ETQ-P6F3R5SFA Datasheet

https://www.DiGi-Electronics.com

DiGi Electronics Part Number	ETQ-P6F3R5SFA-DG
Manufacturer	Panasonic Electronic Components
Manufacturer Product Number	ETQ-P6F3R5SFA
Description	FIXED IND 3.5UH 9.3A 6.48MOHM SM
Detailed Description	3.5 µH Shielded Inductor 9.3 A 6.48mOhm Max 2-SMD, J-Lead

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RFQ Email: Info@DiGi-Electronics.com

Purchase and inquiry

Manufacturer Product Number:	Manufacturer:
ETQ-P6F3R5SFA	Panasonic Electronic Components
Series:	Product Status:
PCC-F126F (N6)	Obsolete
Type:	Material - Core:
-	Ferrite
Inductance:	Tolerance:
3.5 µH	±30%
Current Rating (Amps):	Current - Saturation (Isat):
9.3 A	9.5A
Shielding:	DC Resistance (DCR):
Shielded	6.48mOhm Max
Q @ Freq:	Frequency - Self Resonant:
-	-
Ratings:	Operating Temperature:
-	-
Inductance Frequency - Test:	Mounting Type:
100 kHz	Surface Mount
Package / Case:	Supplier Device Package:
2-SMD, J-Lead	-
Size / Dimension:	Height - Seated (Max):
0.492" L x 0.492" W (12.50mm x 12.50mm)	0.224" (5.70mm)
Base Product Number:	
ETQ-P6	

Environmental & Export classification

Moisture Sensitivity Level (MSL):	ECCN:
1 (Unlimited)	EAR99
HTSUS:	
8504.50.4000	

Panasonic

Choke Coils

Power Choke Coil **Discontinued**

Series: **PCC-F126F (N6)**

Thin, compact and high power

■ Features

- High power (Isat 20 A /100 °C)
- Thin profile (5.7 mm height)/SMD
- Low leakage flux
- RoHS compliant

■ Recommended Applications

- DC-DC converter for driving PCs at high speed
- On-board power supply module for DC-DC converters (10 to 40 W)

■ Standard Packing Quantity

- 500 pcs./Reel

■ Explanation of Part Numbers

1	2	3	4	5	6	7	8	9	10	11	12
E	T	Q	P		F						
Product code			Classification	Size	Winding	Inductance			Core	Packaging	Suffix

