

## Inductors

## MDWK4040TR33NM



## ■ Features

- Item Summary  
0.33uH±30%, 7.8A, 4.0x4.0x2.0mm
- Lifecycle Stage  
New PN available
- Standard packaging quantity (minimum)  
Taping Embossed 700pcs

## ■ Products characteristics table

Inductance	0.33 uH ± 30 %
Case Size (mm)	4.0x4.0
Rated Current (max)	7.8 A
Saturation Current (max)	16 A ( $\Delta L=30\%$ )
Saturation Current (typ)	21 A ( $\Delta L=30\%$ )
Temperature Rise Current (max)	7.8 A ( $\Delta T=40^\circ\text{C}$ )
Temperature Rise Current (typ)	8.8 A ( $\Delta T=40^\circ\text{C}$ )
DC Resistance (max)	13 m $\Omega$
DC Resistance (typ)	11 m $\Omega$
LQ Measuring Frequency	1 MHz
Operating Temp. Range	-40 to +125 °C (Including-self-generated heat)
Temperature characteristic (Inductance change)	± 10 %
RoHS Compliance (10 subst.)	Yes
REACH Compliance (223 subst.)	Yes
Halogen Free	Yes
Soldering	Reflow

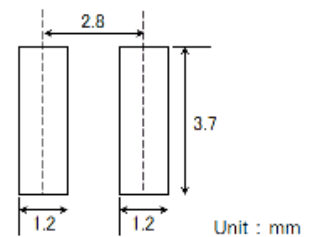
## ■ External Dimensions

Dimension L	4.0 ± 0.2 mm
Dimension W	4.0 ± 0.2 mm
Dimension H	Max 2.0 mm
Dimension e	1.1 ± 0.2 mm
Dimension f	2.5 ± 0.2 mm

## ■ Recommended Land Patterns

【推奨のランドパターン】  
 二層基板の場合  
 ・銅箔の厚さを0.03mm以上とし、銅箔の厚さを0.03mm以上とし、  
 ・銅箔の厚さを0.03mm以上とし、銅箔の厚さを0.03mm以上とし、

【Recommend Land Pattern】  
 Surface Mounting  
 ・High temperature reflow soldering is recommended.  
 ・Apply the soldering process to these products in reflow soldering.



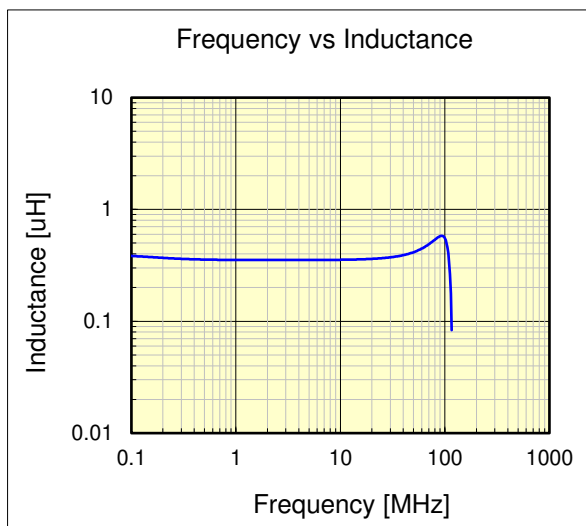
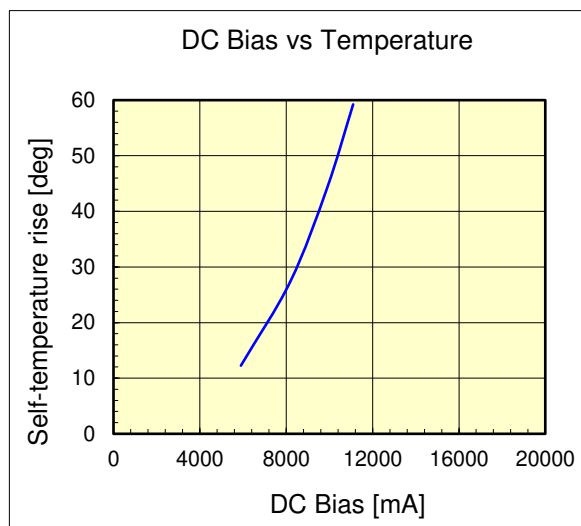
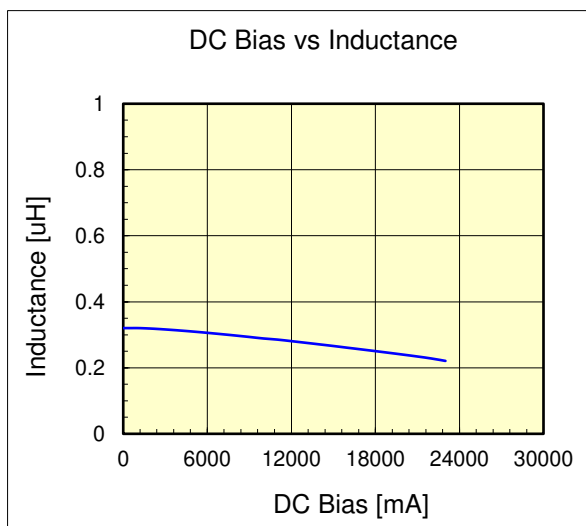
**Metal Core SMD Power Inductors (MCOIL™, MD series)**

MCOIL™  
MDWK4040TR33NM



Dimension	unit : mm	unit : inch
Length :	4.0 +/- 0.2	( 0.157 +/- 0.008 )
Width :	4.0 +/- 0.2	( 0.157 +/- 0.008 )
Height :	2.0 max.	( 0.079 max. )

Inductance :	0.33	uH	( test freq at 1MHz )
DC Resistance :	0.011 / 0.013	ohm	( typ / max )
Saturation Current :	21,000 / 16,000	mA	( typ / max )
Temp. rise Current :	8,800 / 7,800	mA	( typ / max )
Saturation current typical : 30% reduction from initial L value.			
Temp rise Current typical : Temperature will rise by 40 deg C			



The data is reference only. Electrical characteristics vary depending on environment or measurement condition. TAIYO YUDEN reserves the right to make change to the data at any time without notice. Before making final selection, please check product specification.

Please read this notice before using the TAIYO YUDEN products.



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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).  
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.  
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