

IDF Series

SMT Unshielded Power Inductors – IDF73, IDF75

TRIGON
COMPONENTS



FEATURES

- Low profile (3.5mm height and 7.4mm Width max.)
- For large current.
- Fit for power line & signal line circuit.
- To help you go pass the CE/FCC standard.
- RoHS Compliant.

APPLICATION

- Notebook, Portable communication equipment, DC/DC converters, etc.
- Mobiles Device / Handheld Device / LowProfile Device / Panel...

ORDERING CODE

IDF73 **M** **220** **T**
(1) (2) (3) (4)

(1) SMT Unshielded Power Inductors

IDF73
IDF75

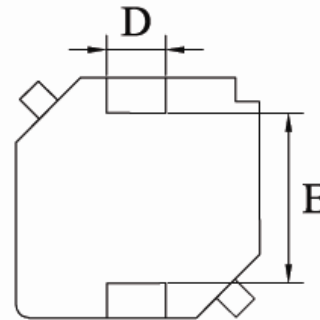
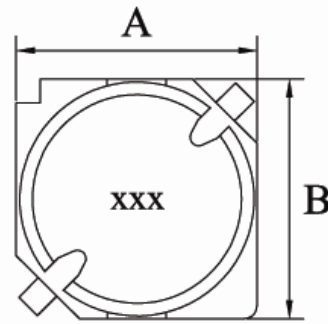
(2) Tolerance Code:
K: 10%, L: 15%, M: 20%
N: 30%

(3) Inductance: uH

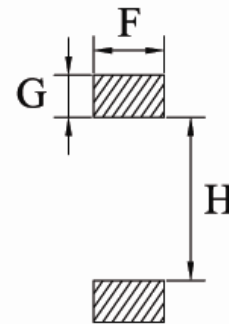
(4) Package

※Please refer to complete Ordering Code document (IDF-Ord) for more ordering options.

Configurations:



Land Pattern



Dimension (mm)

Item	A (max)	B (max)	C (max)	D ±0.2	E (max)	F	G	H
IDF73	7.4	7.4	3.5	2.0	5.4	3.0	2.0	4.4
IDF75	7.4	7.4	5.1	2.0	5.4	3.0	2.0	4.4

※Design as Customer's Requested Specifications.

Inductance Range

Item	μH
IDF73	1.00 ~ 100.00
IDF75	1.00 ~ 1000.00

Inductor

IDF Series

SMT Unshielded Power Inductors – IDF73

Electrical Characteristics for IDF73 Series

Part Number	Inductance (μH)	Test Freq. (KHz)	DCR (Ω) (max)	IDC (A) (max)
IDF73M1R0	1.00	1	0.022	2.88
IDF73M1R5	1.50	1	0.026	2.67
IDF73M2R2	2.20	1	0.032	2.40
IDF73M3R3	3.30	1	0.041	2.08
IDF73M4R7	4.70	1	0.049	1.92
IDF73M6R8	6.80	1	0.067	1.60
IDF73M100	10.00	1	0.085	1.41
IDF73M120	12.00	1	0.100	1.28
IDF73M150	15.00	1	0.130	1.12
IDF73M180	18.00	1	0.160	1.00
IDF73M220	22.00	1	0.180	0.93
IDF73M270	27.00	1	0.240	0.80
IDF73M330	33.00	1	0.290	0.72
IDF73M390	39.00	1	0.340	0.66
IDF73M470	47.00	1	0.410	0.59
IDF73M560	56.00	1	0.480	0.55
IDF73M680	68.00	1	0.600	0.49
IDF73M820	82.00	1	0.710	0.44
IDF73M101	100.00	1	0.950	0.38

※Test Freq.: 1KHz / 0.25V

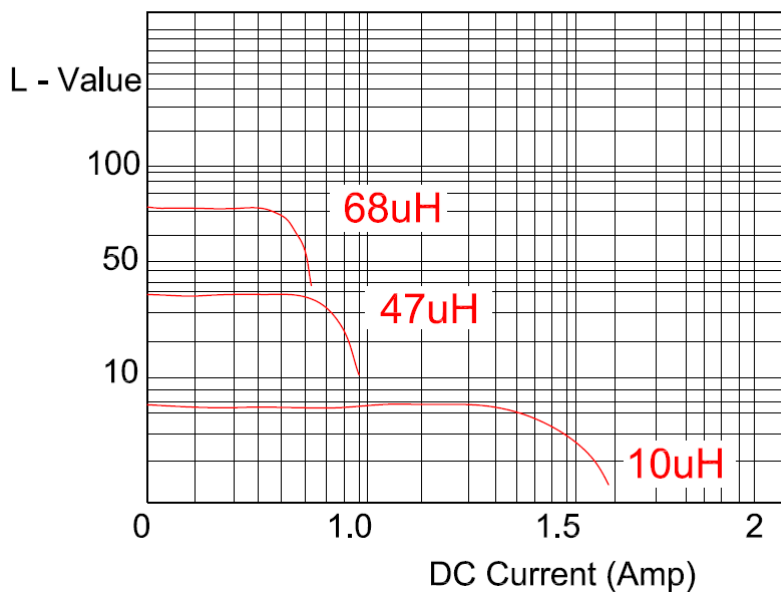
※Operating Temp. : -40°C ~ +85°C

※Inductance drop = 10% typ. at IDC.

