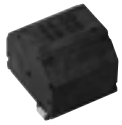
Power Choke Coil for Automotive application

Series: **PCC-D1413H (DUST)**



Realize high heat resistance, low loss and high reliability with dust core (DUST)

Industrial Property : patents 5 (Pending)

■ Features

- High heat resistance : Operation up to 150 °C
- SMD and small package : L×W×T=14.7×13.2×13.1 mm
- High-reliability : High vibration resistance due to newly developed integral construction and severe reliability condition of automotive application is covered
- High bias current : Excellent inductance stability by using ferrous alloy magnetic material
- High Vibration proof : 5 Hz to 2 kHz/30 G
- High efficiency : Achieve by Low loss Dust core and Edgewise coil with rectangular wire
- AEC-Q200 qualified
- RoHS compliant

■ Recommended Applications

- Driver circuits of fuel injection systems in automotive, driver circuits of diesel common rail injection, step-up power supplies for motor driver-circuits

■ Standard Packing Quantity

- 600 pcs./10 Tray

■ Explanation of Part Numbers

1	2	3	4	5	6	7	8	9	10	11	12
E	T	Q	P		H				D		
Product Code			Classification	Height	Winding	Inductance			Core	Suffix	Size

■ Temperature rating

Operating temperature range		Tc : -40 °C to +150 °C(Including self-temperature rise)
Storage condition	After PWB mounting	
	Before PWB mounting	Ta : -5 °C to +35 °C 85%RH max.

■ Standard Parts

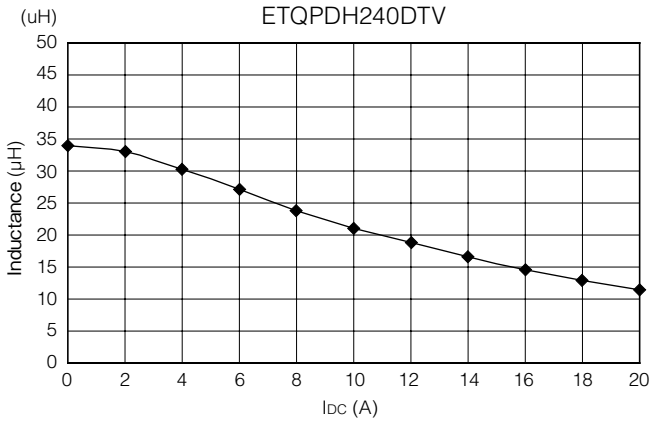
Part No.	Inductance *1		DCR	ACR	Rated Current *3
	L0 at 0A (μH)	L1 at 10A (μH)	at 20 °C (mΩ)	at 20 kHz (mΩ)	△T=40K (A)
ETQPDH240DTV	36.0±30%	(24.0) *2	25.8 typ.	50.0 typ.	6.9

(*1) Measured at 100 kHz.
(*2) Reference Only.
(*3) 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.

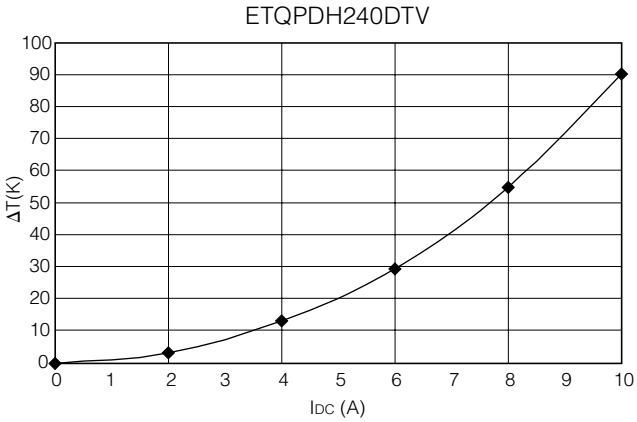
✻ Within a suitable application, the part's temperature depends on circuit design and certain heat dissipation conditions. This should be double checked in a worst case operation mode.
In normal case, the max. standard operating temperature of +150 °C should not be exceeded.
For higher operating temperature conditions, please contact Panasonic representative in your area.

