### Power Choke Coil for Automotive application

- Series: PCC-M0530M (MC) PCC-M0540M (MC) PCC-M0630M (MC) PCC-M0645M (MC) PCC-M0754M (MC) PCC-M0750M (MC) PCC-M0854M (MC) PCC-M0850M (MC) PCC-M1054M (MC) PCC-M1050M (MC) PCC-M1050ML (MC) PCC-M1060ML (MC)



IDC (A)

High heat resistance and high reliability Using metal composite core (MC)

Industrial Property : patents 21 (Registered 2/Pending 19)

<ul> <li>High-reliability</li> <li>High vibration resistance as result of newly developed integral construction; under severe reliability conditions of automotive and other strenuous applications</li> <li>High bias current</li> <li>Excellent inductance stability using ferrous alloy magnetic material (Fig.1)</li> <li>Temp. stability</li> <li>Excellent inductance stability over broad temp. range (Fig.1)</li> <li>Low audible (buzz) noise: New metal composite core technology</li> <li>High efficiency</li> <li>Low Rbc of winding and low eddy-current loss of the core</li> </ul>	Features		
<ul> <li>developed integral construction; under severe reliability conditions of automotive and other strenuous applications</li> <li>High bias current</li> <li>Excellent inductance stability using ferrous alloy magnetic material (Fig.1)</li> <li>Temp. stability</li> <li>Excellent inductance stability over broad temp. range (Fig.1)</li> <li>Low audible (buzz) noise: New metal composite core technology</li> <li>High efficiency</li> <li>Low Roc of winding and low eddy-current loss of the core</li> </ul>	<ul> <li>High heat resistance</li> </ul>	: Operation up to 150 °C including self-heating	• Fig.1 Inductance v.s. DC current, Terr
<ul> <li>High bias current</li> <li>Excellent inductance stability using ferrous alloy magnetic material (Fig.1)</li> <li>Temp. stability</li> <li>Excellent inductance stability over broad temp. range (Fig.1)</li> <li>Low audible (buzz) noise: New metal composite core technology</li> <li>High efficiency</li> <li>Low Roc of winding and low eddy-current loss of the core</li> </ul>	<ul> <li>High-reliability</li> </ul>	: High vibration resistance as result of newly	ETQP5M470YFM(reference
<ul> <li>High bias current</li> <li>Excellent inductance stability using ferrous alloy magnetic material (Fig.1)</li> <li>Temp. stability</li> <li>Excellent inductance stability over broad temp. range (Fig.1)</li> <li>Low audible (buzz) noise: New metal composite core technology</li> <li>High efficiency</li> <li>Low Roc of winding and low eddy-current loss of the core</li> </ul>		developed integral construction; under severe	60.0
<ul> <li>High bias current</li> <li>Excellent inductance stability using ferrous alloy magnetic material (Fig.1)</li> <li>Temp. stability</li> <li>Excellent inductance stability over broad temp. range (Fig.1)</li> <li>Low audible (buzz) noise</li> <li>New metal composite core technology</li> <li>High efficiency</li> <li>Low Rbc of winding and low eddy-current loss of the core</li> </ul>			50.0
<ul> <li>magnetic material (Fig.1)</li> <li>Temp. stability</li> <li>Excellent inductance stability over broad temp. range (Fig.1)</li> <li>Low audible (buzz) noise : New metal composite core technology</li> <li>High efficiency</li> <li>Low Roc of winding and low eddy-current loss of the core</li> </ul>			T to a
<ul> <li>Low audible (buzz) noise : New metal composite core technology</li> <li>High efficiency : Low Rbc of winding and low eddy-current loss of the core</li> </ul>	<ul> <li>High bias current</li> </ul>	, , , ,	± 40.0
<ul> <li>Low audible (buzz) noise : New metal composite core technology</li> <li>High efficiency : Low Rbc of winding and low eddy-current loss of the core</li> </ul>			g 30.0
Low audible (buzz) noise : New metal composite core technology     High efficiency     Low Rbc of winding and low eddy-current loss of the core	Temp. stability	: Excellent inductance stability over broad temp. range (Fig.1)	g 20 0 100 °C
High efficiency     E Low Hoc of winding and low eddy-current loss of the core	<ul> <li>Low audible (buzz) noise</li> </ul>	: New metal composite core technology	-+- 125 °C
Shielded construction		: Low RDC of winding and low eddy-current loss of the core	10.0 150 °C
	<ul> <li>Shielded construction</li> </ul>		0.0 0.5 1.0 1.5 2.0 2.5 3.0

