

Katalog

HF-Übertrager von **myrra** 





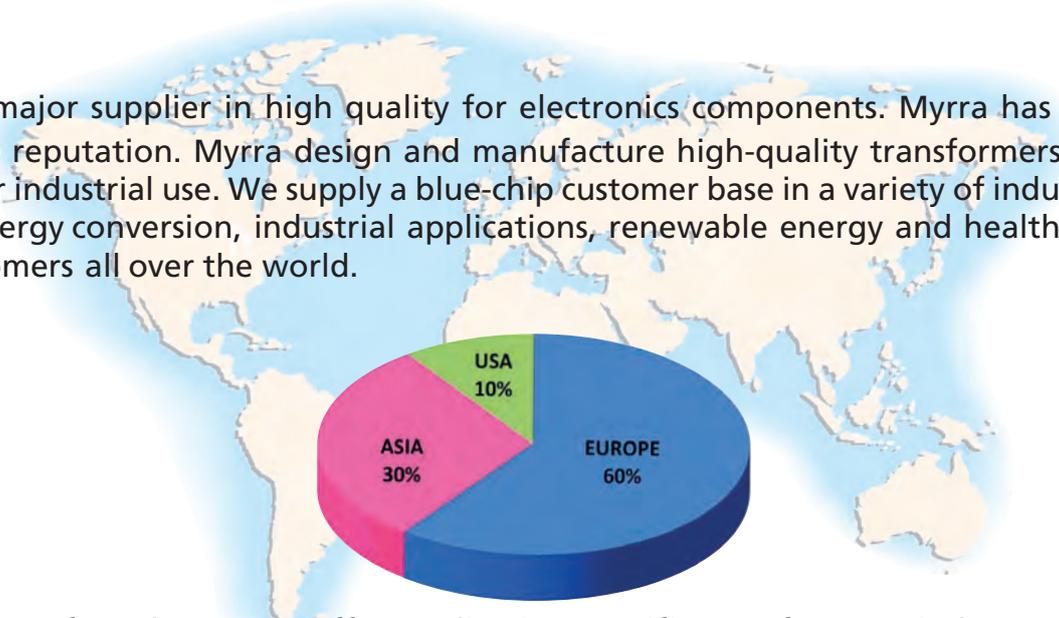
TRANSFORMERS & INDUCTORS

YOUR ENERGY DEMAND
OUR INNOVATIVE
SOLUTIONS



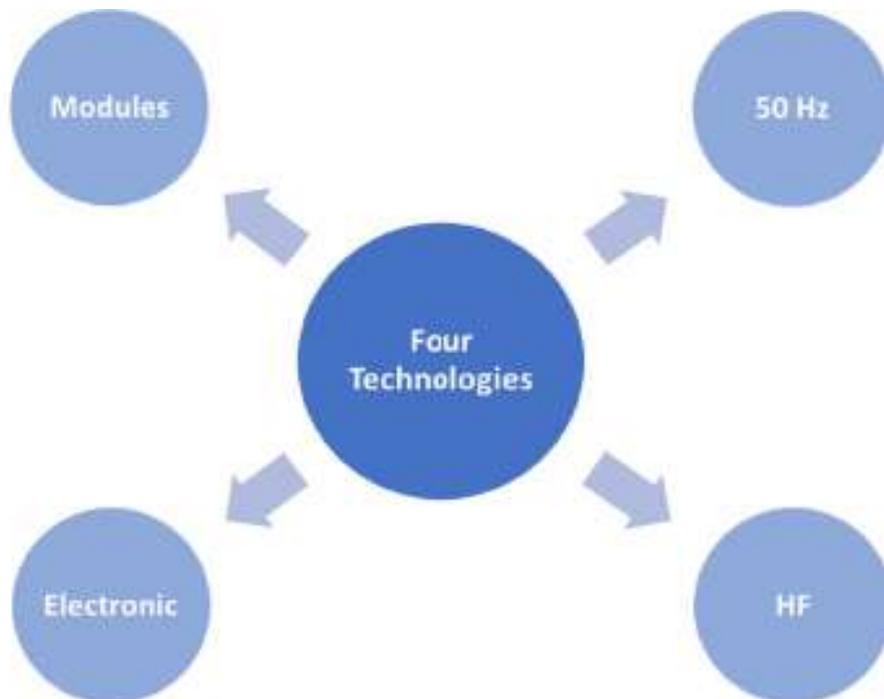
COMPANY PROFILE

Myrra is a major supplier in high quality for electronics components. Myrra has established a worldwide reputation. Myrra design and manufacture high-quality transformers and inductors for industrial use. We supply a blue-chip customer base in a variety of industries, including energy conversion, industrial applications, renewable energy and healthcare. We supply customers all over the world.