■ Performance Characteristics (Reference)

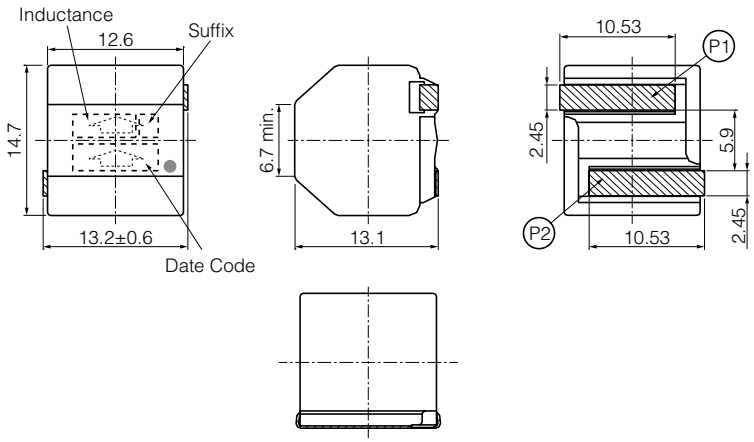
● Inductance vs DC Current



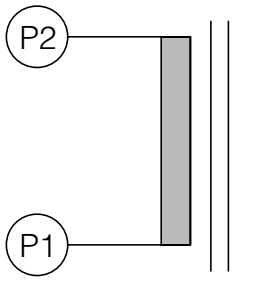
● Case Temperature vs DC Current



■ Dimensions in mm (not to scale)
Dimensional tolerance unless noted : ±0.5

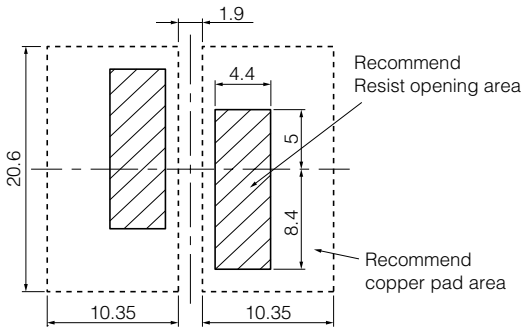


■ Connection



✻ None polar character

■ Recommended Land Pattern in mm (not to scale)
Dimensional tolerance unless noted : ±0.5