AEC-Q200 Automotive gualified

RoHS compliant

#### **Recommended Applications**

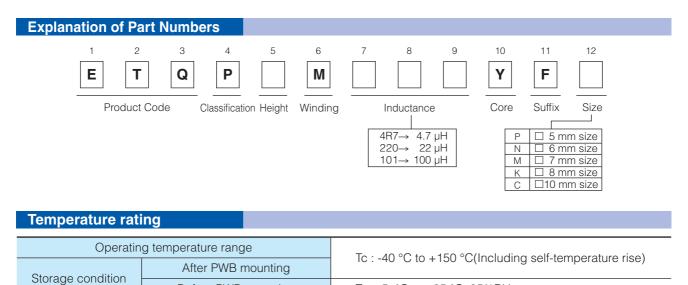
• Noise filter for various drive circuitry requiring high temp. operation and peak current handling capability

Boost-Converter, Buck-Converter DC/DC

#### Standard Packing Quantity (Minimum Quantity/Packing Unit)

Before PWB mounting

- 1,000 pcs./box (2 reel) : PCC-M0645M, M0754M, M0750M, M0854M, M0850M, M1054M,
  - M1050M, M1050ML, M1060ML
- 2,000 pcs./box (2 reel) : PCC-M0530M, M0540M, M0630M



Ta : -5 °C to +35 °C 85%RH max.

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#### 1. Series PCC-M0530M/PCC-M0540M (ETQP3M VFP/ETQP4M VFP)

Standard Parts								
		Inducta	ance *1	DCR (at 20	°C) (m $\Omega$ )	Rateo	d Current (	Гур. : А)
Series	Part No.	LO	Tolerance	Тур.	Tolerance	∆T=	40K	△L=-30%
		(µH)	(%)	(max.)	(%)	(*2)	(*3)	(*4)
PCC-M0530M	ETQP3M2R2YFP	2.2		22.6 (24.8)		4.8	5.8	10.9
[5.5×5.0×3.0(mm)]	ETQP3M3R3YFP	3.3	±20	31.3 (34.4)	. 10	4.1	5.0	8.6
PCC-M0540M	ETQP4M4R7YFP	4.7	1 ±20	36.0 (39.6)	±10	4.0	4.8	7.7
[5.5×5.0×4.0(mm)]	ETQP4M220YFP	22	]	163 (179)		1.9	2.3	3.1

(\*1) Measured at 100 kHz.

(\*2) DC current which causes temperature rise of 40 K. Parts are soldered by reflow on four-layer PWB (1.6 mm FR4) and measured at room temperature. See also (\*5)

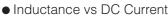
(\*3) DC current which causes temperature rise of 40 K. Parts are soldered by reflow on multilayer PWB with high heat dissipation performance. Note: Heat radiation constant are approx. 52 K/W measured on 5.5×5.0×3.0 mm case size and approx. 48 K/W measured on 5.5×5.0×4.0 mm case size. See also (\*5)

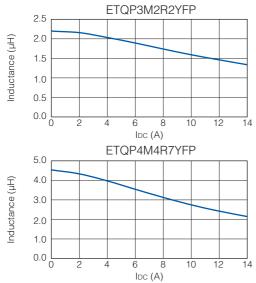
(\*4) Saturation rated current : DC current which causes L(0) drop -30 %.

(\*5) Within a suitable application, the part's temperature depends on circuit design and certain heat dissipation conditions. This should be double checked in a worst case operation mode. In normal case, the max.standard operating temperature of +150 °C should not be exceeded.

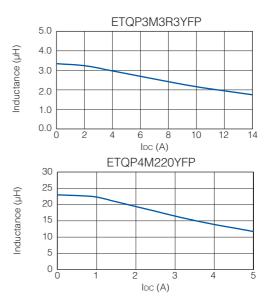
For higher operating temperature conditions, please contact Panasonic representative in your area.

#### **Performance Characteristics (Reference)**

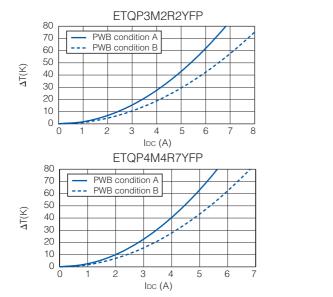


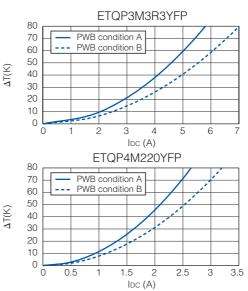






PWB condition A : Four-layer PWB (1.6 mm FR4), See also (\*2) PWB condition B : Multilayer PWB with high heat dissipation performance. See also (\*3)





