

# TELECOM TRANSFORMERS FARM, POT SERIES



## FEATURES

High inductance.  
Low leakage inductance  
Low interwind capacitance  
Compact size and Surface-mounted  
Designed to meet UL, CSA, VDE, BABT safety standard

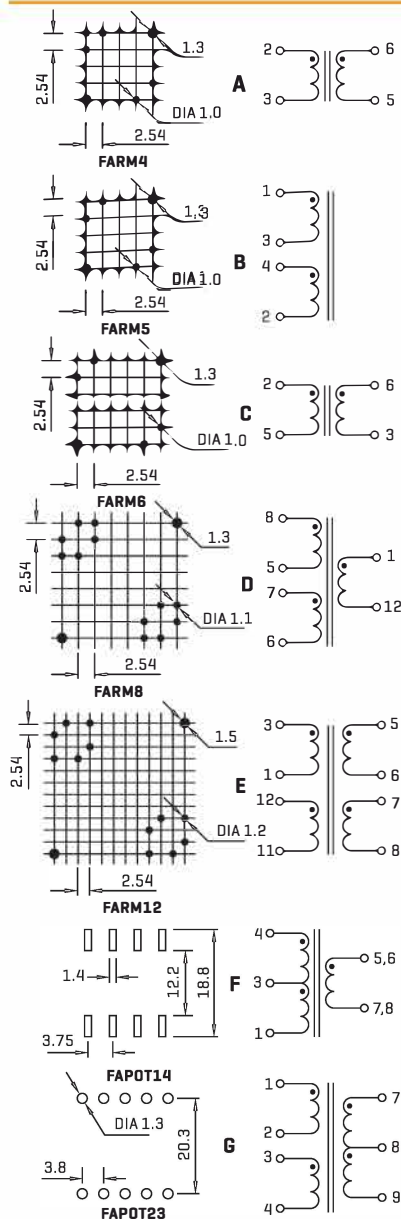
## OPTIONS

Tape and reel is standard  
Bulk packaging available for Smaller quantities  
Custom design available  
Tolerance: 5% is standard, Tighter tolerance available  
RM 4, 5, 6, 7, 8, 10, 12, 14 available  
POT 3,2, 4,5, 6, 7, 9, 11, 14, 18, 22, 26, 30, 36, 42, 48 available

## COMMON APPLICATIONS

Modem  
Fax machine, Hub  
ISDN, ADSL, HDSL, PABX  
Other telecommunication facilities etc  
Switching power supplies  
AC-DC, DC-DC converters