Inductor

IDF73 series

L v.s Rated DC Current Curve



IDF Series

SMT Unshielded Power Inductors – IDF75

Electrical Characteristics for IDF75 Series

Part Number	Inductance (μ H)	Test Freq. (KHz)	DCR (Ω) (max)	IDC (A) (max)
IDF75M1R0	1.00	1	0.023	2.880
IDF75M1R5	1.50	1	0.028	2.560
IDF75M2R2	2.20	1	0.032	2.360
IDF75M2R7	2.70	1	0.035	2.360
IDF75M3R3	3.30	1	0.038	2.160
IDF75M3R9	3.90	1	0.042	2.160
IDF75M4R7	4.70	1	0.049	1.880
IDF75M5R6	5.60	1	0.055	1.880
IDF75M6R8	6.80	1	0.060	1.680
IDF75M8R2	8.20	1	0.067	1.680
IDF75M100	10.00	1	0.070	1.560
IDF75M120	12.00	1	0.080	1.440
IDF75M150	15.00	1	0.090	1.360
IDF75M180	18.00	1	0.100	1.280
IDF75M220	22.00	1	0.120	1.170
IDF75M270	27.00	1	0.140	1.070
IDF75M330	33.00	1	0.160	1.000
IDF75M390	39.00	1	0.190	0.910
IDF75M470	47.00	1	0.220	0.840
IDF75M560	56.00	1	0.290	0.720
IDF75M680	68.00	1	0.340	0.660
IDF75M820	82.00	1	0.460	0.580
IDF75M101	100.00	1	0.550	0.510
IDF75M121	120.00	1	0.670	0.420
IDF75M151	150.00	1	0.900	0.370
IDF75M181	180.00	1	1.050	0.350
IDF75M221	220.00	1	1.350	0.290
IDF75M271	270.00	1	1.550	0.280
IDF75M331	330.00	1	2.050	0.230
IDF75M391	390.00	1	2.300	0.215
IDF75M471	470.00	1	2.600	0.195
IDF75M561	560.00	1	2.900	0.185
IDF75M681	680.00	1	3.400	0.170
IDF75M821	820.00	1	4.200	0.165
IDF75M102	1000.00	1	5.390	0.150

※Test Freq.: 1KHz / 0.25V.

※Operating Temp. : -40°C ~ +85°C

※Inductance drop = 10% typ. at IDC.

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TRIGON
COMPONENTS

Test Equipment:

- ※ HP4284A, HP42841A-L, IDC, Q.RDC
- ※ HP8753D NETWORK ANALYZER- SRF

Standard Atmospheric Conditions:

Ambient Temp: 20+/-15°C

Relative Humidity: 60+/-20%

If there may be any doubt on the result, measurement shall be made within the following limits:

Ambient Temp: 25+/-5°C

Relative Humidity: 75+/-10%

Operating & Storage Condition:

Operating Temp: -40°C ~+85°C

Storage Temp: -40°C ~+85°C

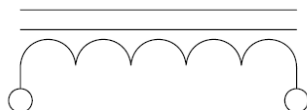
Storage Life Time: 12 Month @25°C, RH 65%

Attention & Caution:

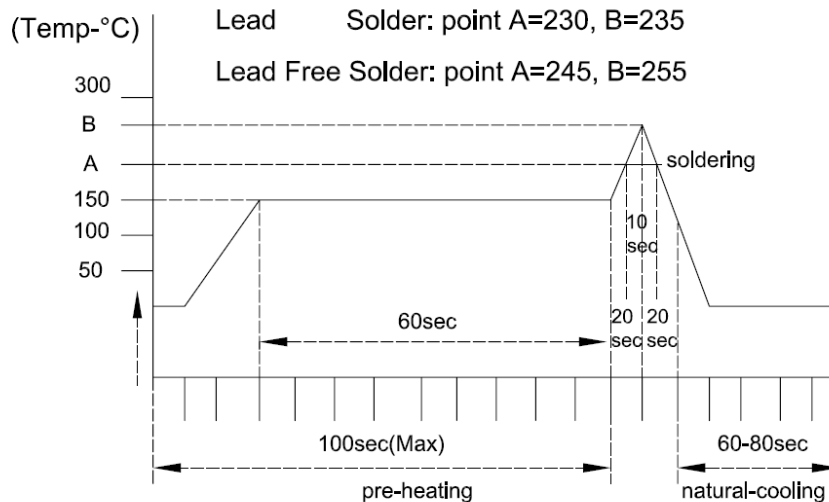
Please avoid following matters:

- ※ Splashing water or salt water
- ※ Toxic Gas (Hydrogen sulfide, Sulfurous acid, Chlorine, Ammonia)
- ※ Vibrations or shocks which exceed the specified condition
- ※ Dew Condenses
- ※ Please be careful for the stress to this product by board flexure or something after the mounting.