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#### 2. Series PCC-M0630M/PCC-M0645M (ETQP3M VFN/ETQP4M VFN)

Standard Parts								
		Inductance *1		DCR (at 20 °C) (mΩ)		Rated Current (1		Тур. : А)
Series	Part No.	LO	Tolerance	Тур.	Tolerance	∆T=40K		△L=-30%
		(µH)	(%)	(max.)	(%)	(*2)	(*3)	(*4)
PCC-M0630M	ETQP3MR68YFN	0.68		6.3 (6.9)		9.8	12.0	24.0
[6.5×6.0×3.0(mm)]	ETQP3M1R0YFN	1.0	-	7.9 (8.7)		8.8	10.7	20.0
	ETQP4M6R8YFN	6.8		39.3 (43.2)		4.1	5.2	10.0
	ETQP4M100YFN	10	±20	54.2 (59.6)	±10	3.3	4.5	8.3
PCC-M0645M [6.5×6.0×4.5(mm)]	ETQP4M220YFN	22		126(138.6)		2.3	2.9	6.0
[/]	ETQP4M330YFN	33		172(189.2)		2.0	2.5	4.1
	ETQP4M470YFN	47		210 (231)		1.8	2.2	3.8

(\*1) Measured at 100 kHz.

(\*2) DC current which causes temperature rise of 40 K. Parts are soldered by reflow on four-layer PWB (1.6 mm FR4) and measured at room temperature. See also (\*5)

(\*3) DC current which causes temperature rise of 40 K. Partsare soldered by reflow on multilayer PWB with high heat dissipation performance. Note: Heat radiation constant are approx. 44 K/W measured on 6.5×6.0×3.0 mm case size and approx. 37 K/W measured on 6.5×6.0×4.5 mm case size. See also (\*5)

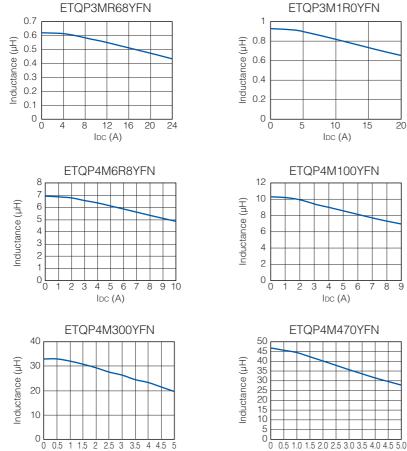
(\*4) Saturation rated current : DC current which causes L(0) drop -30 %.

(\*5) Within a suitable application, the part's temperature depends on circuit design and certain heat dissipation conditions. This should be double checked in a worst case operation mode. In normal case, the max.standard operating temperature of +150 °C should not be exceeded.

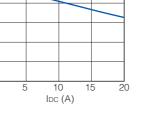
For higher operating temperature conditions, please contact Panasonic representative in your area.

#### **Performance Characteristics (Reference)**

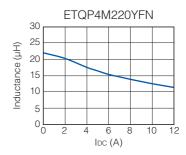
Inductance vs DC Current



IDC (A)



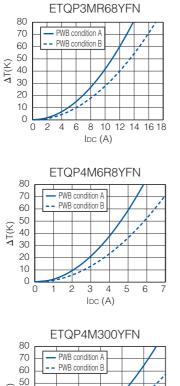
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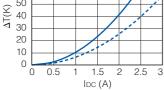


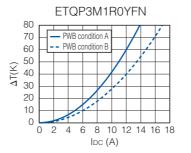
IDC (A)

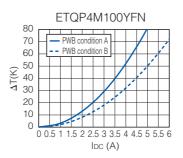
• Case Temperature vs DC Current

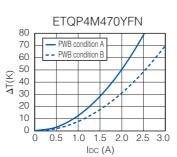
PWB condition A : Four-layer PWB (1.6 mm FR4), See also (\*2) PWB condition B : Multilayer PWB with high heat dissipation performance. See also (\*3)