## TECHNICAL INFORMATION

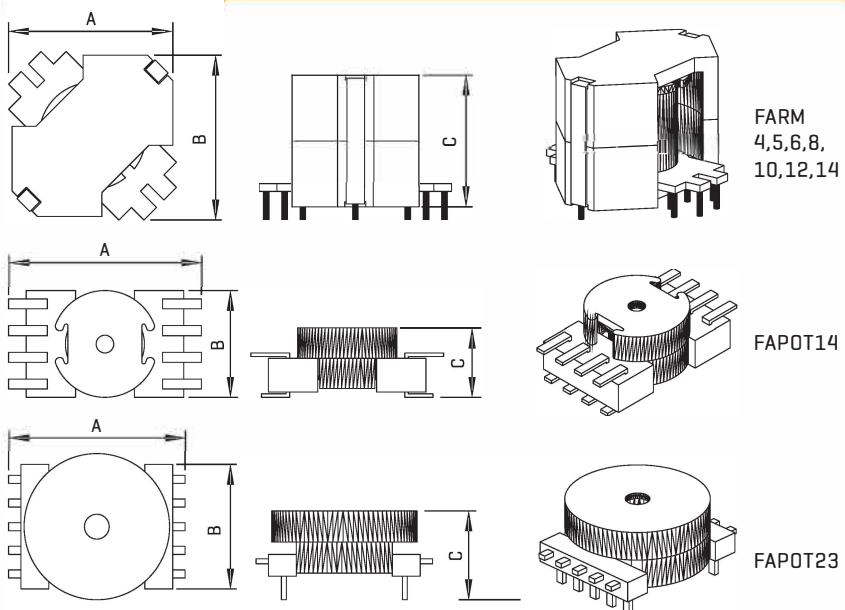


ALL DIMENSIONS IN MM

## ELECTRICAL CHARACTERISTICS

Part No.	Inductance [10kHz/0.1V Typ]	Turn Ratio	DCR[Ωmax]	Hi-pot [Pri-Sec]	Schematic
FARM4	45.2mH±35%(3-4)	1:1[2-3:5-6]	2.5:2.5[2-3:5-6]	500VDC	A
FARM5	43.5mH±6%(1-3=3-4)	1:1[1-3:4-2]	4.6:4.6[1-3:4-2]	1000VDC	B
FARM6	20mH±6%(2-3 tie 6+5)	1:1[2-5:6-3]	4.0:4.0[2-5:6-3]	850VDC	C
FARM8	3.0mH±6%[8-6 tie 5+7]	5.24:1[8-6:1-12 tie 5-7]	1.7:1.7:0.42[8-5:7-6:1-12]	2500VAC	D
FARM12	140µHmin[3-1=2-11]	1:1:2:2[3-1:12-11:5-6:7-8]	0.012:0.05[3-1=12-11:5-6=7-8]	500VDC	E
FAPOT14	450µH±25%(4-1)	3.75:1[4-1:6-8]	0.04:0.012:0.012[4-3:5-7:6-8]	1250VDC	F
FAPOT23	15.5mH±10%(1-4 tie 2+3)	1:0.6[1-4:7-9 tie 2+3]	13:7.8[1-4:7-9 tie 2+3]	1500DC	G

## PHYSICAL CHARACTERISTICS



PartNo.	FARM4	FARM5	FARM6	FARM8	FARM12	FAPOT14	FAPOT23
A	10.5max	13.5max	16.6max	22.0max	31.7max	21.0max	24.4max
B	10.5max	13.5max	16.6max	22.0max	31.7max	15.0max	23.5max
C	11.0max	11.5max	12.7max	17.5max	25.4max	9.0max	11.6max

# TELECOM TRANSFORMERS FAEFD,ER SERIES



## FEATURES

High inductance.  
Low leakage inductance  
Low interwind capacitance  
Compact size and Surface-mounted  
Designed to meet UL, CSA, VDE, BABT safety standard

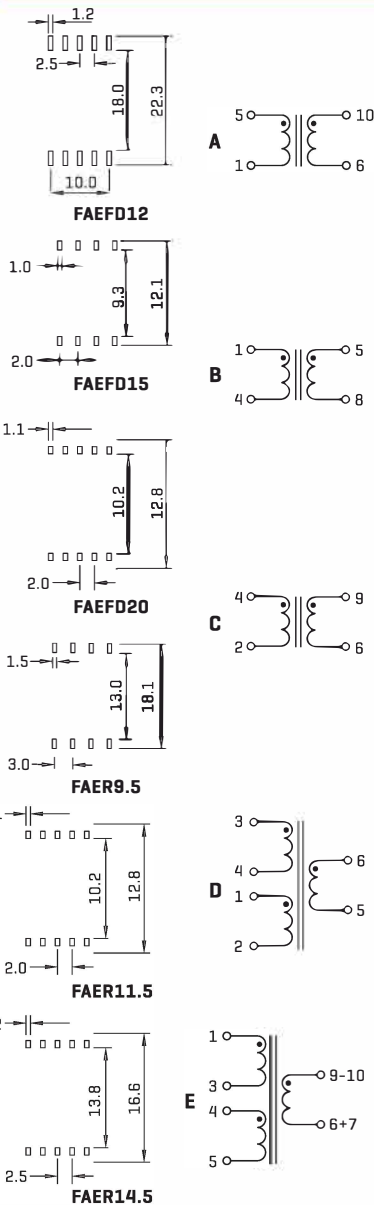
## OPTIONS

Tape and reel is standard  
Bulk packaging available for Smaller quantities  
Custom design available  
Tolerance: 5% is standard, tight FATER available  
SMD EFD 25/30 available

## COMMON APPLICATIONS

Modem  
Fax machine, Hub  
ISDN, ADSL, HDSL, PABX  
Other telecommunication facilities etc  
Switching power supplies  
AC-DC, DC-DC converters