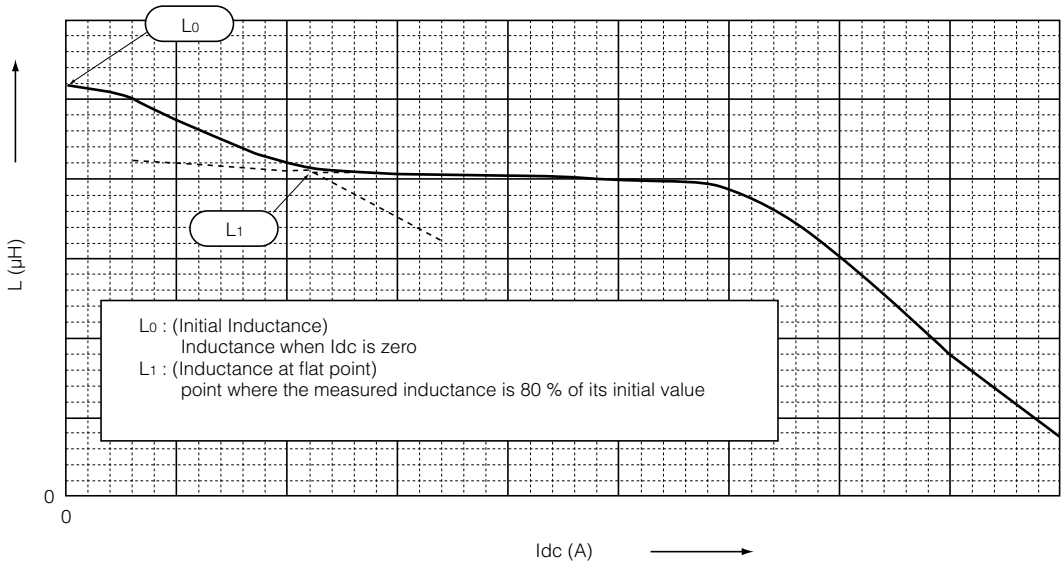
■ Standard Parts

Parts No.	Type	Initial inductance at 25 °C		Inductance at flat point at 25 °C		Saturation current		Heat current ΔT=40 °C	DC resistance at 20 °C
						at 25 °C	at 100 °C		
		L_0 (μH)	Tol. (%)	L_1 (μH)	Tol. (%)	I sat (A) min.	I sat (A) min.	I_0 (A)	R_{DC} (mΩ) max.
ETQP6F1R2HFA	HL	2.3	±30	1.2	±30	14.3	11.7	14.2	2.24
ETQP6F2R0HFA		3.5		2.0		10.7	8.7	12.5	3.30
ETQP6F3R2HFA		4.8	±25	3.2	±25	8.6	7.1	10.8	4.92
ETQP6F4R6HFA		6.6		4.6		7.3	6.0	9.3	6.48
ETQP6F6R4HFA		8.3		6.4		6.2	5.2	7.9	8.64
ETQP6F8R2HFA		10.4		8.2		6.0	5.0	7.2	10.90
ETQP6F102HFA		12.5		10.2		4.7	4.0	6.5	13.30
ETQP6F1R0SFA	SP	1.9	±30	1.0	±30	19.4	15.4	14.2	2.24
ETQP6F1R6SFA		2.8		1.6		14.9	12.2	12.5	3.30
ETQP6F2R5SFA		3.6		2.5		11.3	9.3	10.8	4.92
ETQP6F3R5SFA		4.9		3.5		9.5	8.0	9.3	6.48
ETQP6F0R8LFA	LB	1.8		0.8		25.2	20.0	14.2	2.24
ETQP6F1R3LFA		2.5		1.3		18.6	15.8	12.5	3.30
ETQP6F2R0LFA		3.1		2.0		15.1	12.1	10.8	4.92
ETQP6F2R9LFA		4.1		2.9		12.0	10.0	9.3	6.48
ETQP6F4R1LFA		5.0	±20	4.1	±20	10.8	8.7	7.9	8.64

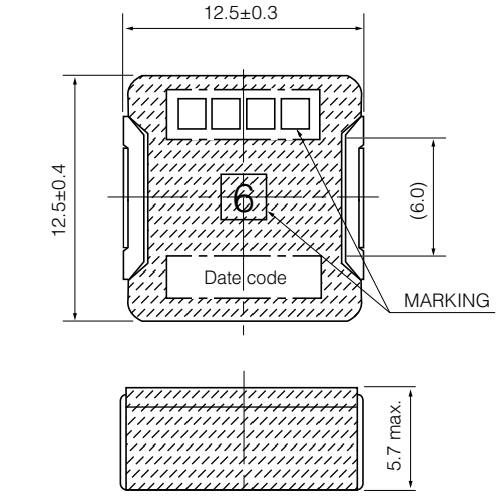
(Note1) Inductance is measured at 100 kHz
(Note2) For definitions of L_0 & L_1 please see the next page
(Note3) Saturation current (I sat) is the current value that inductance (L1) decreases to 80 % of initial value.
(Note4) Heat current (I_0) is the actual value of the current at which the temperature rise of the coil becomes 40 dc from its initial (ambient temperature) value.
The case temperature of the power choke coil is determined by the ambient temperature plus the heat generated by the operating current.