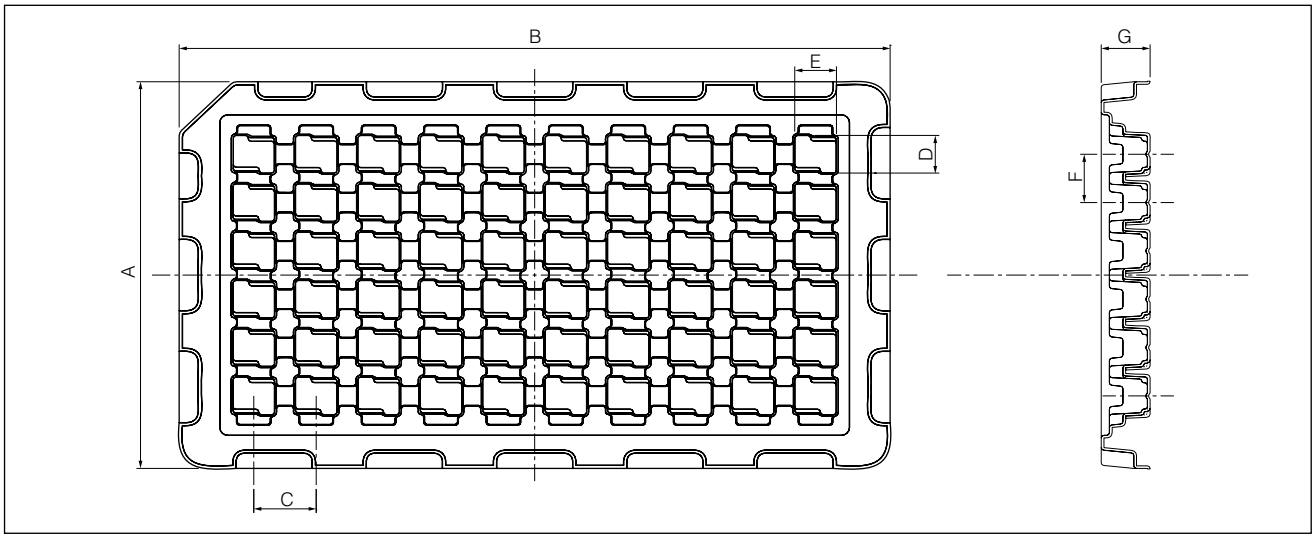


✻ Due to bigger part, Thermal Capacity is large and may occure PWB temperature differences during reflow process.
Recommended land pattern (Heat absorb) should be designed with reflow mountablity.

■ Soldering Conditions and Safety Precautions (Common precautions for Power Choke Coils for high reliability use)
Please see Data Files

■ Packaging Methods (Tray)

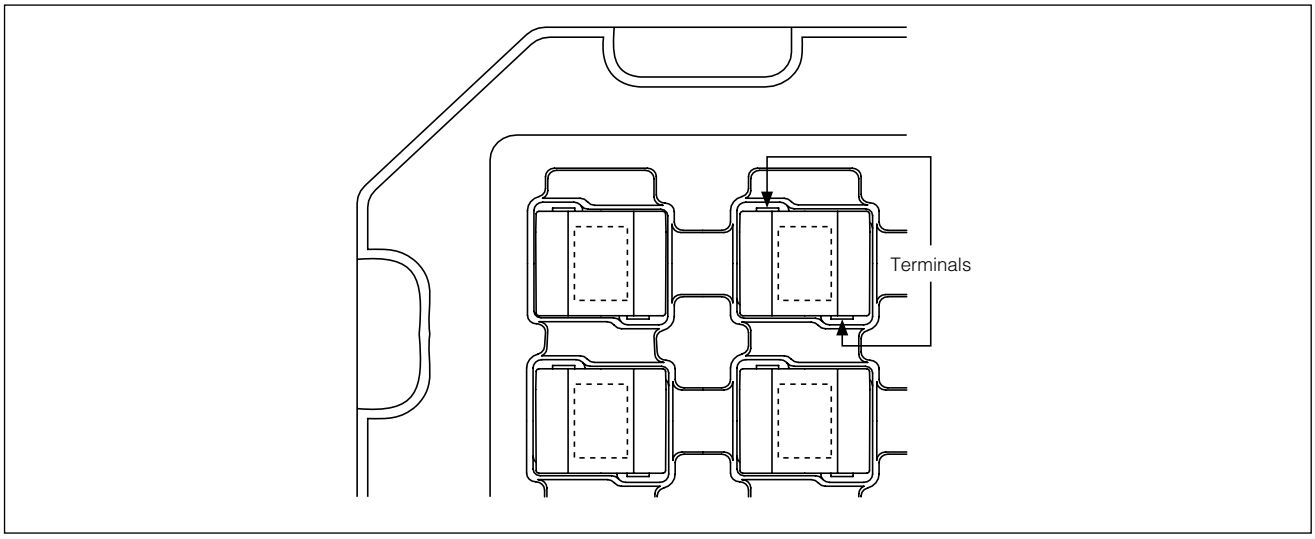
● Blister Tray (mm) 60 pcs.



Blister Tray Dimention

Part No.	A	B	C	D	E	F	G
ETQPDH240DTV	152	262	23	14.8	15.1	19	18

■ Component Placement (Tray)



■ Standard Packing Quantity/Tray

Part No.	Quantity
ETQPDH240DTV	600 pcs. /10 Tray (60 pcs. /1 Tray)