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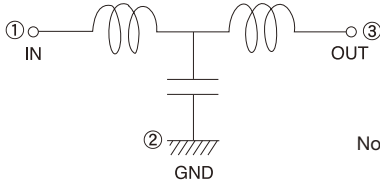
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積層チップEMI除去フィルタ

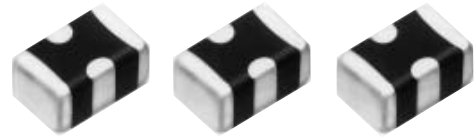
MULTILAYER EMI SUPPRESSION FILTER

OPERATING TEMP. | -25~+85°C

等価回路
Equivalent circuit



No direction



リフロー/REFLOW

特長 FEATURES

- ・積層コンデンサ、積層インダクタを一体化した2×1.25mmサイズのEMIフィルタです
- ・急峻な減衰特性の Tシリーズ と デジタル信号の波形品位維持に効果的な TZシリーズ をラインナップ
- ・積層コンデンサ等と同一形状で、自動機による高速実装に最適です
- ・2×1.25mm size EMI filter unifying capacitor and inductor T series with rapid attenuation characteristics and TZ series with effective maintaining of waveform quality of digital signal are lined up.
- ・Same shape as multilayer capacitor which is suitable for high speed mounting by automatic machine.

用途 APPLICATIONS

- ・DVD、DSC、PDP等の映像信号に於けるノイズ対策 (Tシリーズ)
- ・パソコン、情報機器等、デジタル信号処理回路でのノイズ対策と波形品位維持 (TZシリーズ)
- ・Noise countermeasure in visual signal such as DVD, DSC, PDP, etc. (T series)
- ・Noise countermeasure and maintaining waveform quality in digital signal processing circuit in personal computer, communication equipment, etc. (TZ series)

形名表記法 ORDERING CODE

■ T Series

1 形式 FK 積層チップEMI除去フィルタ	3 等価回路 T T型	4 カットオフ周波数 例 186 18 MHz 256 25 MHz	5 減衰特性 例 A シャープな減衰特性	7 包装 -T リールテーピング
2 形状寸法 (L×W) [mm] 2125 (0805) 2.0×1.25			6 定格電圧 [V] L 10	8 当社管理番号 △ 標準品 △=スペース

F K 2 1 2 5 T 2 5 6 A L - T ○

1 Type FK Multilayer EMI Suppression Filter	3 Equivalence circuit T T type	4 Cutoff frequency example 186 18 MHz 256 25 MHz	5 Characteristic example A Sharp	7 Packaging -T Tape&Reel
2 External dimensions (L×W) [mm] 2125 (0805) 2.0×1.25			6 Rated voltage [V] L 10	8 Internal code △ Standard products △ = Blank space

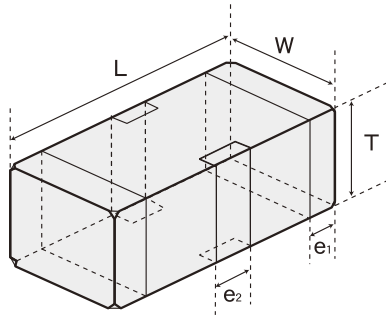
■ TZ Series

1 形式 FK 積層チップEMI除去フィルタ	2 形状寸法 (L×W) [mm] 2125 (0805) 2.0×1.25	4 公称インピーダンス [100MHz] Z700 70Ω Z101 100Ω Z201 200Ω	5 公称静電容量 [1MHz] C170 17pF C500 50pF C850 85pF	6 包装 T リールテーピング
	3 等価回路 T T型			7 当社管理番号 △ 標準品 △=スペース

F K 2 1 2 5 T Z 2 0 1 C 8 5 0 T ○

1 Type FK Multilayer EMI Suppression Filter	2 External dimensions (L×W) [mm] 2125 (0805) 2.0×1.25	4 Nominal Impedance [100MHz] Z700 70Ω Z101 100Ω Z201 200Ω	5 Nominal Capacitance [1MHz] C170 17pF C500 50pF C850 85pF	6 Packaging T Tape&Reel
	3 Equivalence circuit T T type			7 Internal code △ Standard products △ = Blank space

外形寸法 EXTERNAL DIMENSIONS

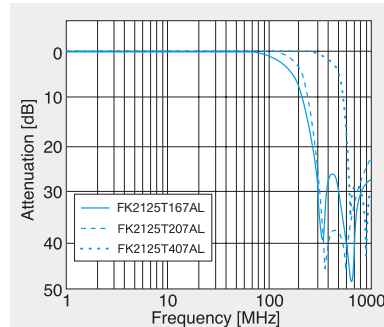
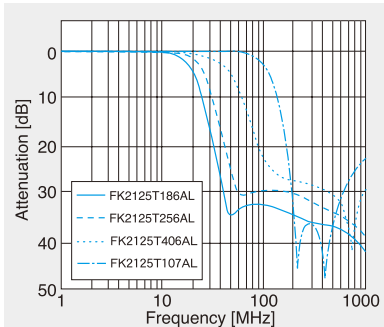