A wide range of products : We offer application specific transformers, inductors, chokes and coils, in three technologies: high frequency, 50Hz technology and electronic, enabling us to serve a number of major markets.

MAGNETICS & ELECTRONICS PRODUCTS



Applications

Conversion

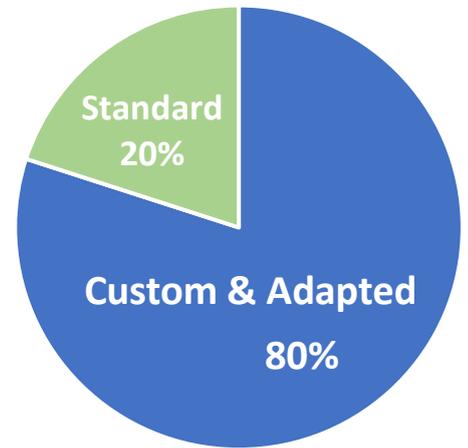
Measuring

Filtering

PRODUCTION SPREAD

Each of our clients have different needs & project, that is why most of our products are customized & adapted solutions to the client needs (80%).

Whether it is standard or custom product, each solution needs to be approved by our technical department & raise to our quality standard.



MARKET SEGMENTS

Myrra clients come from various markets & at different position in the product lifecycle (supplier, distributor, end-product ...).

Our presence keeps growing over the years and help us to adapt our product to many applications.

Here's a few examples of our client market :



Industrial



Energy Renewable



Transport

PRODUCT APPLICATION

Each of our product has a wide range of potential applications.

Therefore, it is difficult to state a specific application for our product but here are some examples of application :

- Motor drives
- Connectivity
- Sensors
- Solar PV Inverters/UPS
- X-Ray Scanners
- And many more !

PRODUCT CERTIFICATIONS



PCB Magnetic Components

50-60Hz transformers (44 & 45 series)

- * Full range of standard references
- * Isolating safety application
- * UL, VDE, EN61558 certification
- * Automated - 100% tested production



Passive PFC chokes (43 series)

- * Large range of open & potted standard references

Transformers & inductors for SMPS (74 series)

- * Large application range: flyback transformers, CM chokes etc.
- * International standards compliant
- * Standard products and customized design



THT & SMD Chokes (75-79 series)



POWER RANGE Transformers and chokes for specific applications

DC, 50-60 Hz and switching applications

- * Customized design on specification
 - Chokes up to 1000A
 - 50-60 Hz transformers up to 20 kVA
 - HF transformers up to 200 kW
- * Insulation systems: B, F, H classes
- * UL, IEC, CSA Compliant



Encapsulated POWER SUPPLY

- * Pioneering alternative to linear transformers in AC/DC application
- * E130 to E148 size - Input range: 85V-265VAC
- * Regulated output: 3.3VDC-24VDC/ 2.5W-5W-7W-10W-20W-40W-60W
- * Full compliance with Safety, EMC and Immunity standards



EV Charging

- * Wallbox
- * AC/DC Power Converters



PRODUCT INDEX

■ ENCAPSULATED TRANSFORMERS	4 to 25
TECHNICAL INFORMATIONS	4
44000 SERIES	
0.6 VA to 2.8VA / EI30-5 to EI30-18	5 to 13
3.2VA to 30 VA / EI38 to EI66	14 to 19
WITH OTHER BOXES	20
45000 SERIES	
1 VA to 60 VA	21 to 24
FLF / FLC SERIES	
3.2 VA to 240 VA	25
■ PASSIVE PFC	26 to 34
EI30-23 to EI54-23 / Open & Potted	26 to 34
■ PCB COMPONENTS FOR SWITCHING APPLICATIONS	35 to 95
POWER FERRITE TRANSFORMERS	35 to 59
FLYBACK TRANSFORMERS RANGE	35
1 W to 12 W EE16	36 to 46
10 W to 30 W EL19 EF20 EE25	47 to 50
35 W to 180 W ETD29 to ETD44 ERL28	51 to 55
FLYBACK TRANSFORMERS STANDARD SIZES	56 to 58
COMMON MODE CHOKES FOR EMI SUPPRESSION	59 to 63
TOROIDAL CHOKES	64
CURRENT TRANSFORMERS RANGE	65 to 78
PULSE TRANSFORMER RANGE	79 to 84
POWER LINE COMMUNICATION COUPLING TRANSFORMERS	85 to 87
ACTIVE PFC	88 to 94
THROUGH HOLES CHOKES / SURFACE MOUNT CHOKES	95
■ POWER PRODUCTS	96 to 109
Custom Power Products	96 to 98
DC Chokes	99 to 103
Power Chokes	104 to 109
■ ENCAPSULATED POWER SUPPLY	110 to 112
■ EV CHARGING	113

TECHNICAL INFORMATION

RATED PRIMARY VOLTAGE (V)

This is the supply voltage assigned to the transformer by the manufacturer.