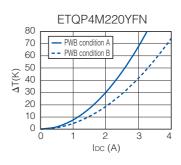












#### 3. Series PCC-M0754M/PCC-M0750M (ETQP5M YFM/ETQP5M YGM)

Standard Parts								
		Inductance *1		DCR (at 20 °C) (mΩ)		Rate	Тур. : А)	
Series	Part No.	LO	Tolerance	Тур.	Tolerance	∆T=	-40K	∆L=–30%
		(µH)	(%)	(max.)	(%)	(*2)	(*3)	(*4)
	ETQP5M4R7YFM	4.7	-	20(23)		6.3	8.0	13.1
	ETQP5M6R8YFM	6.8		26.7(29.4)		5.5	6.9	12.1
PCC-M0754M	ETQP5M100YFM	10		37.6(41.3)		4.7	5.7	10.6
[7.5×7.0×5.4(mm)]	ETQP5M220YFM	22	±20	92(102)	±10	3.0	3.7	5.8
	ETQP5M330YFM	33		120(132)		2.6	3.3	4.8
	ETQP5M470YFM	48		156(172)		2.3	2.9	4.1
PCC-M0750M [7.5×7.0×5.0(mm)]	ETQP5M101YGM	95		348(382.8)		1.4	1.9	3.1

(\*1) Measured at 100 kHz.

(\*2) DC current which causes temperature rise of 40 K. Parts are soldered by reflow on four-layer PWB (1.6 mm FR4) and measured at room temperature. See also (\*5)
 (\*3) DC current which causes temperature rise of 40 K. Parts are soldered by reflow on multilayer PWB with high

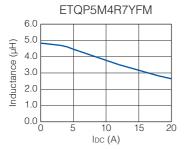
(\*3) DC current which causes temperature rise of 40 K. Parts are soldered by reflow on multilayer PWB with high heat dissipation performance. Note: Heat radiation constant is approx. 31 K/W measured on 7.5×7.0×5.4 mm case size and approx. 29 K/W measured on 7.5×7.0×5.0 mm case size. See also (\*5)
(\*4) Saturation rated current : DC current which causes L(0) drop -30 %.

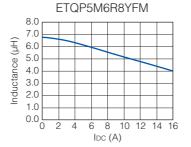
 (\*4) Saturation rated current. De current which cases E(0) drop -30 %.
 (\*5) Within a suitable application, the part's temperature depends on circuit design and certain heat dissipation conditions. This should be double checked in a worst case operation mode. In normal case, the max.standard operating temperature of +150 °C should not be exceeded.

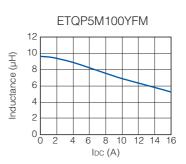
For higher operating temperature conditions, please contact Panasonic representative in your area.

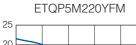
#### **Performance Characteristics (Reference)**

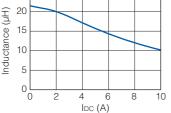
### Inductance vs DC Current



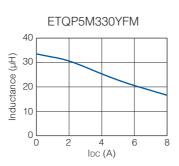


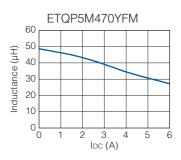






ETQP5M101YGM (H) 80 40 20 0 0 1 2 3 4 5 Ibc (A)





### **Power Inductors**

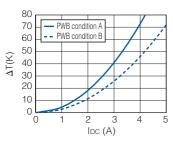
# Panasonic

#### • Case Temperature vs DC Current

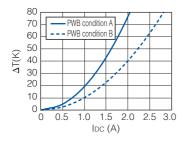
PWB condition A : Four-layer PWB (1.6 mm FR4), See also (\*2) PWB condition B : Multilayer PWB with high heat dissipation performance. See also (\*3)

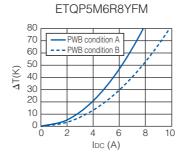
ETQP5M4R7YFM 80 70 PWB condition A PWB condition B 60 50 ΔT(K) 40 30 20 10 0 10 0 4 6 8 2 IDC (A)



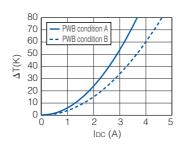


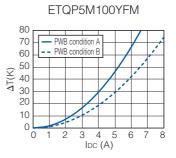
ETQP5M101YGM



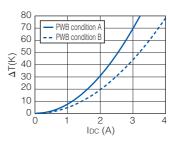


#### ETQP5M330YFM





#### ETQP5M470YFM



#### 4. Series PCC-M0854M/PCC-M0850M (ETQP5M VFK/ETQP5M VGK)

Standard Parts								
		Inducta	ance *1	DCR (at 2	0 °C) (mΩ)	Rated Current (Typ. : A)		
Series	Part No.	LO	Tolerance	Тур.	Tolerance	∆T=40K		∆L=–30%
		(µH)	(%)	(max.)	(%)	(*2)	(*3)	(*4)
	ETQP5M2R5YFK	2.5		7.6(8.4)		11.9	14.0	20.1
PCC-M0854M	ETQP5M100YFK	10		33(37)		5.7	6.7	13.0
$[8.5 \times 8.0 \times 5.4(mm)]$	ETQP5M150YFK	15		48.2(53.1)	] [	4.7	5.5	7.2
[0.3×0.0×3.4(1111)]	ETQP5M220YFK	22	±20	63(70)	±10	4.1	4.8	6.9
	ETQP5M470YFK	48		125(138)		2.9	3.4	5.4
PCC-M0850M [8.5×8.0×5.0(mm)]	ETQP5M101YGK	100		302(333)		1.7	2.1	3.0

(\*1) Measured at 100 kHz.