## TECHNICAL INFORMATION



## ELECTRICAL CHARACTERISTICS

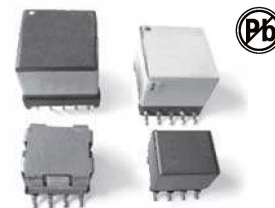
Part No.	Inductance (10kHz/0.1V Typ)	Turn Ratio	DCR(Ωmax)	Hi-pot (Pri-Sec)	Schematic
FAEFD12	27 μH ±10 % (3-4)	0.74:1.0.71 (3-4:1-2:6-5)	0.21:1.15:0.35 (3-4:1-2:6-5)	1250VAC	D
FAEFD15	4.0mH±6% (1-5=10-6)	1:1 (1-5:10-6)	6.25:6.25 (1-5:10-6)	1000VDC	A
FAEFD20	20mH±6% (1-5 tie 10+6)	1:1 (1-5:10-6)	5.5:5.5 (1-5:10-6)	1000VDC	A
FAER9.5	200μH Typ. (1-4)	1:1 (1-4:5-8)	0.12:0.132 (1-4:5-8)	1000VDC	B
FAER11.5	58μH±10 % (4-2)	1:2 (4-2:9-6)	0.35:1.75 (4-2:9-6)	500VAC	C
FAER14.5	14.4μH±10% (1-3)	1:1:1 (1-3:4-5:10-6)	0.063:0.28:0.066 (1-3:4-5:10+9-6+7)	500AC	E

## PHYSICAL CHARACTERISTICS

Part No.	FAEFD12	FAEFD15	FAEFD20	FAER9.5	FAER11.5	FAER14.5
A	14.0max	16.5max	22.0max	10.5max	12.2max	15.2max
B	21.5max	22.3max	26.0max	12.1max	12.7max	16.5max
C	7.4max	8.6max	11.4max	6.2max	6.5max	7.2max

ALL DIMENSIONS IN MM

# TELECOM TRANSFORMERS FAEP SERIES



## FEATURES

Low inFATERwind capacitance  
Low total harmonic distortion(THD)  
Compact size and Surface-mounted  
Designed to meet UL, CSA, VDE, BABT safety standard

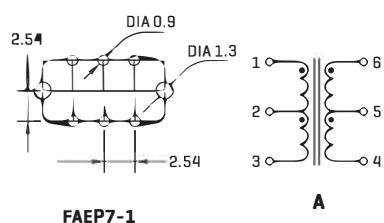
## OPTIONS

Tape and reel is standard  
Bulk packaging available for Smaller quantities  
Custom design available  
Tolerance: 5% is standard,  
Tigh FATER tolerance available

## COMMON APPLICATIONS

Modem  
Fax machine, Hub  
ISDN, ADSL, HDSL, PABX  
Dther telecommunication facilities etc  
Switching power supplies  
AC-DC, DC-DC converters

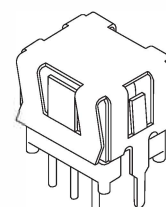
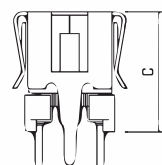
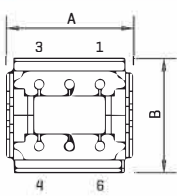
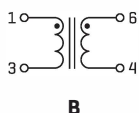
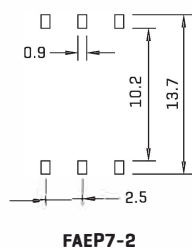
## TECHNICAL INFORMATION



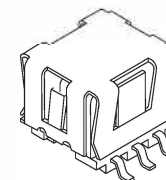
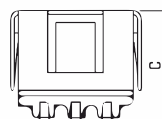
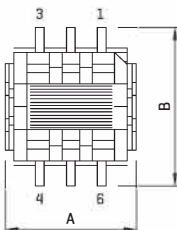
## ELECTRICAL CHARACTERISTICS

Part No.	Inductance (10kHz/0.1V Typ)	Cs (max)	Turn Ratio	DCR(Ωmax)	THD (max)	Hi-pot (Pri-Sec)	Schematic
FAEP7-1	2.0mH min (1-3)	27pF (pri-sec)	1.66:1(1-3:6-4)	0.8:0.7(1-3:6-4)		1250VAC	A
FAEP7-2	530 μH±6% (6-4)	27pF (pri-sec)	1:1(1-3:6-4)	2.1:2.1(1-3:6-4)	-54dB	1250VAC	B
FAEP10	1.75mH min (8-2)	100pF (pri-sec)	1:0.653:0.184 (8-2:6-7:3-5)	0.9:0.58:0.09 (8-2:6-7:3-5)		500VDC	C