RATED SECONDARY VOLTAGE (V)

This is the secondary output voltage assigned to the transformer when supplied with the rated primary voltage, frequency range, rated secondary current, all assigned by the manufacturer for the specified operating conditions of the transformer.

RATED POWER (VA)

The specified power levels in this catalogue are the secondary power levels, in other words, those available when the transformer is loaded. It is the product of the RMS rated secondary voltage by the RMS rated current. If the transformer has more than one output winding, the rated power denotes the maximum sum of the products of RMS rated secondary voltage by the RMS rated secondary current, respectively. This rated power is defined for rated ambient temperature conditions.

example : $P = 3,2 \text{ VA ta } 70/B$

The transformer can deliver 3.2VA at maximum ambient (70°C), the load consisting of a resistor load defined by $R(\text{load}) = U(\text{sec})^2/P$ (assigned U sec & P values), heating does not exceed the relevant limit for Class B components used in this construction.

NOTE : When the transformer is intended to supply DC voltage and current in conjunction with rectifiers and smoothing capacitors, the VA power required from the transformer is far higher than the $U(\text{DC})$ and $I(\text{DC})$ product. To help you to determine the true transformer power, our Technical Department is at your disposal.

AMBIENT TEMPERATURE (Ta)

The maximum temperature at which the transformer may be operated continuously under nominal conditions of use. It is the air temperature measured close to the transformer after thermal stabilization when operating at rated conditions.

HEATING

The increase of the winding temperature when operating at rated conditions and maximum ambient temperature. The heating must be determined by the resistance method.

TEMPERATURE CLASS

The international classification of temperature classes is as follows :

A	105°C	H	180 °C
E	120°C	200	200 °C
B	130°C	220	220 °C
F	155°C	250	250 °C

It defines the maximum temperature the transformer components must withstand in continuous operation, in compliance with the N° 85 IEC publication classification. There insulating materials are therefore certificated for the thermal index corresponding to the declared class in accordance with N° 216 IEC standard.

PARTICULAR POINTS OF EN 61558-2-6 STANDARD FOR SAFETY TRANSFORMERS

On-load secondary voltage tolerance.

This should not differ from the rated value by more than :

10% for transformers with build-in resistance to short-circuits (a supplement of 5% is granted on the 2nd secondary for transformers with 2 secondaries).

5% for other transformers whatever the secondaries number.

Off-load secondary voltage.

The values given in this catalogue are maximum theoretical values.

NOTE : For safety transformers, this should never exceed 50 V rms. In the case of a transformer with several secondaries, the sum of the secondary voltages should be less than 50 V rms.

ADAPTED TRANSFORMERS FROM THE STANDARDS SERIES

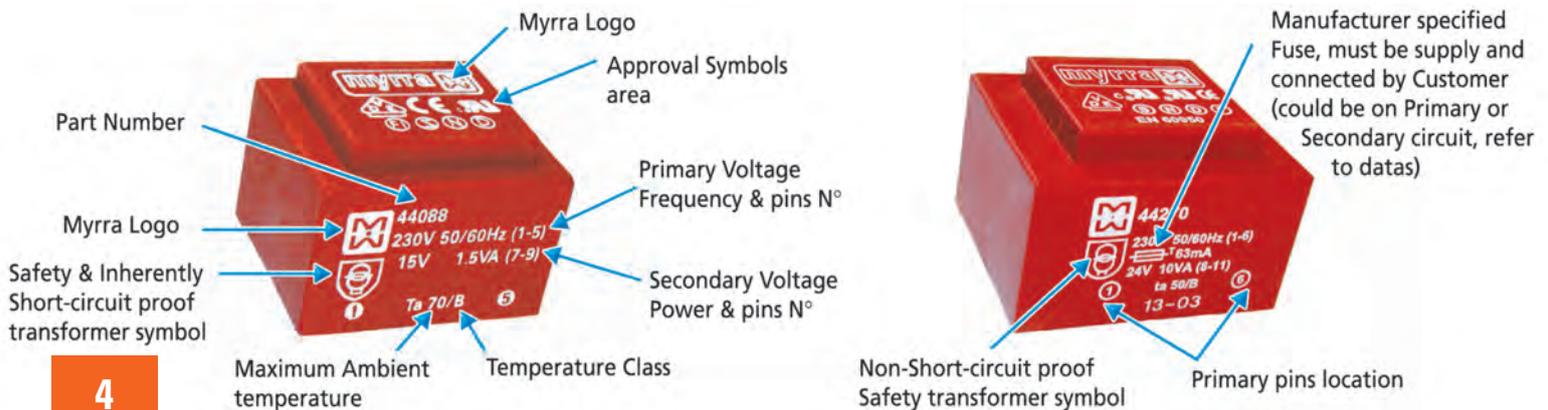
Any transformer whose requires Power and Ambient corresponding to those of our 44000 & 45000 range, and whose secondary voltage can fit in our minimum to maximum secondary range will be covered by EN61558-2-6, EN60950, or UL506 approvals, depending on the effective choice .