(\*2) DC current which causes temperature rise of 40 K. Parts are soldered by reflow on four-layer PWB (1.6 mm FR4) and measured at room temperature. See also (\*5)

(\*3) DC current which causes temperature rise of 40 K. Parts are soldered by reflow on multilayer PWB with high heat dissipation performance. Note: Heat radiation constant are approx. 27 K/W measured on 8.5×8.0×5.4 mm case size and approx. 29 K/W measured on 8.5×8.0×5.0 mm case size. See also (\*5)
 (\*4) Saturation rated current : DC current which causes L(0) drop -30 %.

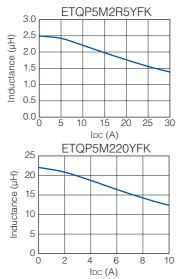
(\*5) Within a suitable application, the part's temperature depends on circuit design and certain heat dissipation conditions. This should be double checked in a worst case operation mode.

In normal case, the max.standard operating temperature of + 150 °C should not be exceeded.

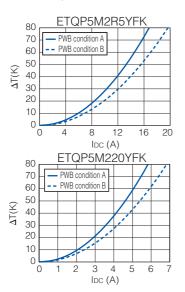
For higher operating temperature conditions, please contact Panasonic representative in your area.

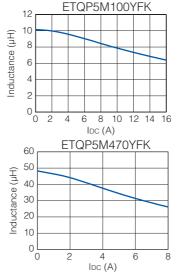
### Performance Characteristics (Reference)

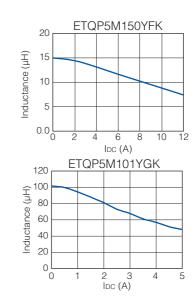
• Inductance vs DC Current



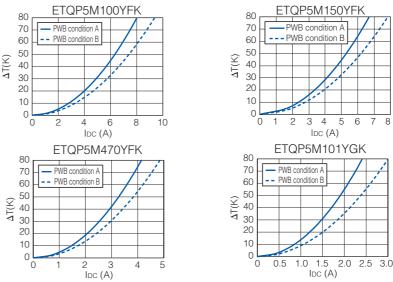
• Case Temperature vs DC Current







PWB condition A : Four-layer PWB (1.6 mm FR4), See also (\*2) PWB condition B : Multilayer PWB with high heat dissipation performance. See also (\*3)



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#### 5. Series PCC-M1054M/PCC-M1050M (ETQP5M VFC/ETQP5M VGC)

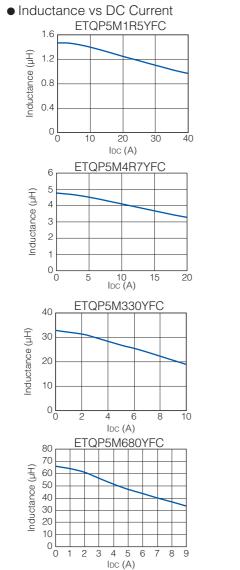
Standard Parts								
		Inducta	ance *1	DCR (at 20	0 °C) (mΩ)	Rated Current (Typ. : A)		
Series	Part No.	LO	Tolerance	Тур.	Tolerance	∆T=	=40K	∆L=–30%
		(µH)	(%)	(max.)	(%)	(*2)	(*3)	(*4)
	ETQP5M1R5YFC	1.45		3.8(4.2)		17.9	21.4	35.1
	ETQP5M2R5YFC	2.5		5.3(5.9)	] [	15.1	18.1	27.2
	ETQP5M3R3YFC	3.3		7.1(7.9)	] [	13.1	15.7	22.7
PCC-M1054M	ETQP5M4R7YFC	4.7		10.2(11.3)		10.9	13.1	20.0
$[10.7 \times 10.0 \times 5.4(\text{mm})]$	ETQP5M100YFC	10	]	23.8(26.2)	] [	7.1	8.5	10.7
[10.7 × 10.0 × 5.4(1111)]	ETQP5M220YFC	22	±20	45(50)	) ±10 [	5.2	6.2	8.8
	ETQP5M330YFC	32.5	]	68.5(75.4)	] [	4.2	5.0	7.6
	ETQP5M470YFC	47	1	99(108.9)	1	3.5	4.2	6.8
	ETQP5M680YFC	66	]	136(149.6)	] [	3.0	3.6	4.9
PCC-M1050M [10.7×10.0×5.0(mm)]	ETQP5M101YGC	97		208(229)		2.2	2.7	3.0

