(0.0157 \pm 0.004)} = \frac{0.035 \text{max}}{(0.035 \text{max})} = \frac{0.035 \text{max}}{($						
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	MCFE1608 (0603)	0.65(0.026)				
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	MCHK2012 (0805)	0.8 (0.021)	1.55±0.2	2.3±0.2	4.0±0.1	0.9max
Unit: mm(inch)	WIOT INZUTZ (U0UU)	0.0 (0.031)	(0.061 ± 0.008)	(0.091 ± 0.008)	(0.157±0.004)	

Unit: mm(inch)

This catalog contains the typical specification only due to the limitation of space. When you consider the purchase of our products, please check our specification. For details of each product (characteristics graph, reliability information, precautions for use, and so on), see our Web site (http://www.ty-top.com/).



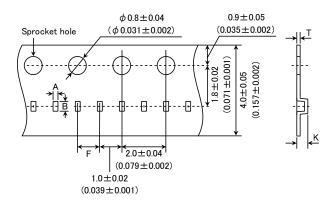
-	Thickness	Chip cavity		Insertion Pitch	Tape Thickness	
Туре	mm(inch)	Α	В	F	K	Т
CK2125 (0805)	1.25(0.049)	1.5±0.2 (0.059±0.008)	2.3±0.2 (0.091±0.008)	4.0±0.1 (0.157±0.004)	2.0 (0.079)	0.3 (0.012)
CKS2125(0805)	1.25(0.049)	1.5±0.2 (0.059±0.008)	2.3±0.2 (0.091±0.008)	4.0±0.1 (0.157±0.004)	2.0 (0.079)	0.3 (0.012)
CKP2012 (0805)	0.9 (0.035)	1.55±0.2 (0.061±0.008)	2.3±0.2 (0.091±0.008)	4.0±0.1 (0.157±0.004)	1.3 (0.051)	0.3 (0.012)
CKP2016 (0806)	0.9 (0.035)	1.8±0.1 (0.071±0.004)	2.2±0.1 (0.087±0.004)	4.0±0.1 (0.157±0.004)	1.3 (0.051)	0.25 (0.01)
	0.7 (0.028)				1.4 (0.055)	
CKP2520 (1008)	0.9 (0.035)	2.3±0.1 (0.091±0.004)	2.8±0.1 (0.110±0.004)	4.0±0.1 (0.157±0.004)	1.4 (0.055)	0.3 (0.012)
	1.1 (0.043)				1.7 (0.067)	
NM2012 (0805)	0.9 (0.035)	1.55±0.2 (0.061±0.008)	2.3 ± 0.2 (0.091 ± 0.008)	4.0±0.1 (0.157±0.004)	1.3 (0.051)	0.3 (0.012)
NIMOTOO (4.000)	0.9 (0.035)	2.3±0.1	2.8±0.1	4.0±0.1	1.4 (0.055)	0.3
NM2520(1008)	1.1 (0.043)	(0.091 ± 0.004)	(0.110±0.004)	(0.157±0.004)	1.7 (0.067)	(0.012)
LK2125(0805)	1.25(0.049)	1.5±0.2 (0.059±0.008)	2.3 ± 0.2 (0.091 ± 0.008)	4.0±0.1 (0.157±0.004)	2.0 (0.079)	0.3 (0.012)
HK2125(0805)	0.85(0.033)	1.5±0.2	2.3±0.2	4.0±0.1	1.5 (0.059)	0.3
HK2125(0605)	1.0 (0.039)	(0.059 ± 0.008)	(0.091 ± 0.008)	(0.157±0.004)	2.0 (0.079)	(0.012)
BK2125(0805)	1.25(0.049)	1.5±0.2 (0.059±0.008)	2.3 ± 0.2 (0.091 ± 0.008)	4.0±0.1 (0.157±0.004)	2.0 (0.079)	0.3 (0.012)
BK3216(1206)	0.8(0.031)	1.9±0.1 (0.075±0.004)	3.5±0.1 (0.138±0.004)	4.0±0.1 (0.157±0.004)	1.4 (0.055)	0.3 (0.012)
MCF0806 (0302)	0.4 (0.016)	0.75±0.05 (0.030±0.002)	0.95±0.05 (0.037±0.002)	2.0±0.05 (0.079±0.002)	0.55 (0.022)	0.3 (0.012)
MCF1210(0504)	0.55(0.022)	1.15±0.05 (0.045±0.002)	1.40 ± 0.05 (0.055 ± 0.002)	4.0±0.1 (0.157±0.004)	0.65 (0.026)	0.3 (0.012)
MCF2010 (0804)	0.45(0.018)	1.1±0.1 (0.043±0.004)	2.3±0.1 (0.091±0.004)	4.0±0.1 (0.157±0.004)	0.85 (0.033)	0.3 (0.012)
MCKK1608(0603)	1.0 (0.039)	1.1±0.1 (0.043±0.004)	1.95±0.1 (±0.004)	4.0±0.1 (0.157±0.004)	1.4 (0.055)	0.25 (0.01)
MCKK2012 (0805)	1.0 (0.039)	1.55±0.2 (0.061±0.008)	2.3±0.2 (0.091±0.008)	4.0±0.1 (0.157±0.004)	1.35 (0.053)	0.25 (0.010)

Unit: mm(inch)

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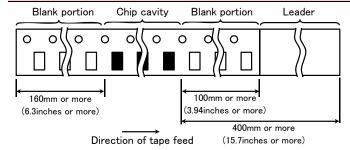
Embossed Tape (4mm wide)

Unit:mm(inch)

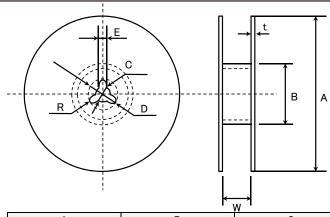


T	Thickness	Chip cavity		Insertion Pitch	Tape Thickness K T	
Туре	mm(inch)	Α	В	F	K	Т
HKQ0402(01005)	0.2 (0.008)	0.23	0.43	1.0±0.02	0.5max.	0.25max.
					Unit	: mm

4LEADER AND BLANK PORTION



5Reel Size



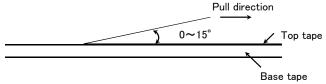
A	В	С	D	E	R
ϕ 178 \pm 2.0	ϕ 50 or more	ϕ 13.0 \pm 0.2	ϕ 21.0±0.8	2.0±0.5	1.0

	t	W
4mm width tape	1.5max.	5±1.0
8mm width tape	2.5max.	10±1.5

(Unit : mm)

6Top tape strength

The top tape requires a peel-off force of $0.1 \sim 0.7 N$ in the direction of the arrow as illustrated below.