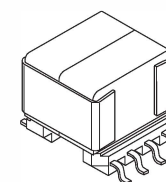
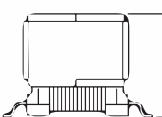
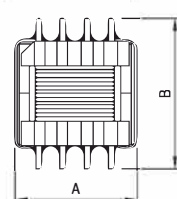
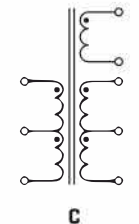
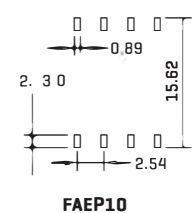
## PHYSICAL CHARACTERISTICS



**FAEP7-1**



**FAEP7-2**

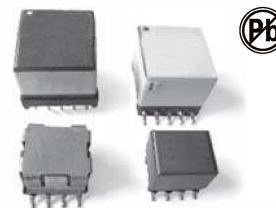


**FAEP10**

Part No.	FAEP7-1	FAEP7-2	FAEP10
A	10.5max	13.5max	24.4max
B	10.5max	13.5max	23.5max
C	11.0max	11.5max	11.6max

ALL DIMENSIONS IN MM

# TELECOM TRANSFORMERS FAEP SERIES



## FEATURES

Low inFATERwind capacitance  
Low total harmonic distortion[THD]  
Compact size and Surface-mounted  
Designed to meet UL, CSA, VDE, BABT safety standard

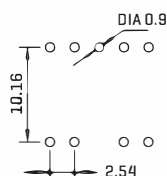
## OPTIONS

Tape and reel is standard  
Bulk packaging available for Smaller quantities  
Custom design available  
Tolerance: 5% is standard,  
Tigh FATER tolerance available

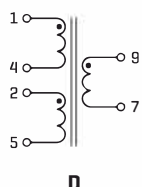
## COMMON APPLICATIONS

Modem  
Fax machine, Hub  
ISDN, ADSL, HDSL, PABX  
Other telecommunication facilities etc  
Switching power supplies  
AC-DC, DC-DC converters

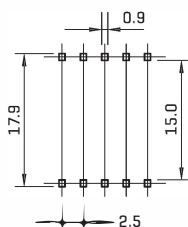
## TECHNICAL INFORMATION



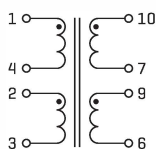
FAEP13-1



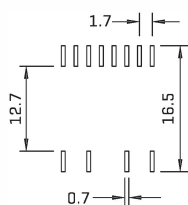
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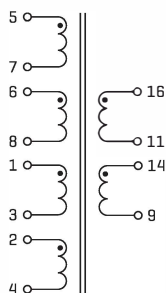
FAEP13-2



E



FAEP13-3

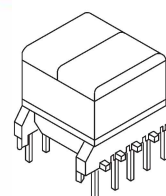
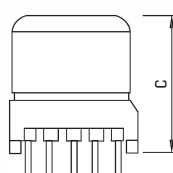
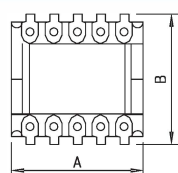


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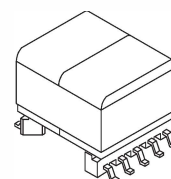
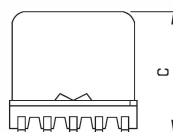
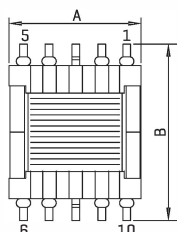
## ELECTRICAL CHARACTERISTICS

Part No.	Inductance (10kHz/0.1V Typ)	Cs (max)	Turn Ratio	DCR(Ωmax)	THD (max)	Hi-pot (Pri-Sec)	Schematic
FAEP13-1	2.0mH±10% [1-5 tie 2, 4]		4:1 [1-5:9-7 tie 2,4]	1.25:1.25:1.0 [1-4:2-5:9-7]	-72dB	2050VAC	D
FAEP13-2	410 μH±6% [1-5 tie 2, 4]		2:1 [1-5:10-6 tie 2+4,7+9]	0.48:0.23 [1-4:10-7]	-72dB	1875VAC	E
FAEP13-3	400 μH ±6% [16-9 tie 11,14]	21pF [pri-sec]	4.25:1 [16-9:5-8 tie 11+14,7+6]	0.49:0.28:0.96 [14-9:5-7:1-3]	-68dB	1875VAC	F