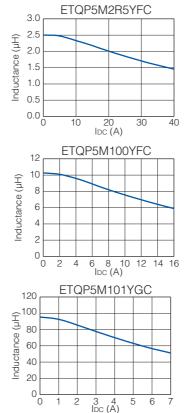
(\*1) Measured at 100 kHz.

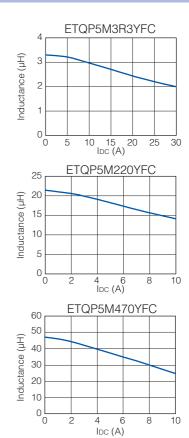
(\*2) DC current which causes temperature rise of 40 K. Parts are soldered by reflow on four-layer PWB (1.6 mm FR4)

(\*2) DC current which causes temperature rise of 40 K. Parts are soldered by reflow on four-layer PWB (1.6 mm FR4) and measured at room temperature. See also (\*5)
(\*3) DC current which causes temperature rise of 40 K. Parts are soldered by reflow on multilayer PWB with high heat dissipation performance. Note: Heat radiation constant are approx. 23 KW measured on 10.7×10.0x5.4 mm case size and approx. 26 KW measured on 10.7×10.0x5.0 mm case size. See also (\*5)
(\*4) Saturation rated current : Dc current which causes L(0) drop -30 %.
(\*5) Within a suitable application, the part's temperature depends on circuit design and certain heat dissipation conditions. This should be double checked in a worst case operation mode. In normal case, the max.standard operating temperature of +150 °C should not be exceeded. For higher operating temperature conditions, please contact Panasonic representative in your area.

#### Performance Characteristics (Reference)







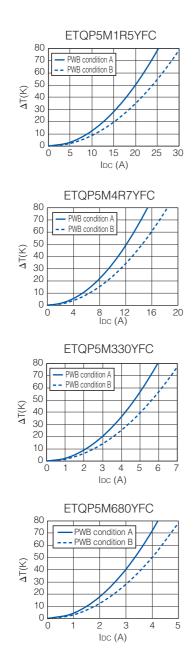
Design and specifications are each subject to change without notice. Ask factory for the current technical specifications before purchase and/or use Should a safety concern arise regarding this product, please be sure to contact us immediately

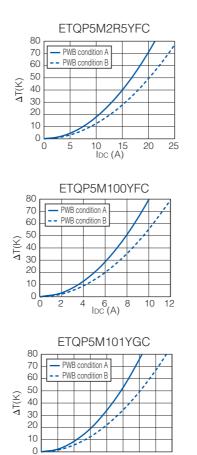
ETQP5M3R3YFC

### Panasonic

• Case Temperature vs DC Current

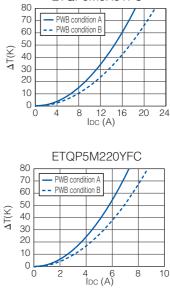
PWB condition A : Four-layer PWB (1.6 mm FR4), See also (\*2) PWB condition B : Multilayer PWB with high heat dissipation performance. See also (\*3)

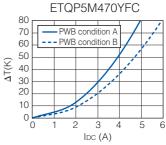




0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 IDC (A)

0





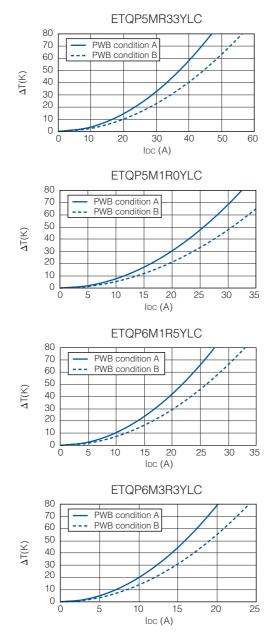
### 6. Series PCC-M1050ML/PCC-M1060ML (ETQP5M UL/ETQP6M UL/PLC)