L	W	T	e ¹	e ²
2.0±0.2 (0.079±0.008)	1.25±0.2 (0.049±0.008)	1.0±0.2 (0.039±0.008)	0.3±0.2 (0.012±0.008)	0.4±0.2 (0.016±0.008)

Unit : mm (inch)

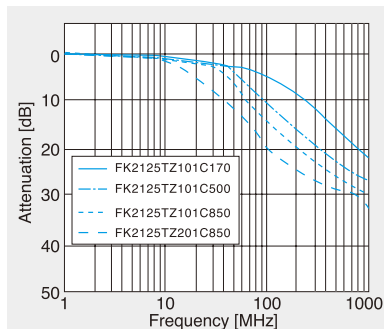
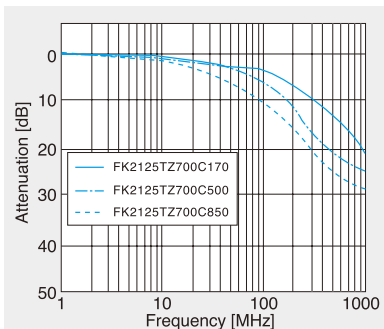
特性図 ELECTRICAL CHARACTERISTICS

●Tシリーズ



形名 Ordering code	EHS (Environmental Hazardous Substances)	カットオフ周波数 Cut-Off Frequency	挿入損失 insertion-loss [1MHz]	減衰特性 attenuation								直流抵抗 DC resistance max.	定格電圧 Rated voltage	定格電流 Rated current	絶縁抵抗 Insulation resistance
				[50MHz]	[100MHz]	[200MHz]	[350MHz]	[500MHz]	[600MHz]	[800MHz]					
FK2125T186AL	RoHS	18MHz±3.6MHz	≦1.0dB	≧20dB	≧20dB	-	-	≧20dB	-	-	2Ω	10V DC	100mA DC	≧30MΩ	
FK2125T256AL	RoHS	25MHz±5MHz		≧15dB	≧20dB	-	-	≧20dB	-	-					
FK2125T406AL	RoHS	40MHz±10MHz		-	≧15dB	≧20dB	-	≧20dB	-	-	3Ω				
FK2125T107AL	RoHS	100MHz±20MHz		-	-	≧20dB	-	≧20dB	-	-					
FK2125T167AL	RoHS	160MHz±30MHz		-	-	-	≧20dB	≧20dB	-	-	2Ω				
FK2125T207AL	RoHS	200MHz±40MHz		-	-	-	≧20dB	≧20dB	-	-					
FK2125T407AL	RoHS	400MHz±80MHz		-	-	-	-	-	≧20dB	≧20dB					

●TZシリーズ



形名 Ordering code	EHS (Environmental Hazardous Substances)	インピーダンス (端子1-3) impedance [100MHz]	静電容量 (端子1-2) capacitance [1MHz]	直流抵抗 DC resistance max.	定格電圧 Rated voltage	定格電流 Rated current	絶縁抵抗 Insulation resistance
FK2125TZ700C170	RoHS	70Ω±30%	17pF±20%	2Ω	10V DC	100mA DC	≧30MΩ
FK2125TZ700C500	RoHS	70Ω±30%	50pF±20%				
FK2125TZ700C850	RoHS	70Ω±30%	85pF±20%				
FK2125TZ101C170	RoHS	100Ω±30%	17pF±20%				
FK2125TZ101C500	RoHS	100Ω±30%	50pF±20%				
FK2125TZ101C850	RoHS	100Ω±30%	85pF±20%				
FK2125TZ201C850	RoHS	200Ω±30%	85pF±20%				

セレクションガイド
Selection Guide

アイテム一覧
Part Numbers

特性図
Electrical Characteristics

梱包
Packaging

信頼性
Reliability Data

使用上の注意
Precautions



etc

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TAIYO YUDEN 2009

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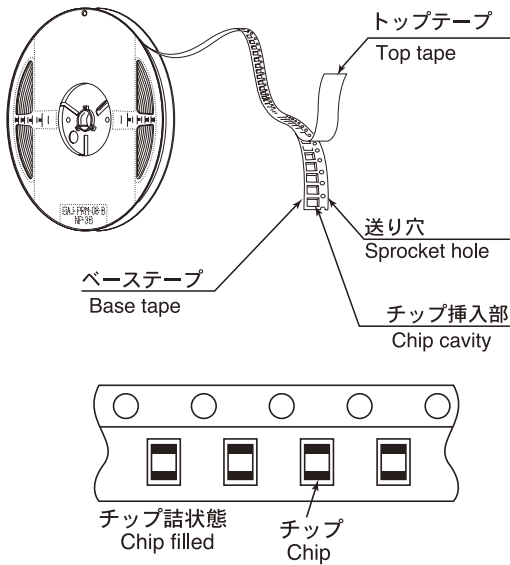
①最小受注単位数 Minimum Quantity