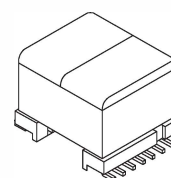
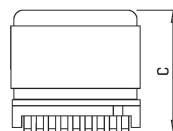
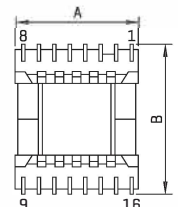
## PHYSICAL CHARACTERISTICS



FAEP13-1



FAEP13-2

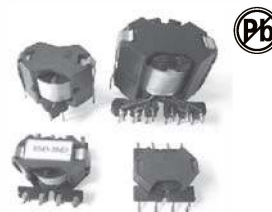


FAEP13-3

Part No.	FAEP13-1	FAEP13-2	FAEP13-3
A	14.2max	13.6max	14.0max
B	14.2max	17.9max	16.4max
C	13.0max	12.4max	12.6max

ALL DIMENSIONS IN MM

# TELECOM TRANSFORMERS & POWER TRANSFORMERS FARM SERIES



## FEATURES

Low inFATERwind capacitance  
 Low total harmonic distortion[THD]  
 Compact size and Surface-mounted  
 Designed to meet UL, CSA, VDE, BABT safety standard

## OPTIONS

Tape and reel is standard  
 Bulk packaging available for Smaller quantities  
 Custom design available  
 Tolerance: 5% is standard, Tigh FATER available  
 RM 5, 6, SMD available  
 RM 6, 8, 10, 12, 14 Power available

## COMMON APPLICATIONS

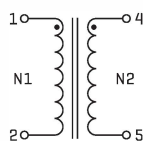
Modem  
 Fax machine, Hub  
 ISDN, ADSL, HDSL, PABX  
 Other telecommunication facilities etc  
 Switching power supplies  
 AC-DC, DC-DC converters

## TECHNICAL INFORMATION

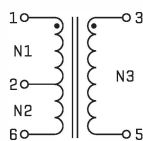
Soldering temperature: 260°C for 4 ± 1 seconds  
 Operating temperature: 0°C to 70°C  
 Storage Temperature: -25°C to 85°C  
 Different package available per special request

## ELECTRICAL CHARACTERISTICS

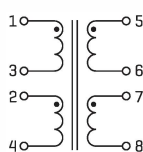
Part No.	N1 Inductance [1kHz/0.1V Typ]	Turn Ratio	N1 DCR[Qmax]	Hi-pot (Pri-Sec)	Schematic
FATP 6012	3.6mH min	N1:N2=1:2.5	4.5	1250V	1
FATM 5001	2.5mH min	N1:N2:N3=1:1:3	6.5	1250V	2
FATM 5002	1H min	N1:N2:N3:N4=1:1:1:1	30.0	1250V	3



Schematic 1

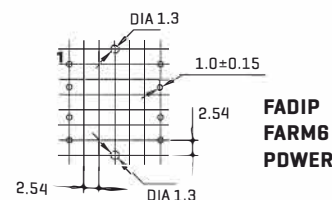
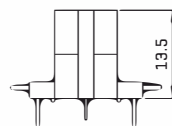
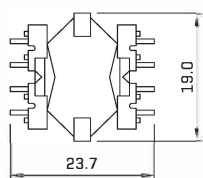


Schematic 2

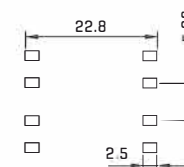
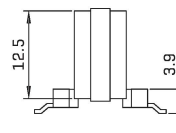
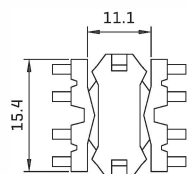


Schematic 3

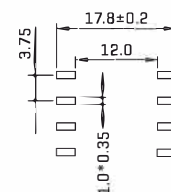
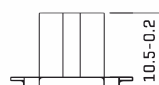
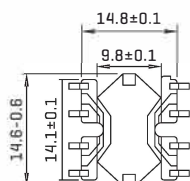
## PHYSICAL CHARACTERISTICS



FADIP  
FARM6  
POWER



FARM5  
FASMD

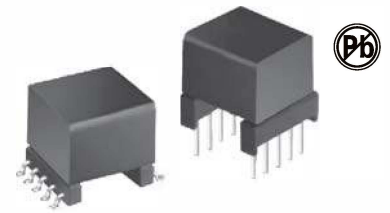


FARM5  
FASMD

ALL DIMENSIONS IN MM

# FAADSL TRANSFORMERS

## FAADSL-100 SERIES



### FEATURES

High Frequency Design  
Excellent THD  
High Reliability

### OPTIONS

Tape & Reel is Standard  
Custom design available

### COMMON APPLICATIONS

FAADSL VDSL Router  
Analog Devices, Alcatel, Globespan.  
Central Office/Customer Premise