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Multilayer chip inductors

Multilayer chip inductors for high frequency, Multilayer chip bead inductors

Multilayer common mode choke coils (MC series F type)

Metal Multilayer Chip Power Inductors (MCOIL™ MC series)

■RELIABILITY DATA

1. Operating Tempe	rature Range				
oporating rempe	BK0402				
	BK0603				
	BK1005				
	BKH0603				
	BKH1005				
	BK1608				
	BK2125				
		BK2010			
	ARRAY	BK3216			
	BKP0402	_ L			
	BKP0603				
	BKP1005				
	BKP1608				
	BKP2125				
	MCF 0605				
	MCF 0806		10 1000		
	MCF 1210		-40~+85°C		
	MCF 2010				
	CK1608				
	CK2125				
	CKS2125				
Specified Value	CKP1608				
	CKP2012				
	CKP2016				
	CKP2520				
	NM2012				
	NM2520				
	LK1005				
	LK1608				
	LK2125				
	HKQ0402				
	HK0603		-55~+125°C		
	HK1005				
	HK1608				
	HK2125		-40·4 +65 C		
	HKQ0603W/HK	Q0603S/HKQ0603U	_55~ ±125°C		
	AQ105		- −55~+125°C		
	MCFK1608				
	MCFE1608				
	MCKK1608		-40~+125°C (Including self-generated heat)		
	MCHK2012		-40'- + 120 O (Including Self-generated fleat)		
	MCKK2012				

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2. Storage Tempera	ture Range				
2. Otorage reilipera	BK0402				
	BK0603				
	BK1005				
	BKH0603				
	BKH1005				
	BK1608		00 1120 0		
	BK2125				
		BK2010			
	ARRAY	BK3216			
	BKP0402	BROZTO			
	BKP0603				
	BKP1005				
	BKP1608		30 - 1 60 0		
	BKP2125				
	MCF 0605				
	MCF 0806				
	MCF 1210				
	MCF 2010				
	CK1608				
	CK2125				
	CKS2125				
Specified Value	CKP1608				
	CKP2012				
	CKP2016				
	CKP2520		40~+85°C		
	NM2012				
	NM2520		1		
	LK1005				
	LK1608				
	LK2125				
	HKQ0402				
	HK0603				
	HK1005				
	HK1608				
	HK2125		-40~+85 C		
		Q0603S/HKQ0603U			
	AQ105		-55° + 125 C		
	MCFK1608				
	MCFE1608				
	MCKK1608		-40~+85°C		
	MCHK2012		40 1000		
	MCKK2012				

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3. Rated Current					
	BK0402		150~750mA DC		
	BK0603		100∼500mA DC		
	BK1005		120~1000mA DC		
	BKH0603		115~450mA DC		
	BKH1005		200~300mA DC		
	BK1608		150~1500mA DC		
	BK2125		200~1200mA DC		
	ARRAY	BK2010	100mA DC		
	ARRAT	BK3216	100~200mA DC		
	BKP0402		0.55~1.1A DC		
	BKP0603		0.8∼1.8A DC		
	BKP1005		0.8~2.4A DC		
	BKP1608		1.0∼3.0A DC		
	BKP2125		1.5~4.0A DC		
	MCF 0605		0.05A DC		
	MCF 0806		0.1~0.13A DC		
	MCF 1210		0.1~0.16A DC		
	MCF 2010		0.1A DC		
	CK1608		50~60mA DC		
	CK2125		60∼500mA DC		
	CKS2125		110~280mA DC		
Specified Value	CKP1608		0.35~0.9A DC		
Specified value	CKP2012		0.7∼1.7A DC		
	CKP2016		0.9∼1.6A DC		
	CKP2520		1.1~1.8A DC		
	NM2012		1.0∼1.2A DC		
	NM2520		0.9~1.2A DC		
	LK1005		20~25mA DC		
	LK1608		1~150mA DC		
	LK2125		5~300mA DC		
	HK0603		60~470mA DC		
	HK1005		110~300mA DC (-55~+125°C) 200~900mA DC (-55~+85°C)		
	HK1608		150~300mA DC		
	HK2125		300mA DC		
	HKQ0402		100∼500mA DC		
	HKQ0603W		100~850mA DC		
	HKQ0603S		130~600mA DC		
	HKQ0603U		190~900mA DC		
	AQ105		280~710mA DC		
	MCFK1608		Idc1 : 1500~2300mA DC, Idc2 : 900~2100mA DC		
	MCFE1608		Idc1 : 1400~2600mA DC, Idc2 : 800~1500mA DC		
	MCKK1608		Idc1 : 2800~2000mA DC		

Definition of rated current:

MCHK2012

MCKK2012

- •In the CK, CKS and BK Series, the rated current is the value of current at which the temperature of the element is increased within 20°C.
- •In the BK Series P type, CK Series P type, NM Series, the rated current is the value of current at which the temperature of the element is increased within 40°C.
- •In the LK, HK, HKQ0603, and AQ Series, the rated current is either the DC value at which the initial L value is decreased within 5% with the application of DC bias, or the value of current at which the temperature of the element is increased within 20°C.

Idc1 : 2260~4320mA DC, Idc2 : 1470~3600mA DC Idc1 : 3600~6200mA DC, Idc2 : 2100~4000mA DC

- •In the HKQ0402(~9N1), the rated current is either the DC value at which the initial L value is decreased within 5% with the application of DC bias, or the value of current at which the temperature of the element is increased within 20°C.
- •In the HKQ0402(10N~), the rated current is either the DC value at which the initial L value is decreased within 5% with the application of DC bias, or the value of current at which the temperature of the element is increased within 25°C.
- •In the MC Series, Idc1 is the DC value at which the initial L value is decreased within 30% and Idc2 is the DC value at which the temperature of element is increased within 40°C by the application of DC bias. (at 20°C)