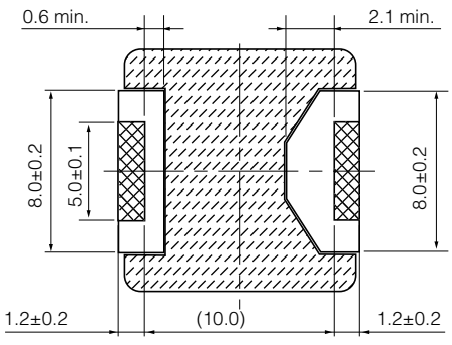
■ Figure 1: L_0,L_1:Definition

DC Bias Characteristic

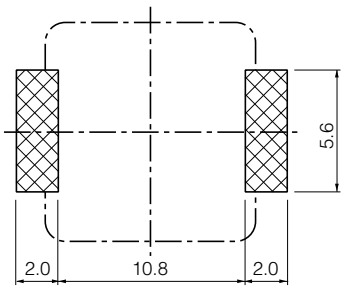


■ Figure 2: Dimensions in mm (not to scale)

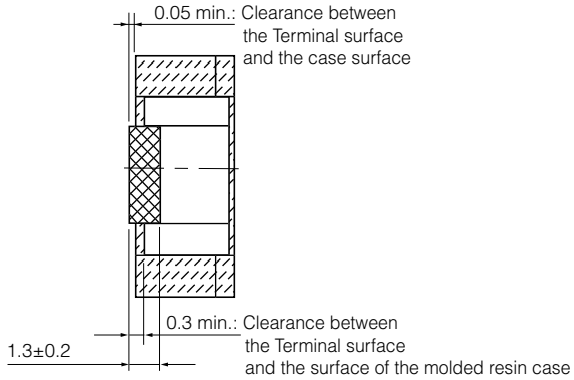




■ Recommended Land Pattern in mm (not to scale)



( ) : Reference value

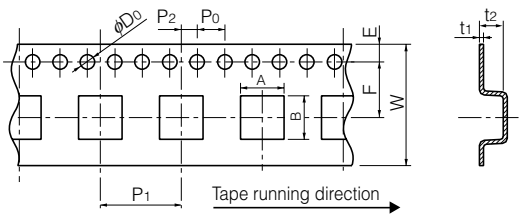


■ Packaging Methods, Soldering Conditions and Safety Precautions (Power Choke Coils for Consumer use)

Please see Data Files

■ Packaging Methods (Taping)

● Embossed Carrier Tape Dimensions in mm (not to scale)



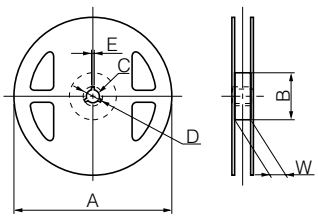
Power Choke Coils for high reliability use

Series	A	B	W	E	F	P_1	P_2	P_0	ϕD_0	t_1	t_2
PCC-M0530M	5.6	6.1	16.0	1.75	7.5	12.0	2.0	4.0	1.5	0.4	3.3
PCC-M0540M											4.3
PCC-M0630M	7.1	6.6									3.3
PCC-M0645M											5.0
PCC-M0754M	8.1	7.6									6.0
PCC-M0854M/M0850M	9.1	8.6									
PCC-M1054M/M1050M PCC-M1050ML/M1060ML	10.7	11.9	24.0		11.5	16.0				0.5	6.3

Power Choke Coils for consumer use

Series	A	B	W	E	F	P_1	P_2	P_0	ϕD_0	t_1	t_2
PCC-M0512W	5.6	5.85	12.0	1.75	5.5	8.0	2.0	4.0	1.5	0.4	1.4
PCC-M0630L	7.1	8.0	16.0		7.5	12.0					3.2
PCC-M0630W	7.2	7.5									3.3
PCC-M0730L	7.6	8.9									4.2
PCC-M074L	7.6	8.9									4.3
PCC-M104W	10.6	11.0	24.0		11.5	16.0					
PCC-M104L	10.6	11.8									5.2
PCC-M125L	13.1	14.8									5.3
PCC-D124H	13.5	13.5									5.2
PCC-D125H											
PCC-D126H											6.2
PCC-D126F	13.0	13.0									6.0
PCC-F126F											

● Taping Reel Dimensions in mm (not to scale)