テーピング梱包

Type	製品厚み Thickness [mm]	標準数量 Standard quantity [pcs]
		エンボステープ Embossed tape
FK 2125 (0805)	1.0 (0.039)	3000

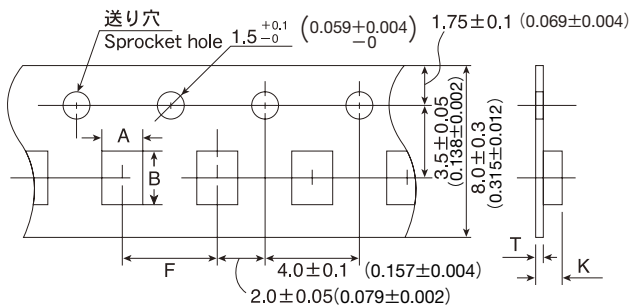
②テーピング材質 Tape material

エンボステープ
Embossed Tape



③テーピング寸法 Taping dimensions

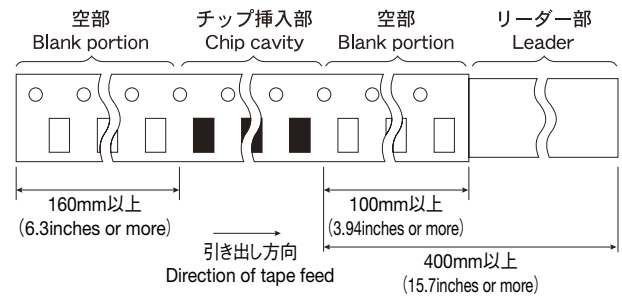
エンボステープ (8mm幅) Embossed tape (0.031inches wide)



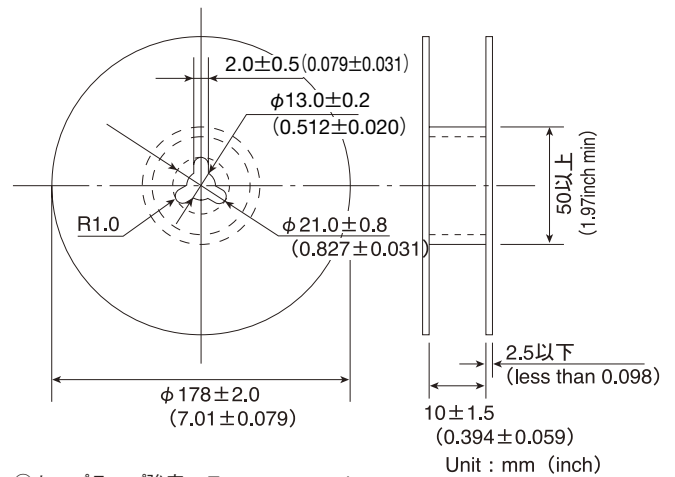
形式 Type	チップ挿入部 Chip cavity		挿入ピッチ Insertion pitch	テープ厚み Tape thickness	
	A	B	F	K	T
FK 2125 (0805)	1.5 ± 0.2 (0.059 ± 0.008)	2.3 ± 0.2 (0.091 ± 0.008)	4.0 ± 0.1 (0.157 ± 0.004)	2.0 max. (0.079) max.	0.3 max. (0.012) max.

Unit : mm (inch)

④リーダー部/空部 Leader and Blank portion

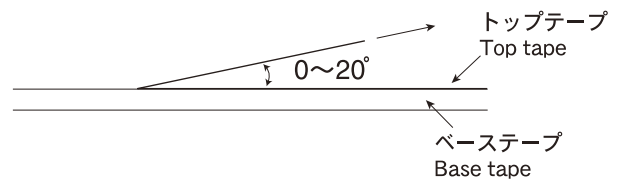


⑤リール寸法 Reel size

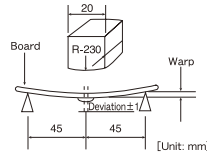


⑥トップテープ強度 Top tape strength

トップテープのはがし力は下図矢印方向にて0.1~0.7Nとなります。
The top tape requires a peel-off force of 0.1~0.7N in the direction of the arrow as illustrated below.

