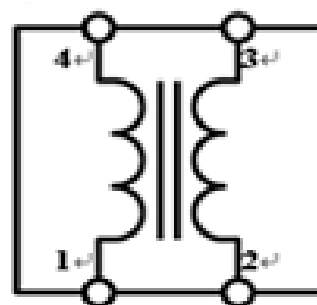


Engineering Specification

TCF03025U12002A

Features and Application

TCF03025U12002A series is a thin film common mode filter designed to suppress common mode noise for high speed differential data lines, such as Display Port, e-SATA, USB3.0, HDMI, MIPI and MHL.



ABSOLUTE MAXIMUM RATINGS

PARAMETER	PARAMETER	RATING	UNITS
Rated Voltage	VDC	5	V
Operating Temperature		-25~85	°C
Rated Current	IDC	100	mA
Lead Soldering Temperature	TSOL	260(10sec.)	°C

ELECTRICAL CHARACTERISTICS

PARAMETER	MIN	TYP	MAX	UNITS
Common Mode Impedance (at 100MHz)	7	12	17	Ω
Cut-off Frequency		8.5		GHz
DC Resistance			2.0	Ω
Insulation Resistance	10			M Ω

Engineering Specification

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PART NUMBER CODE

<u>TCF</u>	<u>03025</u>	<u>U</u>	<u>120</u>	<u>02</u>	<u>A</u>	<u>□□</u>
1	2	3	4	5	6	7

- 1: Product Type : TCF= Thin Film Common Mode Filter
- 2: EIA Dimension Code
- 3: Speed Identification Code
- 4: Impedance(at 100MHz):120=12Ω
- 5: Line Code:02=2 lines
- 6: Specialized Specification Code
- 7: Control code

TYPICAL CHARACTERISTIC

Fig1. IMPEDANCE vs. FREQUENCY CHARACTERISTICS

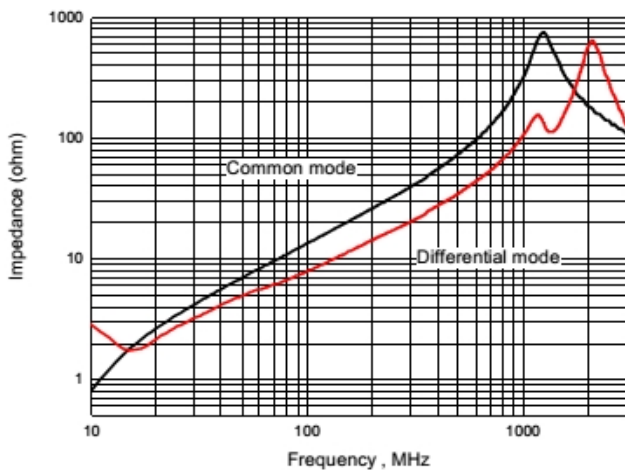
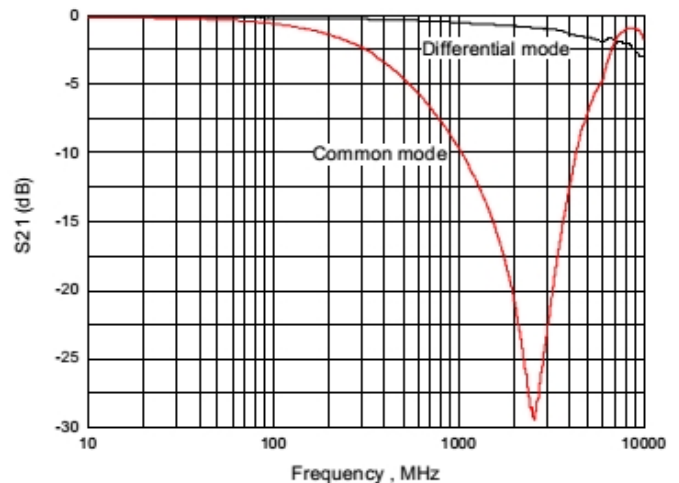


Fig2. INSERTION LOSS vs. FREQUENCY CHARACTERISTICS

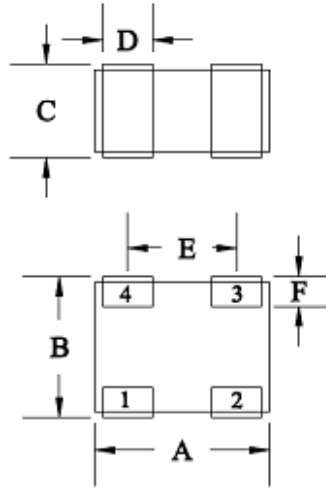
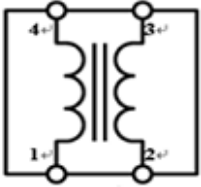


Test Instrument : HP4291A Impedance/Material Analyzer
Test Instrument : Agilent E5071C ENAL-L Network Analyzer