Power Choke Coils for high reliability use

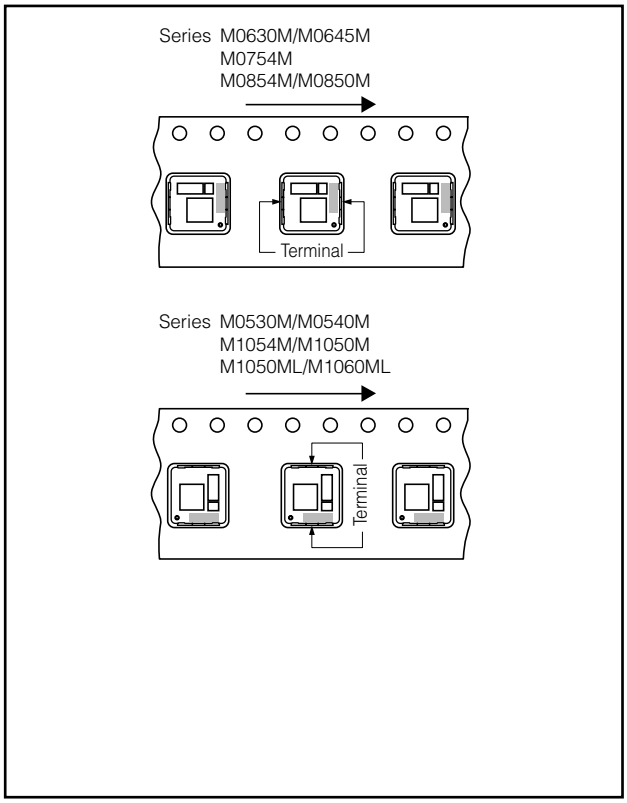
Series	A	B	C	D	E	W
PCC-M0530M/M0540M PCC-M0630M/M0645M PCC-M0754M PCC-M0854M/M0850M	330	100	13	21	2	17.5
PCC-M1054M/M1050M PCC-M1050ML/M1060ML						25.5

Power Choke Coils for consumer use

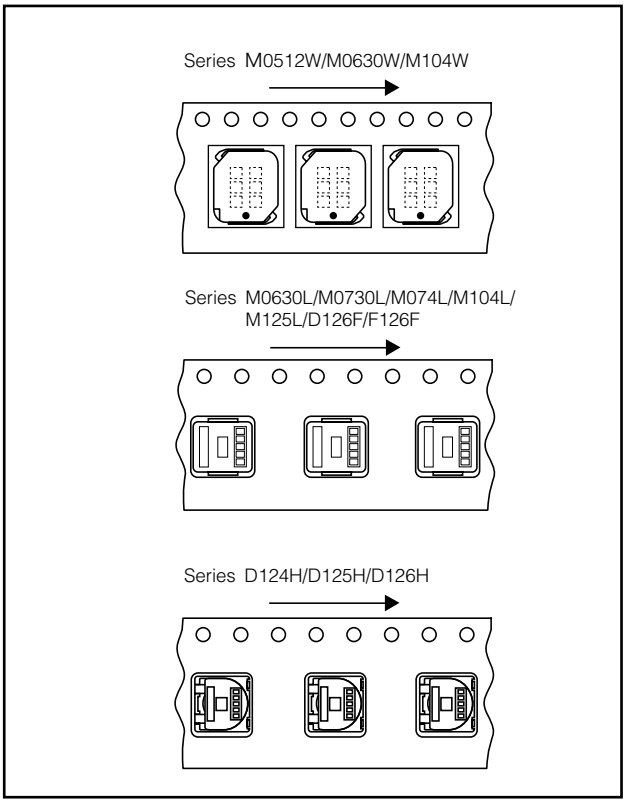
Series	A	B	C	D	E	W
PCC-M0512W	330	(80)	13	21	2	13.5
PCC-M0630L/M0630W		80				17.5
PCC-M104W						25.5
PCC-M0730L/M074L	380					17.5
PCC-M104L						25.4
PCC-M125L/D124H/D125H/ D126H/D126F/F126F						