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4. Impedance			
T. Impedance	BK0402		$10\sim330\Omega \pm 5\Omega (10\Omega)$, $\pm25\% (Other)$
	BK0603		$10 \sim 1200 \Omega \pm 25\%$
	BK1005		10~1800Ω ±25%
	BKH0603		25~1500Ω ±25%
	BKH1005		600~1800Ω ±25%
	BK1608		22~2500Ω ±25%
	BK2125		15~2500Ω ±25%
	F	BK2010	5~1000Ω ±25%
	I ARRAY —	BK3216	60~1000Ω ±25%
	BKP0402		$10\sim33\Omega \pm 5\Omega(10\Omega)$, $\pm25\%(Other)$
	BKP0603		$10\sim120\Omega \pm 5\Omega \times 10\Omega$, $\pm25\% \times (Other)$
	BKP1005		$10\sim330\Omega\pm 5\Omega$ (EM100), ±25 %(Other)
	BKP1608		$33\sim470\Omega \pm 25\%$
	BKP2125		$33\sim330\Omega \pm 25\%$
	MCF 0605		$12 \sim 90 \Omega \pm 5 \Omega (12 \Omega), \pm 20\% (35 \Omega 90 \Omega), \pm 25\% (60 \Omega)$
	MCF 0806		$12 \sim 90 \Omega \pm 5 \Omega (12 \Omega), \pm 20\% (47 \Omega 90 \Omega), \pm 25\% (30 \Omega)$
	MCF 1210		$40\sim90\Omega \pm 20\%(2H900),\pm25\%(Other)$
	MCF 2010		90Ω ±25%
	CK1608		_
	CK2125		-
Specified Value	CKS2125		
	CKP1608		-
	CKP2012		-
	CKP2016		-
	CKP2520 NM2012		-
	NM2520		-
	LK1005		-
	LK1608		-
	LK2125		1
	HKQ0402		-
	HK0603		1
	HK1005		
	HK1608		
	HK2125		
	HKQ0603W/HKQ060	03S/HKQ0603U	
	AQ105		
	MCFK1608		
	MCFE1608		
	MCKK1608		
	MCHK2012		_
	MCKK2012		
	BK0402Series, BKP0		
	Measuring frequence Measuring equipme	•	uivalent)
	Measuring jig	: 16197A(or its equ	
	BK0603Series, BKP0	·	Training,
	Measuring frequence		
	Measuring equipme		valent)
	Measuring jig	: 16193A(or its equ	uivalent)
	BK1005Series, BKP1005Series ,BKH1005Series		
Test Methods and	BK 1005 Series, BKP		
	Measuring frequence	: 100±1MHz	
Remarks	Measuring frequence Measuring equipme	cy : 100±1MHz ent : 4291A(or its equi	
	Measuring frequence Measuring equipme Measuring jig	ent : 100±1MHz ent : 4291A(or its equi : 16192A(or its equ	ivalent) uivalent), 16193A(or its equivalent)
	Measuring frequence Measuring equipme Measuring jig BK1608 • 2125Series	ey : 100±1MHz ent : 4291A(or its equi : 16192A(or its equi , BKP1608•2125Series	
	Measuring frequence Measuring equipme Measuring jig BK1608 • 2125 Series Measuring frequence	ey : 100±1MHz ent : 4291A(or its equi : 16192A(or its equi , BKP1608•2125Series ey : 100±1MHz	uivalent), 16193A(or its equivalent)
	Measuring frequent Measuring equipme Measuring jig BK1608 • 2125Series Measuring frequent Measuring equipme	ey : 100±1MHz ent : 4291A(or its equi : 16192A(or its equi , BKP1608•2125Series ey : 100±1MHz ent : 4291A(or its equi	uivalent), 16193A(or its equivalent) ivalent), 4195A(or its equivalent)
	Measuring frequence Measuring equipme Measuring jig BK1608 • 2125 Series Measuring frequence	ey : 100±1MHz ent : 4291A(or its equi : 16192A(or its equi , BKP1608•2125Series ey : 100±1MHz ent : 4291A(or its equi : 16092A(or its equi	uivalent), 16193A(or its equivalent)
	Measuring frequent Measuring equipme Measuring jig BK1608 • 2125Series Measuring frequent Measuring equipme Measuring jig	ey : 100±1MHz ent : 4291A(or its equi : 16192A(or its equi , BKP1608•2125Series ey : 100±1MHz ent : 4291A(or its equi : 16092A(or its equi	uivalent), 16193A(or its equivalent) ivalent), 4195A(or its equivalent)
	Measuring frequent Measuring equipme Measuring jig BK1608 • 2125Series Measuring frequent Measuring equipme Measuring jig BK2010 • 3216Series	ey : 100±1MHz ent : 4291A(or its equi : 16192A(or its equi , BKP1608•2125Series ey : 100±1MHz ent : 4291A(or its equi : 16092A(or its equi , MCF Series ey : 100±1MHz	uivalent), 16193A(or its equivalent) ivalent), 4195A(or its equivalent)

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5. Inductance			
	BK0402		
	BK0603		1
	BK1005		1
	BKH0603		1
	BKH1005		1
	BK1608		†
	BK2125		-
	BK2010		-
	ARRAY BK3216		+
	BKP0402		-
	BKP0603		-
			-
	BKP1005 BKP1608		-
			-
	BKP2125		-
	MCF 0605		-
	MCF 0806		-
	MCF 1210		4
	MCF 2010		47, 400 (1), 100%
	CK1608		4.7~10.0 µH: ±20%
	CK2125		0.1~10.0 µH: ±20%
	CKS2125		1.0~10.0 µH: ±20%
	CKP1608		0.33~2.2 µH: ±20%
Specified Value	CKP2012		0.47~4.7 µH: ±20%
	CKP2016		0.47~4.7 µH: ±20%
	CKP2520		0.47~4.7 µH: ±20%
	NM2012		0.82~1.0 µH: ±20%
	NM2520		1.0~2.2 µH: ±20%
	LK1005		0.12~2.2 µH: ±10 or 20%
	LK1608		0.047~33.0 µH: ±20% 0.10~12.0 µH: ±10%
	LK2125		0.047~33.0 µH: ±20% 0.10~12.0 µH: ±10%
	HK0603		1.0~6.2nH: ±0.3nH 6.8~100nH: ±5%
	HK1005		1.0~6.2nH: ±0.3nH 6.8~270nH: ±5%
	HK1608		1.0~5.6nH: ±0.3nH 6.8~470nH: ±5%
	HK2125		1.5~5.6nH: ±0.3nH 6.8~470nH: ±5%
	HKQ0402		0.5~3.9nH: ±0.1 or 0.2 or 0.3nH 4.3~5.6nH: ±0.3nH or 3% or 5%
	111(40102		6.2~47nH: ±3 or 5%
	HKQ0603W		$0.6 \sim 3.9 \text{nH}$: ± 0.1 or 0.2 or 0.3nH $4.3 \sim 6.2 \text{nH}$: ± 0.2 or 0.3nH or 3 or 5%
			6.8~30nH: ±3 or 5% 33~100nH: ±5%
	HKQ0603S		0.6~6.2nH: ±0.2 or 0.3nH 6.8~22nH: ±3 or 5%
	HKQ0603U		0.6~4.2nH: ±0.1 or 0.2 or 0.3nH 4.3~6.5nH: ±0.2 or 0.3nH 6.8~22nH: ±3 or 5%
	AQ105		1.0~6.2nH: ±0.3nH 6.8~15nH: ±5%
	MCFK1608		0.24~1.0 μH: ±20%
	MCFE1608		0.24~1.0 µH: ±20%
	MCKK1608		0.24~1.0 μH: ±20%
	MCHK2012		0.24~1.0 µH: ±20%
	MCKK2012		0.24~1.0 µH: ±20%
	CK, LK, CKP, NM, MC Series		
	Measuring frequency	: 2~4MHz(CK16	
	Measuring frequency	: 2~25MHz(CK2	
	Measuring frequency	: 2~10MHz(CKS	
	Measuring frequency	: 10~25MHz(LK	
	Measuring frequency	: 1~50MHz(LK1	
	Measuring frequency	: 0.4~50MHz(LH	
	Measuring frequency		8 · CKP2012 · CKP2016 · CKP2520 · NM2012 · NM2520 · MCFK1608 · MCFE1608 · MCHK2012 · MCKK2012)
	Measuring equipment /jig		### 16092A(or its equivalent)
			2A(or its equivalent)
			K1608·MCFE1608·MCKK1608·MCHK2012·MCKK2012
Test Methods and	Measuring current	:•1mA rms(0.04)	
Remarks	Measuring current		
		•0.1mA rms(5.6	6~33 µH)
	HK, HKQ, AQ Series	4001411 (111/00/	20 11/4005 40405)
	Measuring frequency		03+HK1005+AQ105)
	Measuring frequency	: 50/100MHz(Hk	
	Measuring frequency		603S+HKQ0603U)
	Measuring frequency	: 300/500MHz(H	
	Measuring frequency Measuring equipment /jig	: 100/500MHz(H	rkQu4u2) 'A(or its equivalent) ∕HK0603∙AQ105
	incasuring equipment /Jig		3A(or its equivalent)/HK1005
			97A(or its equivalent)/HK1005
			2A + in-house made jig(or its equivalent)/HK1608+HK2125
			96D (or its equivalent)/HKQ0402
	1	= :: 3 :: 1 7011	· · · · · · · · · · · · · · · · · · ·