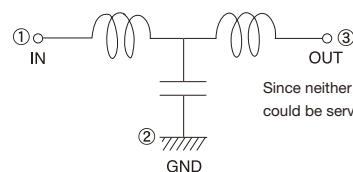


MULTILAYER EMI SUPPRESSION FILTER

Item	Specified	Test Methods and Remarks
1. Operating Temperature Range	-25 to +85°C	
2. Storage Temperature Range	-25 to +85°C	
3. Rated Voltage	10V DC	
4. Rated Current	100mA DC	
5. Cutoff frequency (T Series)	18MHz±3.6MHz 25MHz±5MHz 40MHz±10MHz 100MHz±20MHz 160MHz±30MHz 200MHz±40MHz 400MHz±80MHz	Measuring equipment : HP8753D (or its equivalent) Measuring source : 0dBm Input-Output impedance : 50Ω
6. Impedance (TZ Series)	70Ω±30% 100Ω±30% 200Ω±30%	Measuring frequency : 100MHz Measuring equipment : HP4291A (or its equivalent) Measuring jig : HP16192A Measuring source : -20dBm
7. Capacitance (TZ Series)	17pF±20% 50pF±20% 85pF±20%	Measuring equipment : HP4194A (or its equivalent) Measuring voltage : 0.5V Measuring frequency : 1MHz Capacitance measurement between Terminals 1 and 2.
8. DC Resistance	2Ω max. 3Ω max. (FK2125T107AL)	Conduct measurement between Terminals 1 and 3.
9. Insulation Resistance	30MΩ min.	Conduct measurement between Terminals 1 and 2. Applied voltage : 10VDC
10. Resistance to Flexure of Substrate	No mechanical damage.	Warp: 2mm Testing board: glass epoxy-resin substrate Thickness: 0.8mm 
11. Solderability	At least 75% of terminal electrode is covered by new solder.	Solder temperature : 230±5°C Duration : 4±1 sec. Preheating temperature : 150 to 180°C Preheating time : 2 to 3 min. Flux : Immersion into methanol solution with colophony for 3 to 5 sec.
12. Resistance to Soldering	No significant abnormality in appearance. Circuit diagram	Solder temperature : 260±5°C Duration : 10±0.5 sec. Preheating temperature : 150 to 180°C Preheating time : 2 to 3 min Flux : Immersion into methanol solution with colophony for 3 to 5 sec.
13. Thermal Shock	No mechanical damage. Insulation resistance (between 1 and 2) : 20MΩ min. DC resistance (between 1 and 3) : 2Ω max. 3Ω max. (FK2125T107AL)	Conditions for 1 cycle Step1 : Minimum operating temperature +0/-3°C 30±3 min Step2 : Room temperature 2 to 3 min Step3 : Maximum operating temperature +0/-3°C 30±3 min Step4 : Room temperature 2 to 3 min Number of cycles : 5 Recovery : 2 to 3 hrs of recovery under the standard condition after the test.
14. Damp Heat steady state	No mechanical damage. Insulation resistance (between 1 and 2) : 20MΩ min. DC resistance (between 1 and 3) : 2Ω max. 3Ω max. (FK2125T107AL)	Temperature : 40±2°C Humidity : 90 to 95%RH Duration : 500±12 hrs Recovery : 2 to 3 hrs of recovery under the standard condition after the removal from test chamber.
15. Loading under Damp Heat	No mechanical damage. Insulation resistance (between 1 and 2) : 20MΩ min. DC resistance (between 1 and 3) : 2Ω max. 3Ω max. (FK2125T107AL)	Temperature : 40±2°C Humidity : 90 to 95%RH Applied voltage : Rated voltage (between 1 and 2) Applied current : Rated current (between 1 and 3) Duration : 500±12 hrs Recovery : 2 to 3 hrs of recovery under the standard condition after the removal from test chamber.
16. Loading at High Temperature	No mechanical damage. Insulation resistance (between 1 and 2) : 20MΩ min. DC resistance (between 1 and 3) : 2Ω max. 3Ω max. (FK2125T107AL)	Temperature : 85±2°C Applied voltage : Rated voltage (between 1 and 2) Applied current : Rated current (between 1 and 3) Duration : 500±12 hrs Recovery : 2 to 3 hrs of recovery under the standard condition after the removal from test chamber.

Note on standard condition : "standard condition" referred to herein is defined as follows :
5 to 35°C of temperature, 45 to 85% relative humidity and 86 to 106kPa of air pressure.
When there are questions concerning measurement results :
In order to provide correlation data, the test shall be conducted under condition of 20±2°C of temperature, 60 to 70% relative humidity and 86 to 106kPa of air pressure.
Unless otherwise specified, all the tests are conducted under the "standard condition."

※Circuit diagram



Since neither 1 nor 3 is directional, either could be served as the IN terminal.