■ Component Placement (Taping)

● Power Choke Coils for high reliability use



● Power Choke Coils for consumer use



■ Standard Packing Quantity/Reel

● Power Choke Coils for high reliability use

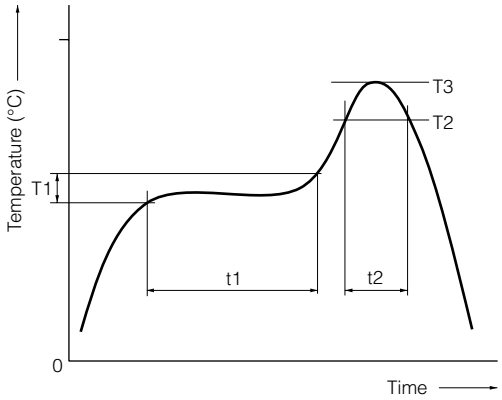
Series	Minimum Quantity / Packing Unit	Quantity per reel
PCC-M0530M/M0540M	2000 pcs. / box (2 reel)	1000 pcs.
PCC-M0630M		
PCC-M0645M	1000 pcs. / box (2 reel)	500 pcs.
PCC-M0754M		
PCC-M0854M/M0850M		
PCC-M1054M/M1050M		
PCC-M1050ML/M1060ML		

● Power Choke Coils for consumer use

Series	Minimum Quantity / Packing Unit	Quantity per reel
PCC-M0512W	6000 pcs. / box (2 reel)	3000 pcs.
PCC-M0730L	3000 pcs. / box (2 reel)	1500 pcs.
PCC-M074L		
PCC-M0630L	2000 pcs. / box (2 reel)	1000 pcs.
PCC-M0630W		
PCC-M104L		
PCC-M104W	1000 pcs. / box (2 reel)	500 pcs.
PCC-M125L		
PCC-D124H		
PCC-D125H		
PCC-D126H		
PCC-D126F		
PCC-F126F		

Soldering Conditions

■ Reflow soldering conditions



● Pb free solder recommended temperature profile

Power Choke Coils for high reliability use

Series	Preheat		Soldering		Peak Temperature		Time of Reflow
	T1 [°C]	t1 [s]	T2 [°C]	t2 [s]	T3	T3 Limit	
PCC-D1413H PCC-M0530M/M0540M PCC-M0630M/M0645M PCC-M0754M PCC-M0854M/M0850M PCC-M1054M/M1050M PCC-M1050ML/M1060ML	150 to 170	60 to 120	230 °C	30 to 40	250 °C, 5 s	260 °C, 10 s	2 times max.

Power Choke Coils for consumer use

Series	Preheat		Soldering		Peak Temperature		Time of Reflow
	T1 [°C]	t1 [s]	T2 [°C]	t2 [s]	T3	T3 Limit	
PCC-M0512W PCC-M0630L PCC-M0630W PCC-M0730L PCC-M074L PCC-M104L PCC-M104W PCC-M125L PCC-D124H PCC-D125H PCC-D126H PCC-D126F PCC-F126F	150 to 170	60 to 120	230 °C	30 to 40	250 °C, 5 s	260 °C, 10 s	2 times max.

⚠ Safety Precautions
(Common precautions for Power Choke Coils for consumer use)

- When using our products, no matter what sort of equipment they might be used for, be sure to make a written agreement on the specifications with us in advance. The design and specifications in this catalog are subject to change without prior notice.
- Do not use the products beyond the specifications described in this catalog.
- This catalog explains the quality and performance of the products as individual components. Before use, check and evaluate their operations when installed in your products.
- Install the following systems for a failsafe design to ensure safety if these products are to be used in equipment where a defect in these products may cause the loss of human life or other significant damage, such as damage to vehicles (automobile, train, vessel), traffic lights, medical equipment, aerospace equipment, electric heating appliances, combustion/gas equipment, rotating equipment, and disaster/crime prevention equipment.