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6.0			
6. Q	BK0402		
	BK0402 BK0603		
	BK1005		
	BKH0603		
	BKH1005		
	BK1608		
	BK2125		
	BK2010		
	ARRAY BK3216		
	BKP0402		
	BKP0603		
	BKP1005		
	BKP1608		
	BKP2125		
	MCF 0605		
	MCF 0806		
	MCF 1210		
	MCF 2010		
	CK1608		
	CK2125		
	CKS2125	·	
Specified Value	CKP1608		
opcomed value	CKP2012		_
	CKP2016		
	CKP2520		
	NM2012		
	NM2520		
	LK1005		10~20 min.
	LK1608 LK2125		10~35 min. 15~50 min.
	HK0603		13~30 min. 4~5 min.
	HK1005		8 min.
	HK1608		8~12 min.
	HK2125		10~18 min.
	HKQ0402		3~8 min.
	HKQ0603W		6~15 min.
	HKQ0603S		10~13 min.
	HKQ0603U		14 min.
	AQ105		8 min.
	MCFK1608		
	MCFE1608		
	MCKK1608		_
	MCHK2012		
	MCKK2012		
	LK Series		
	Measuring frequency Measuring frequency	: 10~25MHz(LK10 : 1~50MHz(LK160	
	Measuring frequency	: 0.4~50MHz(LK2	
	Measuring equipment /jig		H16092A (or its equivalent)
	, 3.8		16092A(or its equivalent)
		•4294A+16192A	(or its equivalent)
		•4291A+16193A	(or its equivalent)/LK1005
	Measuring current	•1mA rms(0.047	• •
Test Methods and		•0.1mA rms(5.6 ∼	·33 μH)
Remarks	HK, HKQ, AQ Series	100111 (111/0000	LU((00E A0(0E)
	Measuring frequency	: 100MHz(HK0603	
	Measuring frequency Measuring frequency	: 50/100MHz(HK16 : 500MHz(HKQ060	
	Measuring frequency Measuring frequency	: 300/500MHz(HKQ060	
	Measuring frequency	: 100/500MHz(HK0	
	Measuring equipment /jig		or its equivalent)/HK0603•AQ105
	. , , , , , , , , , , , , , , , , , , ,		(or its equivalent)/HK1005
			A(or its equivalent)/HKQ0603S•HKQ0603U•HKQ0603W
			+ in-house made jig(or its equivalent)/HK1608, HK2125
		•E4991A+16196	O (or its equivalent) HKQ0402

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7. DC Resistance			
	BK0402		0.07∼1.2Ωmax.
	BK0603		0.065∼1.50 Ω max.
	BK1005		0.03~0.90 Ω max.
	BKH0603		0.26~3.20 Ω max.
	BKH1005		0.85~2.00 Ω max.
	BK1608		0.05∼1.10Ω max.
	BK2125		0.05~0.75Ω max.
		BK2010	0.10~0.90Ω max.
	ARRAY	BK3216	0.15~0.80 Ω max.
	BKP0402		0.05~0.15 Ω max.
	BKP0603		0.030~0.180Ω max.
	BKP1005		0.0273~0.220Ω max.
	BKP1608		0.025~0.18 Ω max.
	BKP2125		0.020~0.075Ω max.
	MCF 0605		2.5~5.0Ω max
	MCF 0806		1.5∼5.0 Ω max.
	MCF 1210		1.5~4.5 Ω max.
	MCF 2010		4.5Ω max.
	CK1608		$0.45 \sim 0.85 \Omega(\pm 30\%)$
	CK2125		0.16~0.65 Ω max.
	CKS2125		0.12~0.52 Ω max.
	CKP1608		0.15~0.35 Ω max.
Specified Value	CKP2012		0.08~0.28 Ω max.
	CKP2016		0.075~0.20 Ω max
	CKP2520		0.05~0.16 Ω max.
	NM2012		0.10~0.15Ω max.
	NM2520		0.11~0.22 Ω max.
	LK1005		0.41 ~ 1.16 Ω max.
	LK1608		$0.2\sim2.2\Omega$ max.
	LK2125		0.2 × 2.2 x max. 0.1 ~ 1.1 Ω max.
	HK0603		0.11~3.74Ω max.
	HK1005		0.08~4.8Ω max.
	HK1608		0.05~2.6 Ω max.
			0.05~2.6 Ω max. 0.10~1.5 Ω max.
	HK2125 HKQ0402		0.10~1.5 Ω max. 0.08~5.0 Ω max.
	· ·		
	HKQ0603W		0.07~4.1 Ω max.
	HKQ0603S		0.06~1.29 Ω max.
	HKQ0603U		0.06~1.29 Ω max.
	AQ105		0.07~0.45Ω max.
	MCFK1608		0.050~0.224Ω max.
	MCFE1608		0.100~0.340Ω max.
	MCKK1608		0.038~0.123Ω max.
	MCHK2012		0.024~0.111Ω max.
	MCKK2012		0.025 ~ 0.090 Ω max.
Test Methods and Remarks	Measuring equipm	ent:VOAC-7412, VOA	AC-7512, VOAC-7521 (made by Iwasaki Tsushinki), HIOKI3227 (or its equivalent)