### STANDARD SPECIFICATIONS

Part Number	Application	Turns Ratio ±2% Line to Chip	OCL [mH±10%] Line Size	L <sub>L</sub> [µH Max]	Longitudinal Balance [dB Min]	DCR [ΩMax]	THD [dB Min]	SCH	Applicable IC
FAADSL-101	CPE	1:1	5.0 [1]	15 [2]	40[25KHz-1.1MHz]	3.0	80@30KHz	1	A020msP910/918
FAADSL-102	CPE	1:1	0.48 [1]	10 [2]	40[30KHz-1.1MHz]	1.0	72@10KHz	1	MTK-20/40
FAADSL-102A	CO	1:1	0.41 [1]	6.5 [2]	40[30KHz-1.1MHz]	0.6	72@20KHz	1	MTK-20/40
FAADSL-103	CPE	2:1	0.43 [3]	10 [4]	40[25KHz-1.1MHz]	0.45	80@100KHz	2	G7000
FAADSL-105	CPE	1:1	0.407 [1]	9 [2]	40[25KHz-1.1MHz]	0.66	80@100KHz	1	EL-1501

Inertion Loss: 0.5dB max Inductance measured @10KHz 0.1 VRMS Hipot: 1500 VRMS

Remark: Add "S" after Part No. for SMT package

Example: FAADSL-101S for SMT Package: Package B

Notes:

- 1.Measure inductance at pin 1-4 with pin 2-3 shorted.
- 2.Measure leakage inductance at pin 1-4 with 2-3 shorted, and 7-8-9-10 shorted.
- 3.Measure inductance at pin 1-5 with pin 2-4 shorted.
- 4.Measure leakage inductance at pin 1-5 with 2-4 shorted, and pin 6-9-7-10 shorted.

### TECHNICAL INFORMATION

Soldering methods: Wave, Reflow

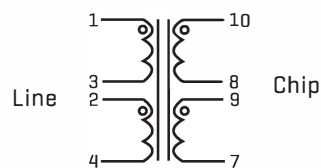
Operating Temperature: 0°C to +70°C

Storage Temperature: -55°C to 125°C

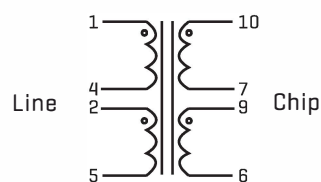
Note:

All specifications subject to change without notice.

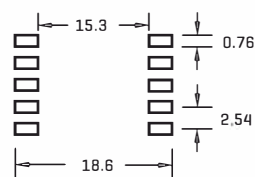
**Schematic 1**



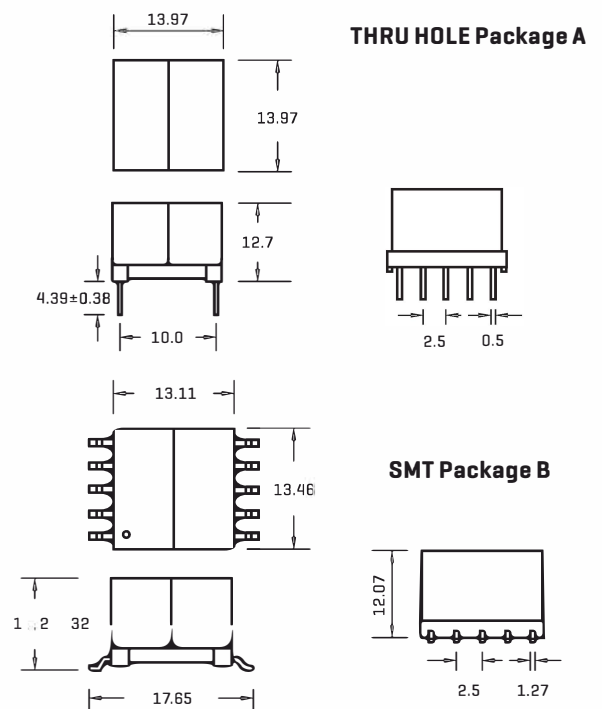
**Schematic 2**



Recommended Pad Layout



### PHYSICAL CHARACTERISTICS



ALL DIMENSIONS IN MM