✻ Systems equipped with a protection circuit and a protection device
✻ Systems equipped with a redundant circuit or other system to prevent an unsafe status in the event of a single fault

⚠ Precautions for use

1. Provision to abnormal condition
This power choke coil itself does not have any protective function in abnormal condition such as overload, short-circuit and open-circuit conditions, etc.
Therefore, it shall be confirmed as the end product that there is no risk of smoking, fire, dielectric withstand voltage, insulation resistance, etc. in abnormal conditions to provide protective devices and/or protection circuit in the end product.

2. Temperature rise
Temperature rise of power choke coil depends on the installation condition in end products. It shall be confirmed in the actual end product that temperature rise of power choke coil is in the limit of specified temperature class.

3. Dielectric strength
Dielectric withstanding test with higher voltage than specific value will damage Insulating material and shorten its life.

4. Water
This Power choke coil must not be used in wet condition by water, coffee or any liquid because insulation strength becomes very low in the condition.

5. Potting
If this power choke coil is potted in some compound, coating material of magnet wire might be occasionally damaged. Please ask us if you intend to pot this power choke coil.

6. Detergent
Please consult our company in case of this because the confirmation of reliablility etc. is needed when the washing is used for the power choke coil.

7. Storage temperature
-5 °C to +35 °C

8. Operating temperature
Minimum temperature : -40 °C(Ambient temperature of the power choke coil)
Maximum temperature : 130 °C(Ambient temperature of the power choke coil plus the temperature rise)
100 °C(Only series : PCC-F126F(N6))

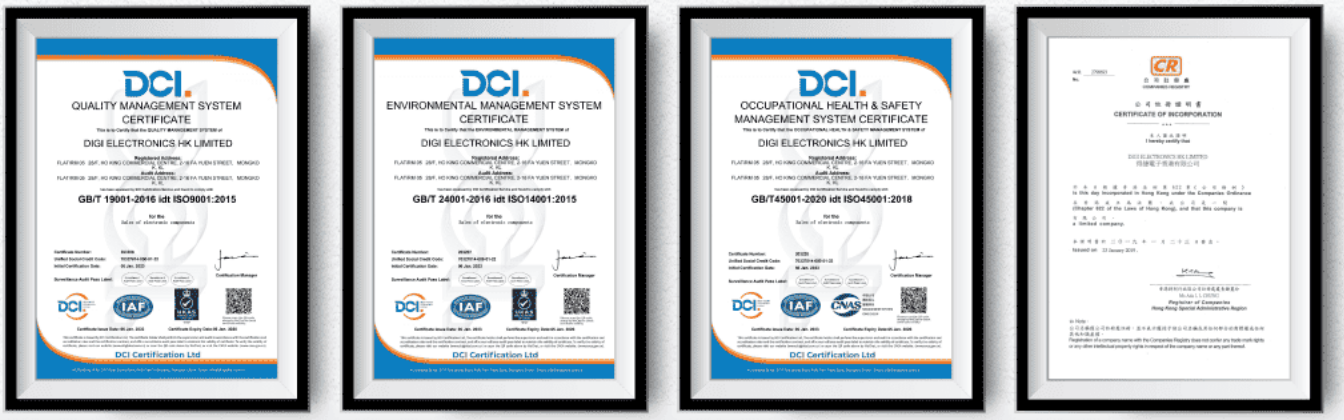
9. Model
When this power choke coil was used in a similar or new product to the original one, sometimes it might be unable to satisfy the specifications due to difference of condition of usage.
Please ask us if you would use this power choke coil in the manner such as above.

10. Drop
If the power choke coil suffered mechanical stress such as drop, characteristics may become poor (due to damage on coil bobbin, etc.). Never use such stressed power choke coil.

<Package markings>
Package markings include the product number, quantity, and country of origin.
In principle, the country of origin should be indicated in English.

OUR CERTIFICATE

DiGi provide top-quality products and perfect service for customer worldwide through standardization, technological innovation and continuous improvement. DiGi through third-party certification, we striciy control the quality of products and services. Welcome your RFQ to Email: Info@DiGi-Electronics.com



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