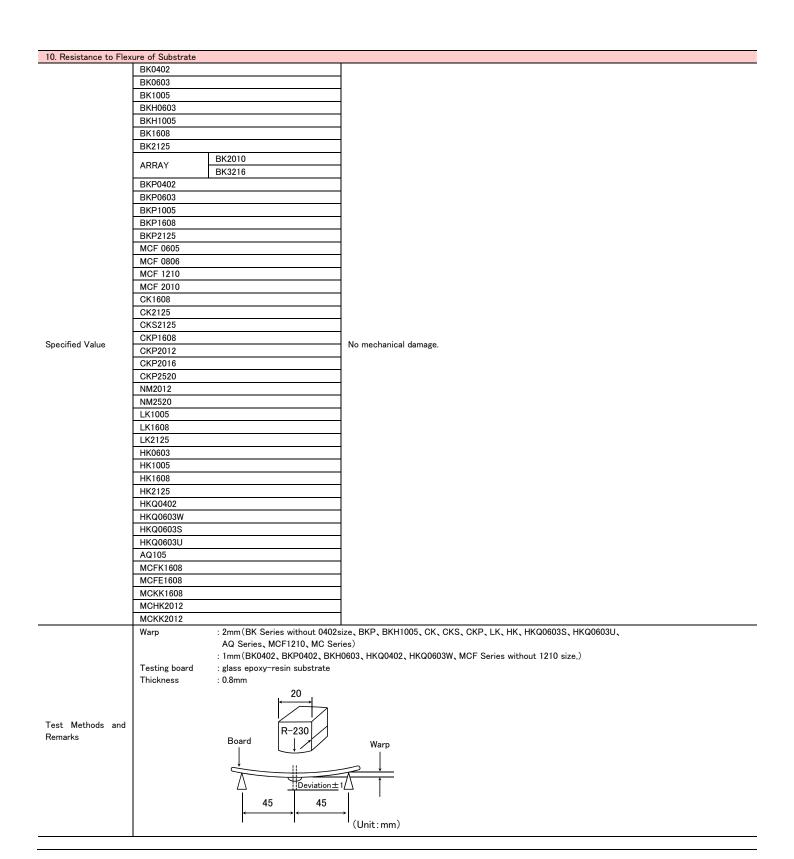
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	, <u> </u>						
8. Self Resonance Fre	Self Resonance Frequency (SRF)						
	BK0402						
	BK0603						
	BK1005						
	BKH0603						
	BKH1005						
	BK1608						
	BK2125						
	ARRAY	BK2010					
		BK3216		<u> </u> _			
	BKP0402						
	BKP0603						
	BKP1005						
	BKP1608						
	BKP2125						
	MCF 0605						
	MCF 0806						
	MCF 1210						
	MCF 2010						
	CK1608			17~25MHz min.			
	CK2125			24~235MHz min.			
	CKS2125			24~75MHz min.			
Specified Value	CKP1608						
Specifica Value	CKP2012						
	CKP2016			_			
	CKP2520						
	NM2012			1			
	NM2520						
	LK1005			40~180MHz min.			
	LK1608			9~260MHz min.			
	LK2125			13~320MHz min.			
	HK0603			900~10000MHz min.			
	HK1005			400~10000MHz min.			
	HK1608			300∼10000MHz min.			
	HK2125			200~4000MHz min.			
	HKQ0402			1200~10000MHz min.			
	HKQ0603W			800~10000MHz min.			
	HKQ0603S			1900~10000MHz min.			
	HKQ0603U			1900~10000MHz min.			
	AQ105			2300~10000MHz min.			
	MCFK1608			-			
	MCFE1608			1			
	MCKK1608			-			
	MCHK2012			-			
	MCKK2012						
	LK, CK Series :		41051/ "				
Test Methods and	Measuring equip	oment	: 4195A (or its equiv				
Remarks	Measuring jig : 41951+16092A(or		: 41951 + 16092A(o	or its equivalent)			
	HK, HKQ, AQ Se Measuring equip		· 87100 (az ita az i	valent) •8753D(or its equivalent)/HK2125			
	wieasuring equip	ment	. 6/190 (or its equit	valent/ -0/000 (or its equivalent// IRZ120			

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### BR0402 BR0603 BK1005 BK1005 BK1005 BK1005 BK1005 BK1008 BK2125 ARRAY BK2010 BK2028 BK2028							
BK0003	9. Temperature Chara						
BR1005							
BKH10903							
BK11005							
BK1608							
BR2125							
ARRAY							
ARTA							
BKP0402 BKP0603 BKP1005 BKP1005 BKP1080 BKP1215 MCF 0806 MCF 210 MCF 210 MCF 210 CK1808 CK2125 CK22125 CK2215 CK22125 CK2212		ARRAY					
BKP003			BK3216				
RKP1005							
BKP1008 BKP125 MCF 0005 MCF 0005 MCF 2010 CK1608 CK2125 CKP2012 CKP2012 CKP2012 CKP2012 CKP2012 CKP2013 CKP2012 CKP2014 CKP2015 CKP2015 CKP2015 CKP2015 CKP2016 CKP2							
BIKP2125							
MCF 0805							
MCF 0306 MCF 2010 CK 120 CK 120 CK 2125 CKS 2125 CKP 2501 CKP 2010 CKP 2010							
MCF 1210					_		
MCF 2010 CK1608 CK2125 CK52125 CK52125 CK52125 CK52125 CK52125 CK52018 CK72018 CK720							
CK1608							
CK2125							
CKS2125							
CKP1018							
CKP2012	Specified Value						
CKP2012							
CKP2520 NM2012 NM2520 LK1005 LK1608 LK2125 HK0603 HK1608 HK2125 HKQ0603W HKQ0603W HKQ0603S HKQ0603S HKQ0603S HKQ0603S HKQ0603S HKQ0603S HKQ0603S HKQ0603U AQ105 MCFK1608 MCFK2012 MCKK2012 MCKX2012 MCKX201							
NM2012							
NM2520							
LK1005							
LK1608							
LK2125							
HK0603							
HK1005							
HK1608							
HK2125							
HKQ0402							
HKQ0603W							
HKQ0603S HKQ0603U AQ105 MCFK1608 MCFE1608 MCKK1608 MCKK2012 MCKK2012 HK, HKQ, AQ Series: Temperature range : -30~+85°C Reference temperature : +20°C MC Series: Temperature range : -40~+85°C							
HKQ0603U							
HKQ0603U					Inductance change: Within ±10%		
MCFK1608 MCFE1608 MCKK1608 MCKK2012 MCKK2012 HK, HKQ, AQ Series: Temperature range : −30~+85°C Remarks MC Series: Temperature range : +20°C MC Series: Temperature range : −40~+85°C					The state of the light with the state of the		
MCFE1608 MCKK1608 MCHK2012 MCKK2012 HK, HKQ, AQ Series: Temperature range : −30~+85°C Remarks MC Series: Temperature range : +20°C MC Series: Temperature range : −40~+85°C							
MCKK1608 MCHK2012 MCKK2012 HK, HKQ, AQ Series: Temperature range : −30~+85°C Remarks Reference temperature : +20°C MC Series: Temperature range : −40~+85°C							
MCHK2012 MCKK2012 HK, HKQ, AQ Series: Temperature range : -30∼+85°C Remarks Reference temperature : +20°C MC Series: Temperature range : -40∼+85°C							
MCKK2012 HK, HKQ, AQ Series: Temperature range : -30~+85°C Remarks Remarks MC Series: Temperature range : +20°C MC Series: Temperature range : -40~+85°C							
HK、HKQ、AQ Series: Temperature range : -30~+85°C Test Methods and Reference temperature : +20°C MC Series: Temperature range : -40~+85°C							
Temperature range : -30~+85°C Reference temperature : +20°C Remarks MC Series: Temperature range : -40~+85°C							
Test Methods and Reference temperature : +20°C Remarks MC Series: Temperature range : -40~+85°C							
Remarks MC Series: Temperature range : -40~+85°C	-						
Temperature range : $-40 \sim +85^{\circ}$ C			erature	: +20°C			
	nemarks		ngo	· -40~ ±05°C			
			-				