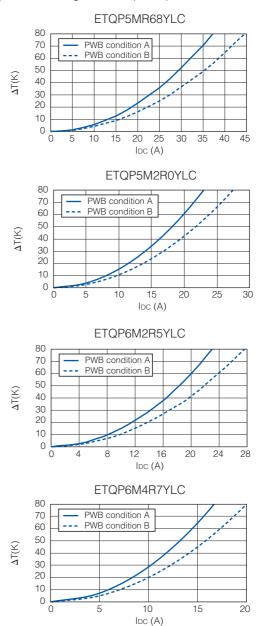
	andard Parts									
			Inducta	ance *1	DCR (a	t 20	°C) (mΩ)	Rate	d Current (	
	Series	Part No.	LO	Tolerance	Тур.		olerance		=40K	△L=-30%
		ETODELIDCOV // C	(µH)	(%)	(max.		(%)	(*2)	(*3)	(*4)
_		ETQP5MR33YLC	0.33		1.1(1.2			33.2	39.7	56.7
	CC-M1050ML ×10.0×5.0(mm)]	ETQP5MR68YLC	0.68		1.75(1.9			26.3	31.5	40.0
10.8	10.0×5.0(mm)]	ETQP5M1R0YLC ETQP5M2R0YLC	1.0 2.0		2.3(2.5		-	23.0 16.2	27.5 19.4	37.8 31.3
		ETQP6M1R5YLC	1.5	±20	3.2(3.5		±10	19.5	23.3	32.0
D	CC-M1060ML	ETQP6M2R5YLC	2.5		4.55(5.			16.3	19.6	25.8
	$\times 10.0 \times 6.0(mm)$ ]	ETQP6M3R3YLC	3.3		6.0(6.6			14.2	17.0	26.3
		ETQP6M4R7YLC	4.7		8.7(9.5		-	11.8	14.1	22.5
*2) [ *3) [ *4) { *5) \ 0	and measured at r DC current which causes constant are approx. 23 K Saturation rated cu Within a suitable conditions. This shi n normal case, the	causes temperature oom temperature. So temperature rise of 40 K. (W measured on 10.9x10.) rrent : Dc current w application, the p pould be double chere max.standard oper g temperature cond	ee also (*5 Parts are solder 0x5.0 mm case hich causes art's tempe cked in a w rating temp	) ed by reflow or size and app s L(0) drop erature dep vorst case c erature of +	n multilayer rox. 23 KM –30 %. pends o peration 150 °C	PWB V mea on c n mc shou	with high he asured on 10. ircuit des ode. uld not be	at dissipation 9×10.0×6.0 m sign and exceeded	performance. nm case size. certain he	Note: Heat radiati See also (*5)
Ре	rformance Ch	aracteristics (R	eference							
	luctance vs DC (									
		QP5MR33YLC					ст	QP5MR68		
	0.4					0.7 г				
Ŧ					Ŧ	0.6				
μ) ę	0.3				μ)	0.5				
Inductance (µH)	0.2				0	0.4 0.3				
ucta					lota	0.2				
Indi	0.1				Indi	0.1				
	0.0					n n L				
	0 10 20	30 40 50 60 70	08 C			0.0	10	20 30	40 50	0 60
									·	
	1.2	QP5M1R0YLC			2.5	5 —	El	QP5M2R0	IYLC	
	1.0									
iductance (μH)	0.8				ductance (µH)					
JCe	0.6				e 1.5	5 –				
ctar					1.0 Star					
	0.4					_				
-	0.2									
	0.0 0 10 20	) 30 40 50	60		0.0	0	5 10 15	20 25 30	0 35 40 4	L] I5 50
		IDC (A)						IDC (A)		
	ET	QP6M1R5YLC					E	ETQP6M2F	R5YLC	
	2.0					<sup>3.0</sup>				
Î	1.5				Ĩ	2.5				
Inductance (µH)					Inductance (µH)	2.0				
anc	1.0				anc	1.5				
luct					luct	1.0				
lno	0.5				pul	0.5				
	0.0					0.0 L				
	0 5 10 15	20 25 30 35 40 4 Ibc (A)	45 50			0	10	20 Idc (A)	30	40
	FT	QP6M3R3YLC					FT	QP6M4R7		
	3.5					5			0	
Ŧ	3.0		—		Ŧ	4	$\rightarrow$	$ \downarrow \downarrow$		
) (µŀ	2.5		—		Inductance (µH)				$ \downarrow  $	
nce	2.0	+ $+$ $+$ $+$			Ince	3 -				
đ	1.5				lota	2				+
lot i	1.0				Indu	1				<u> </u>
Induct					_					- I - I
Inductance (µH)	0.5									
Induct	0.0	15 20 25 30 35 Ibc (A)	5 40			0	5 10	15 20 Ibc (A)		35 40

Design and specifications are each subject to change without notice. Ask factory for the current technical specifications before purchase and/or use. Should a safety concern arise regarding this product, please be sure to contact us immediately.