SCHEMATIC:



Recommand Reflow Curve (Time: Second)



Notice: Iron Soldering: 3Seconds Max @260°C

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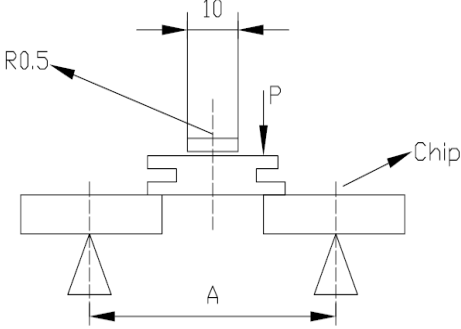
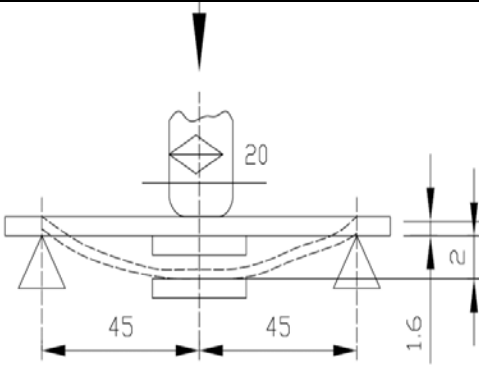
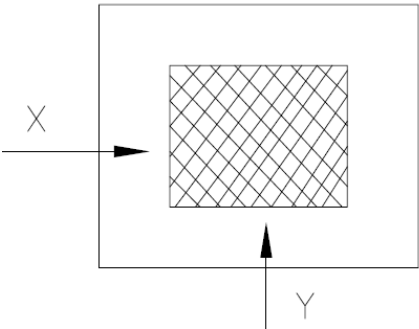
TRIGON
COMPONENTS

NO	ITEM	TEST CONDITIONS	Sample Qty/pcs	Spec	Test Day Time	Modify Day	Result																
1	Dimension	Actual Size...	10	Meet spec	90/07/12 ~ 90/07/12		OK																
2	Thermal Shock (Temperature Cycle)	Temperature: -20°C/+85°C kept stabilized for 30 minutes each Cycle: 100 Cycles(power off)	10	Elec. No variation Appearance No deformation	90/07/12 ~ 90/07/18		OK																
3	Humidity Resistance	Humidity: 90%~95% RH Temperature: 40±2°C Test Time: 120±2 Hours	10	Elec. No variation Appearance No deformation	90/07/12 ~ 90/07/18		OK																
4	High Temperature	Temperature: 85±2°C Humidity: 20% Test Time: 120±2 Hours	10	Elec. No variation Appearance No deformation	90/07/12 ~ 90/07/18		OK																
5	Low Temperature	Temperature: -20±2°C Time: 120±2 Hours	10	Elec. No variation Appearance No deformation	90/07/12 ~ 90/07/18		OK																
6	Temperature and Humidity Cycle	<table border="1"> <thead> <tr> <th>Step</th> <th>Temp</th> <th>Humidity</th> <th>Time</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>25±2°C</td> <td>95~100% RH</td> <td>3.0Hr</td> </tr> <tr> <td>2</td> <td>55±2°C</td> <td>95~96% RH</td> <td>9.5Hr</td> </tr> <tr> <td>3</td> <td>25±2°C</td> <td>95~100% RH</td> <td>9.5Hr</td> </tr> </tbody> </table>	Step	Temp	Humidity	Time	1	25±2°C	95~100% RH	3.0Hr	2	55±2°C	95~96% RH	9.5Hr	3	25±2°C	95~100% RH	9.5Hr	10	Elec. No variation Appearance No deformation	90/07/12 ~ 90/07/19		OK
Step	Temp	Humidity	Time																				
1	25±2°C	95~100% RH	3.0Hr																				
2	55±2°C	95~96% RH	9.5Hr																				
3	25±2°C	95~100% RH	9.5Hr																				
7	Vibration	Frequency: 10Hz~55Hz Amplitude: 1.5mm Direction: X,Y,Z Time: 2 Hours each	10	Elec. No variation Appearance No deformation	90/07/12 ~ 90/07/16		OK																
8	Dipping Verification	Temp Control Solder @ Temp 230±5°C / 3sec Dipping area must be more than 75%	10	Elec. No variation Appearance No deformation	90/07/12 ~ 90/07/12		OK																
9	IR Reflow Soldering	Go through real SMT IR-Reflow... Solder Temp.: 230±5 Time: 90sec. Cycle: x 1	10	Elec. No variation Appearance No deformation	90/07/12 ~ 90/07/12		OK																
10	Soldering Heat Resistance	Preheat: 120~150°C (6sec) Solder: H63A (eutectic solder) Solder Temp.: 260±5°C Flux: Rosin Dip time: 10±1 seconds	10	Elec. No variation Appearance No deformation	90/07/12 ~ 90/07/12		OK																