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11. Solderability	I =1/0./00		
	BK0402		
	BK0603		
	BK1005		4
	BKH0603		
	BKH1005		
	BK1608		
	BK2125		
	ARRAY	BK2010	
		BK3216	
	BKP0402		
	BKP0603		
	BKP1005		
	BKP1608		
	BKP2125		
	MCF 0605		
	MCF 0806		
	MCF 1210		
	MCF 2010		
	CK1608		
	CK2125		At least 90% of terminal electrode is covered by new solder.
	CKS2125		
Specified Value	CKP1608		
Specified Value	CKP2012		
	CKP2016		
	CKP2520		
	NM2012		
	NM2520		
	LK1005		
	LK1608		
	LK2125		
	HK0603		
	HK1005		
	HK1608		
	HK2125		
	HKQ0402		
	HKQ0603W		
	HKQ0603S		
	HKQ0603U		
	AQ105		
	MCFK1608		
	MCFE1608		
	MCKK1608		
	MCHK2012		
	MCKK2012		
Toot Mothede and	Solder temperatu	ure : 230±5°C (JIS Z 32	282 H60A or H63A)
Test Methods and Remarks	Solder temperature :245±3°C (Sn/3.0Ag		.g/0.5Cu)
Nemarks	Duration	:4±1 sec.	

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12. Resistance to Soldering							
	BK0402						
	BK0603						
	BK1005						
	BKH0603						
	BKH1005						
	BK1608						
	BK2125			Appearance: No significant abnormality			
	ARRAY	BK2010		Impedance change:Within ±30%			
		BK3216					
	BKP0402						
	BKP0603						
	BKP1005						
	BKP1608						
	BKP2125						
	MCF 0605						
	MCF 0806			Appearance: No significant abnormality			
	MCF 1210			Impedance change: Within ±20%			
	MCF 2010						
	CK1608						
	CK2125			Appearance: No significant abnormality			
	CKS2125			Inductance change			
	CKP1608			R10~4R7: Within ±10% 6R8~100: Within ±15%			
0 '6 17/1	CKP2012						
Specified Value	CKP2016			CKS2125: Within ±20% CKP1608、CKP2012、CKP2016、CKP2520、NM2012、NM2520: Within ±30%			
	CKP2520						
	NM2012						
_	NM2520			A N 1 100 1 100			
	LK1005			Appearance: No significant abnormality			
	LK1608			Inductance change: Within ±15%			
	LK1000			Appearance: No significant abnormality Inductance change			
	LK2125			47N~4R7: Within ±10%			
				5R6~330: Within ±15%			
	HK0603						
	HK1005						
	HK1608						
	HK2125			Appearance:No significant abnormality			
	HKQ0402						
	HKQ0603W			Inductance change: Within ±5%			
	HKQ0603S						
	HKQ0603U						
	AQ105						
	MCFK1608						
	MCFE1608						
	MCKK1608			Appearance: No significant abnormality			
	MCHK2012			Inductance change: Within ±10%			
	MCKK2012						
	Solder temperature : 260±5°C		260±5°C				
	Duration	:	10±0.5 sec.				
Test Methods and	Preheating tempe	rature :	150 to 180°C				
Remarks	Preheating time		3 min.				
				methanol solution with colophony for 3 to 5 sec.			
				covery under the standard condition after the test.(See Note 1)			
(Note 1) When there a	1) When there are questions concerning measurement result; measurement shall be made after 48±2 hrs of recovery under the standard condition.						

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=						
13. Thermal Shock	T =					
	BK0402					
	BK0603		Í			
	BK1005		4			
	BKH0603		1			
	BKH1005					
	BK1608		Í			
	BK2125	1		Appearance: No significant abnormality		
	ARRAY	BK2010	Impedance change:	: Within ±30%		
		BK3216				
	BKP0402					
	BKP0603		_			
	BKP1005					
	BKP1608					
	BKP2125					
	MCF 0605					
	MCF 0806			mificant abnormality		
	MCF 1210		Impedance change:	: Within ±20%		
	MCF 2010					
	CK1608			nificant abnormality		
	CK2125			:Within ±20% Q change:Within ±30%		
	CKS2125		Appearance: No significant abnormality Inductance change: Within ±20%			
Specified Value	CKP1608	CKP1608				
	CKP2012					
	CKP2016		Appearance: No sig	nificant abnormality		
	CKP2520		Inductance change	: Within ±30%		
	NM2012					
	NM2520					
	LK1005		A N .			
	LK1608			rificant abnormality		
	LK2125		Inductance change	: Within ±10% Q change: Within ±30%		
	HK0603					
	HK1005					
	HK1608					
	HK2125		Appearance: No significant abnormality			
	HKQ0402					
	HKQ0603W		aastanos onange	Inductance change: Within ±10% Q change: Within ±20%		
	HKQ0603S		ĺ			
	HKQ0603U					
	AQ105					
	MCFK1608		Í			
	MCFE1608		Appearance No sig	nificant abnormality		
	MCKK1608		Inductance change			
	MCHK2012		1			
	MCKK2012					
	Conditions for 1					
	Step	temperature (°C)	10/0	time (min.)		
-	1	Minimum operating temperatur		30±3		
Test Methods and	2	Room temperature		2~3		
Remarks	3	Maximum operating temperatur		30±3		
	4	Room temperature		2~3		
	Number of cycle		al a a maliki a mi - 44 - 11 - 11	hook (Soo Noko 1)		
	Recovery: 2 to 3	3 hrs of recovery under the standar	a condition after the	test. (See Note 1)		

Recovery: 2 to 3 hrs of recovery under the standard condition after the test. (See Note 1)

(Note 1) When there are questions concerning measurement result; measurement shall be made after 48±2 hrs of recovery under the standard condition.