• Case Temperature vs DC Current

PWB condition A : Four-layer PWB (1.6 mm FR4), See also (\*2) PWB condition B : Multilayer PWB with high heat dissipation performance. See also (\*3)

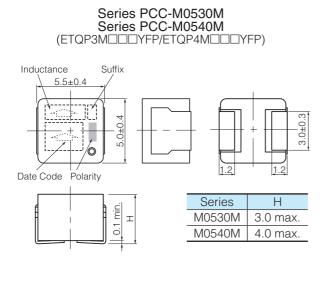




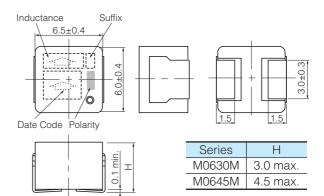
Design and specifications are each subject to change without notice. Ask factory for the current technical specifications before purchase and/or use. Should a safety concern arise regarding this product, please be sure to contact us immediately. 10

### Dimensions in mm (not to scale)

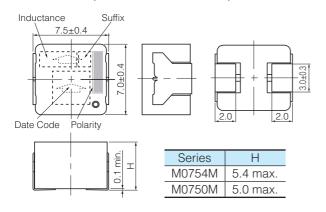
Dimensional tolerance unless noted : ±0.5



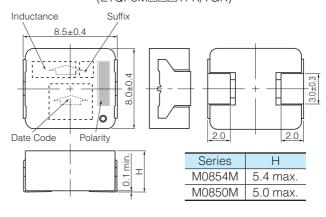
Series PCC-M0630M Series PCC-M0645M (ETQP3MDDDYFN/ETQP4MDDDYFN)



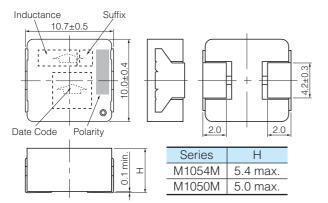
Series PCC-M0754M Series PCC-M0750M (ETQP5MDDDYFM/YGM)



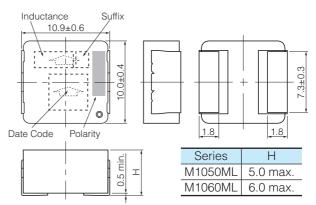
Series PCC-M0854M Series PCC-M0850M (ETQP5MDDDYFK/YGK)



#### Series PCC-M1054M Series PCC-M1050M (ETQP5MDDDYFC/YGC)



#### Series PCC-M1050ML Series PCC-M1060ML (ETQP5MDDJLC/ETQP6MDDJLC)



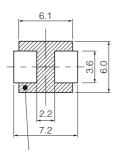
Design and specifications are each subject to change without notice. Ask factory for the current technical specifications before purchase and/or use. Should a safety concern arise regarding this product, please be sure to contact us immediately.

### Recommended Land Pattern in mm (not to scale)

Dimensional tolerance unless noted : ±0.5

Series PCC-M0530M

Series PCC-M0540M (ETQP3MUUUYFP/ETQP4MUUUYFP)



Don't wire on the pattern on shaded portion the PWB.

Series PCC-M0630M Series PCC-M0645M (ETQP3MUUUYFN/ETQP4MUUUYFN)

71

28

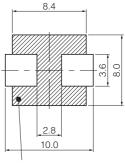
8.8

The same as the left

V

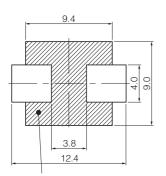
3.6 0

Series PCC-M0754M Series PCC-M0750M (ETQP5MDDDYFM/YGM)



The same as the left.

Series PCC-M0854M Series PCC-M0850M (ETQP5MDDYFK/YGK)



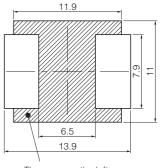
Don't wire on the pattern on shaded portion the PWB

#### Series PCC-M1054M Series PCC-M1050M (ETQP5MDDYFC/YGC)

11.7 4.0 6.1 13.7 The same as the left

Series PCC-M1050ML Series PCC-M1060ML

 $(ETQP5M \square \square YLC/ETQP6M \square \square YLC)$ 



The same as the left.

■ As for Packaging Methods, Soldering Conditions and Safety Precautions (Power Choke Coils for Automotive application),

Please see Data Files