Engineering Specification

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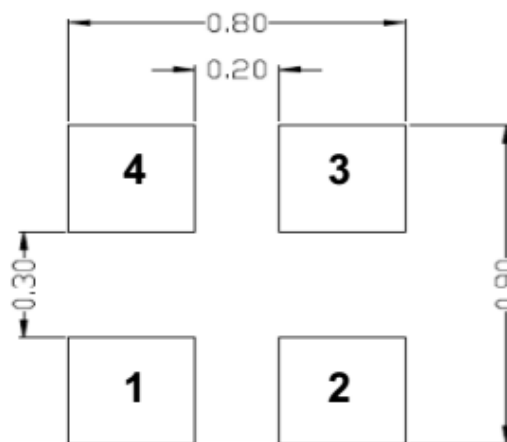
SHARES AND DIMENSIONS



Unit: mm

Series	A	B	C	D	E	F
TCF 03025	0.85±0.05	0.65±0.05	0.4±0.05	0.27±0.1	0.2±0.1	0.5±0.1

CIRCUIT CONFIGURATION & LAYOUT PAD



Dimensions in mm

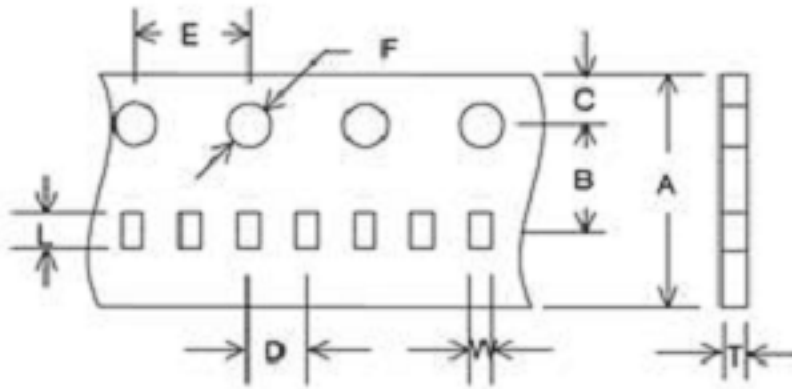
Engineering Specification

TCF03025U12002A

TAPE AND REEL SPECIFICATIONS / TAPING DIMENSIONS

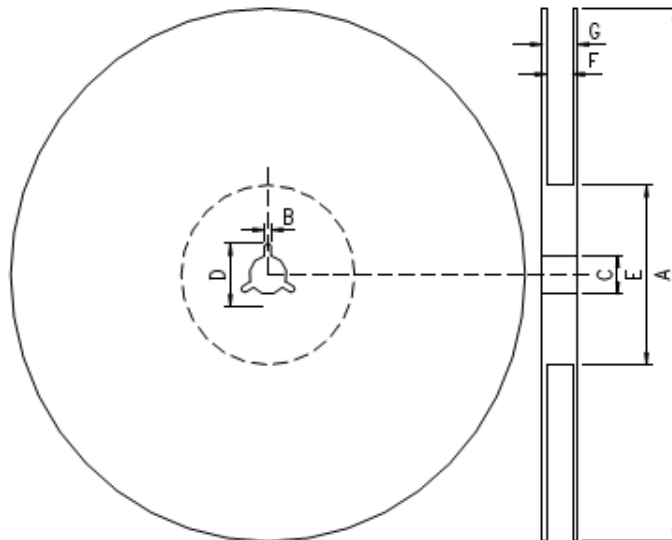
Type : Paper Carrier

Unit : mm



A	8±0.1
B	3.5±0.05
C	1.75±0.05
D	2±0.05
E	4±0.1
F	1.55±0.05
L	1.04±0.03
W	0.78±0.03
T	0.60±0.03

REEL DIMENSIONS



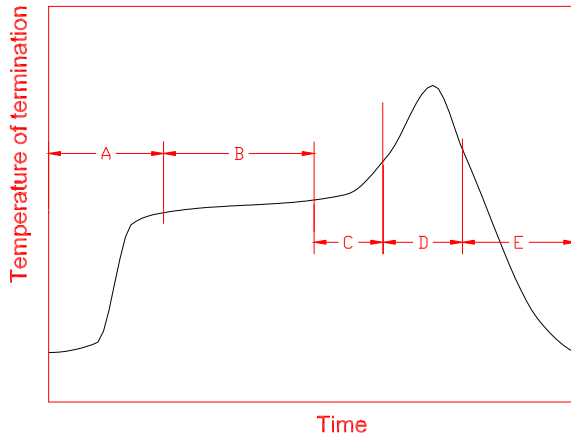
A	178.0±2.0
B	2.0±0.5
C	13.0±0.5
D	21.0±0.8
E	62.0±1.5
F	9.0±0.5
G	13.0±1.0

*Standard quantity : 10,000 pcs/Reel

Engineering Specification

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RECOMMENDED REFLOW SOLDERING



A	1 st rising temperature	The normal to Preheating temperature	30s to 60s
B	Preheating	140°C to 160°C	60s to 120s
C	2 nd rising temperature	Preheating to 200°C	20s to 40s
D	Main heating	if 220°C	50s ~ 60s
		if 230°C	40s ~ 50s
		if 240°C	30s ~ 40s
		if 250°C	20s ~ 40s
		if 260°C	20s ~ 40s
E	Regular cooling	200°C to 100°C	1°C/s ~ 4°C/s

- According to J-STD-020C