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14. Damp Heat (Steam	dy state)					
	BK0402					
	BK0603					
	BK1005					
	BKH0603					
	BKH1005					
	BK1608					
	BK2125	Appearance: No significant abnormality				
	BK2010	Impedance change: Within ±30%				
	ARRAY BK3216					
	BKP0402					
	BKP0603					
	BKP1005					
	BKP1608					
	BKP2125					
	MCF 0605					
	MCF 0806	Appearance: No significant abnormality				
	MCF 1210	Impedance change: Within ±20%				
	MCF 2010					
	CK1608	Appearance: No significant abnormality				
	CK2125	Inductance change: Within ±20% Q change: Within ±30%				
	OKONIOE	Appearance: No significant abnormality				
	CKS2125	Inductance change: Within ±20%				
Specified Value	CKP1608					
Specified value	CKP2012					
	CKP2016	Appearance: No significant abnormality				
	CKP2520	Inductance change: Within ±30%				
	NM2012					
	NM2520					
	LK1005	Appearance: No significant abnormality				
	LK1608	Inductance change: Within ±10% Q change: Within ±30%				
	LK2125	Appearance: No significant abnormality				
		Inductance change: Within ±20% Q change: Within ±30%				
	HK0603					
	HK1005					
	HK1608	Appearance:No significant abnormality Inductance change: Within ±10% Q change: Within ±20%				
	HK2125					
	HKQ0402					
	HKQ0603W	Indicating change. Within 21070 & change. Within 22070				
	HKQ0603S					
	HKQ0603U					
	AQ105					
	MCFK1608					
	MCFE1608	Appearance: No significant abnormality				
	MCKK1608	Inductance change: Within ±10%				
	MCHK2012					
	MCKK2012					
	BK, BKP, BKH, LK, CK, CKS, CKP, NM Series, N	MCF Series:				
	Temperature :40±2°C					
	Humidity :90 to 95%RH					
	Duration : 500 +24/-0 hrs	ha shandard and this of the shanned from hash that I (O. N. 1.4)				
Test Methods and	Recovery :2 to 3 hrs of recovery under t	he standard condition after the removal from test chamber.(See Note 1)				
Remarks	HK HKO AO MC Saries					
	HK、HKQ、AQ、MC Series: Temperature:60±2°C					
	Humidity :90 to 95%RH					
	Duration :500 +24/-0 hrs					
		he standard condition after the removal from test chamber.(See Note 1)				
(Note 1) When there a						
	te 1) When there are questions concerning measurement result; measurement shall be made after 48±2 hrs of recovery under the standard condition.					

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15. Loading under Dar	mp Heat					
	BK0402					
	BK0603					
	BK1005		-			
	BKH0603		-			
	BKH1005		-			
	BK11003		-			
			Annayana Ala siyaifi ant shuayaality			
	BK2125	K2010	Appearance: No significant abnormality			
	I ARRAY —		Impedance change: Within ±30%			
		K3216	-			
	BKP0402		_			
	BKP0603		4			
	BKP1005		_			
	BKP1608		-			
	BKP2125					
	CK1608		Appearance: No significant abnormality			
	CK2125		Inductance change: Within ±20% Q change: Within ±30%			
	CKS2125		Appearance: No significant abnormality			
	OKB1000		Inductance change: Within ±20%			
	CKP1608		-			
	CKP2012		4			
	CKP2016		Appearance: No significant abnormality			
Canada Value	CKP2520		Inductance change: Within ±30%			
Specified Value	NM2012		-			
	NM2520		A ALCOHOLD P			
	LK1005		Appearance: No significant abnormality			
			Inductance change: Within ±10% Q change: Within ±30%			
	L K1600		Appearance: No significant abnormality			
	LK1608		Inductance change: $0.047 \sim 12.0 \mu\text{H}$: Within $\pm 10\%$ $15.0 \sim 33.0 \mu\text{H}$: Within $\pm 15\%$			
			Q change: Within ±30%			
	LK2125		Appearance: No significant abnormality Inductance change: Within ±20% Q change: Within ±30%			
	HK0603		Inductance change. Within ±2070 Q change. Within ±3070			
	HK1005		-			
	HK1608		-			
	HK2125		-			
	HKQ0402		Appearance: No significant abnormality			
	HKQ0603W		Inductance change: Within ±10% Q change: Within ±20%			
	HKQ0603W HKQ0603S					
	HKQ0603U		 -			
	AQ105					
	MCFK1608*					
	MCFK1608%		-			
	MCKK1608%		Appearance: No significant abnormality			
	MCHK2012%		Inductance change: Within ±10%			
	MCKK2012%		-			
		CK, CKS, CKP, NM Series:	1			
	Temperature	:40±2°C				
	Humidity	:90 to 95%RH				
	Applied current	:Rated current				
	Duration	:500 +24/-0 hrs				
	Recovery		der the standard condition after the removal from test chamber. (See Note 1)			
Test Methods and	1	,				
Remarks	HK, HKQ, AQ, MC	Series:				
	Temperature	:60±2°C				
	Humidity	:90 to 95%RH				
	Applied current	:Rated current ※MC ser	ries ; Idc2max			
	Duration	:500 +24/-0 hrs				
	Recovery	:2 to 3 hrs of recovery un	der the standard condition after the removal from test chamber. (See Note 1)			
Nata an atomaloud assure	condition: "standard condition" referred to herein is defined as follows:					

Note on standard condition: "standard condition" referred to herein is defined as follows:

5 to 35°C of temperature, 45 to 85% relative humidity, and 86 to 106kPa of air pressure.

When there are questions concerning measurement results:

In order to provide correlation data, the test shall be conducted under condition of 20±2°C of temperature, 60 to 70% relative humidity, and 86 to 106kPa of air pressure.

Unless otherwise specified, all the tests are conducted under the "standard condition."

(Note 1) Measurement shall be made after 48 ± 2 hrs of recovery under the standard condition.