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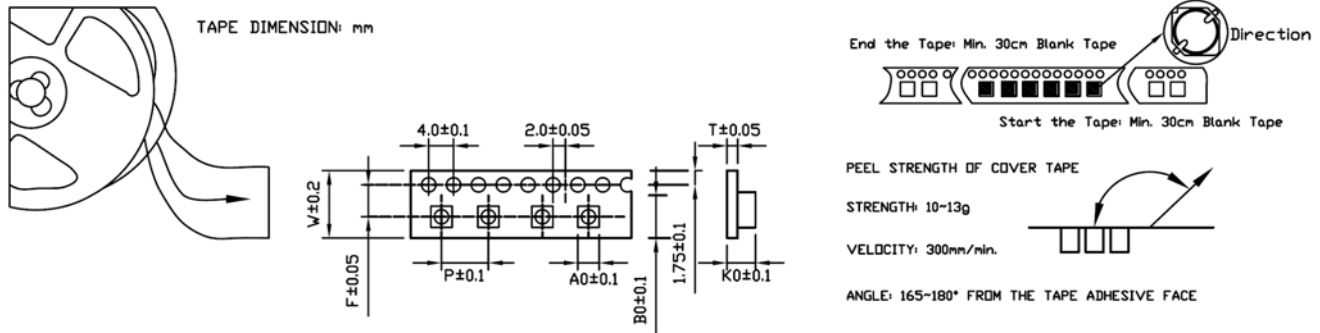
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NO	ITEM	TEST CONDITIONS	Sample Qty/pcs	Spec	Test Day Time	Modify Day	Result
11	Bending Strength		10	Elec. No variation Appearance No deformation	90/07/12 ~ 90/07/12		OK
12	Flexure Strength		10	Elec. No variation Appearance No deformation	90/07/12 ~ 90/07/12		OK
13	Terminal Strength		10	After solder Between copper Plate and terminals of coil, Push in two directions of X,Y with 2.0kg must no crack	90/07/12 ~ 90/07/12		OK
14	High-Voltage	100V DC between core & winding	10	Elec. No variation Appearance No deformation	90/07/12 ~ 90/07/12		OK
15	ORT: on going reliability test	Elec. loading & spec test... Base on Spec for approval	10	Elec. No variation Appearance No deformation	90/07/12 ~ 90/07/12		OK

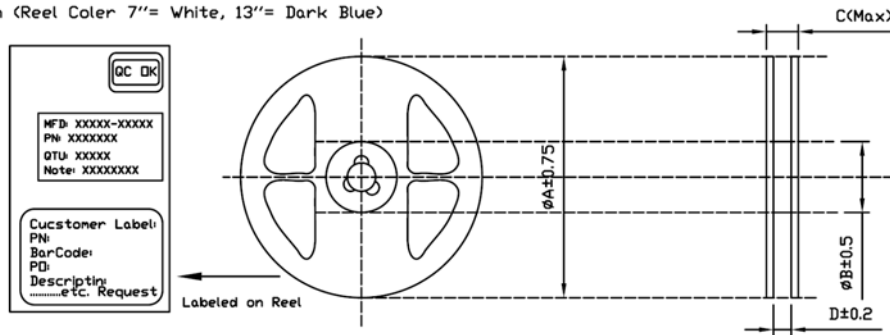
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SIZE/mm	W	P	A ₀	B ₀	K ₀	T	F
73	16.00	12.00	7.50	7.50	3.50	0.35	-
75	16.00	12.00	7.50	7.50	5.10	0.35	-

Reel Dimensions: mm (Reel Color 7"= White, 13"= Dark Blue)

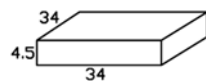


SIZE/mm	A	B	C	D	REEL SIZE	QTY/REEL
73	330	100	22	16.5	13"	1K/Reel
75	330	100	22	16.5	13"	1K/Reel

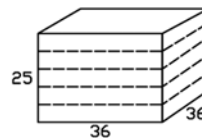
BOX Package: (Unit: cm)

73/75 2 Reel in

5 Inner Small Box in



Inner Small Box



Outer Large Box