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16. Loading at High Te	emperature						
	BK0402						
	BK0603						
	BK1005						
	BKH0603						
	BKH1005						
	BK1608						
	BK2125		Appearance: No significant abnormality				
	BK2	2010	Impedance change: Within ±30%				
	ARRAY	3216	1 '				
	BKP0402						
	BKP0603						
	BKP1005						
	BKP1608						
	BKP2125						
	MCF 0605						
	MCF 0806		Appearance: No significant abnormality				
	MCF 1210		Impedance change: Within ±20%				
	MCF 2010						
	CK1608		Appearance: No significant abnormality				
	CK2125		Inductance change: Within ±20% Q change: Within ±30%				
	01/00405		Appearance: No significant abnormality				
	CKS2125		Inductance change: Within ±20%				
	CKP1608						
	CKP2012						
Specified Value	CKP2016		Appearance: No significant abnormality				
	CKP2520		Inductance change: Within ±30%				
	NM2012						
	NM2520						
	LK1005		Appearance: No significant abnormality				
			Inductance change: Within ±10% Q change: Within ±30%				
	LK1608		Appearance: No significant abnormality				
			Inductance change: 0.047~12.0 μH: Within ±10% 15.0~33.0 μH: Within ±15%				
			Q change: Within ±30%				
			Appearance: No significant abnormality				
	HNOCOS		Inductance change: Within ±20% Q change: Within ±30%				
	HK0603						
	HK1005						
	HK1608		Appearance: No significant abnormality Inductance change: Within ±10% Q change: Within ±20%				
	HK2125						
	HKQ0402 HKQ0603W						
	HKQ06038						
			-				
	HKQ0603U AQ105						
	MCFK1608%						
	MCFE1608%		1				
	MCKK1608%		Appearance: No significant abnormality				
	MCKK1008% MCHK2012%		Inductance change: Within ±10%				
	MCKK2012%						
Test Methods and Remarks	Temperature : Ma Applied current : Ra Duration : 50 Recovery : 2 t	aximum operating temperatur sted current					

Note on standard condition: "standard condition" referred to herein is defined as follows:

5 to $35^{\circ}\!C\,$ of temperature, 45 to 85% relative humidity, and 86 to 106kPa of air pressure.

When there are questions concerning measurement results:

In order to provide correlation data, the test shall be conducted under condition of $20\pm2^{\circ}C$ of temperature, 60 to 70% relative humidity, and 86 to 106kPa of air pressure. Unless otherwise specified, all the tests are conducted under the "standard condition."

(Note 1) Measurement shall be made after 48 ± 2 hrs of recovery under the standard condition.

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Precautions on the use of Multilayer chip inductors

Multilayer chip inductors for high frequency, Multilayer chip bead inductors

Multilayer common mode choke coils (MC series F type)

Metal Multilayer Chip Power Inductors (MCOILTM MC series)

PRECAUTIONS

1. Circuit Design

Precautions

- ♦ Verification of operating environment, electrical rating and performance
 - 1. A malfunction in medical equipment, spacecraft, nuclear reactors, etc. may cause serious harm to human life or have severe social ramifications.

As such, any inductors to be used in such equipment may require higher safety and/or reliability considerations and should be clearly differentiated from components used in general purpose applications.

- ◆Operating Current(Verification of Rated current)
 - 1. The operating current including inrush current for inductors must always be lower than their rated values.
 - 2. Do not apply current in excess of the rated value because the inductance may be reduced due to the magnetic saturation effect.

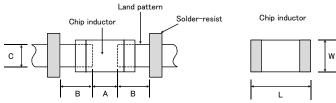
2. PCB Design

Precautions

- ◆Pattern configurations (Design of Land-patterns)
- 1. When inductors are mounted on a PCB, the size of land patterns and the amount of solder used (size of fillet) can directly affect inductor performance.

Therefore, the following items must be carefully considered in the design of solder land patterns:

- (1) The amount of solder applied can affect the ability of chips to withstand mechanical stresses which may lead to breaking or cracking. Therefore, when designing land-patterns it is necessary to consider the appropriate size and configuration of the solder pads which in turn determines the amount of solder necessary to form the fillets.
- (2) When more than one part is jointly soldered onto the same land or pad, the pad must be designed so that each component's soldering point is separated by solder-resist.
- (3) The larger size of land patterns and amount of solder, the smaller Q value after mounting on PCB. It makes higher the Q value to design land patterns smaller than terminal electrode of chips.
- ◆Pattern configurations (Inductor layout on panelized[breakaway] PC boards)
 - After inductors have been mounted on the boards, chips can be subjected to mechanical stresses in subsequent manufacturing processes (PCB cutting, board inspection, mounting of additional parts, assembly into the chassis, wave soldering the reflow soldered boards etc.) For this reason, planning pattern configurations and the position of SMD inductors should be carefully performed to minimize stress.
- ◆Pattern configurations(Design of Land-patterns)
 - 1. The following diagrams and tables show some examples of recommended patterns to prevent excessive solder amounts (larger fillets which extend above the component end terminations). Examples of improper pattern designs are also shown.
 - (1) Recommended land dimensions for a typical chip inductor land patterns for PCBs



Recommended land dimensions for wave-soldering (Unit:mm)

Туре		1608 2012		2125 2016		2520	3216	
Size	L	1.6	2.0	2.0	2.0	2.5	3.2	
	W	0.8	1.25	1.25	1.6	2.0	1.6	
A	4	0.8~1.0	1.0~1.4	1.0~1.4	1.0~1.4	1.0~1.4	1.8~2.5	
Е	3	0.5~0.8	0.8~1.5	0.8~1.5	0.8~1.5	0.6~1.0	0.8~1.7	
С		0.6~0.8 0.9~1.2		0.9~1.2 1.3~1.6		1.6~2.0	1.2~1.6	

Technical considerations

Recommended land dimensions for reflow-soldering (Unit:mm)

T	уре	0402	0603	1005	105	1608	2012	2125	2016	2520	3216
Size	L	0.4	0.6	1.0	1.0	1.6	2.0	2.0	2.0	2.5	3.2
Size	W	0.2	0.3	0.5	0.6	0.8	1.25	1.25	1.6	2.0	1.6
	A	0.15~0.25	0.20~0.30	0.45~0.55	0.50~0.55	0.8~1.0	0.8~1.2	0.8~1.2	0.8~1.2	1.0~1.4	1.8~2.5
	В	0.10~0.20	0.20~0.30	0.40~0.50	0.30~0.40	0.6~0.8	0.8~1.2	0.8~1.2	0.8~1.2	0.6~1.0	0.6~1.5
	С	0.15~0.30	0.25~0.40	0.45~0.55	0.60~0.70	0.6~0.8	0.9~1.6	0.9~1.6	1.2~2.0	1.8~2.2	1.2~2.0

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