SPECIAL TRANSFORMERS

MYRRA can use the 44000, 45000 or 46000 standard ranges to examine any transformer for compliance with your specifications and with international standards.

On request, we can add thermal protection, thermal fuse, thermal switch-CTP.

In certain cases, the addition of thermal protection enables the ambient temperature to be increased, while still complying with EN 61558.

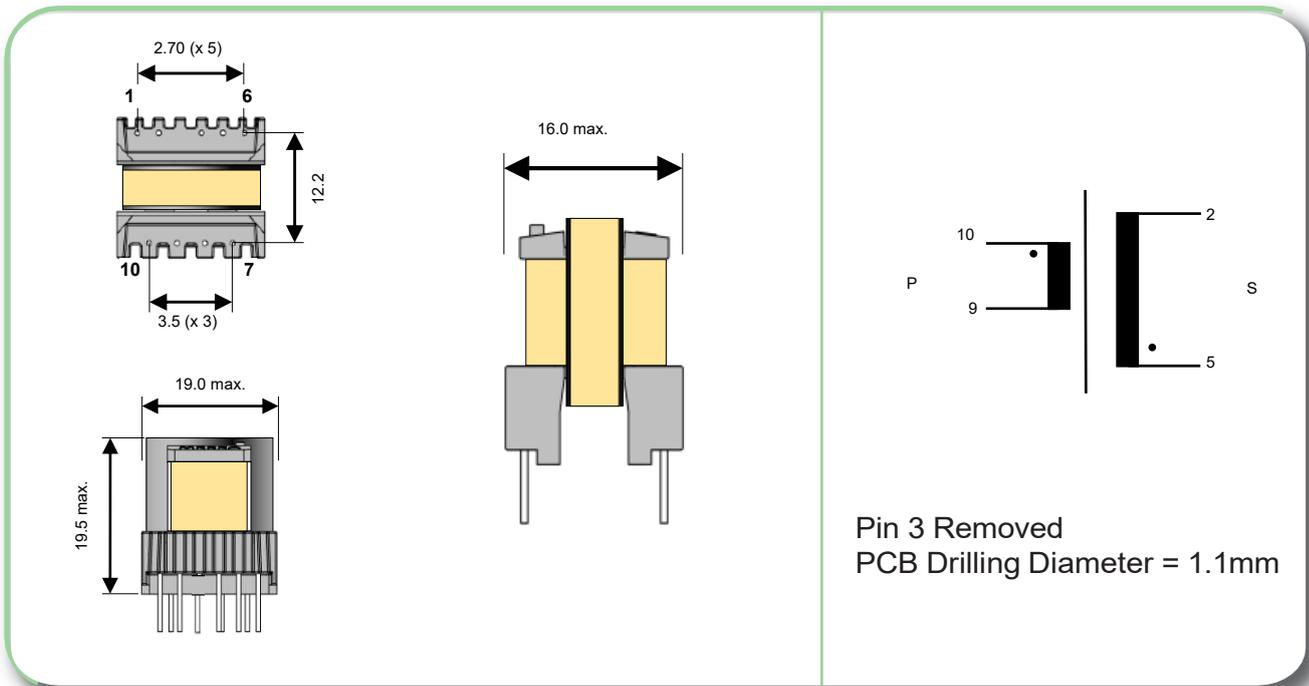




MYRRA Part N°	CORE SIZE	Max. Output Power	Outputs				
		Watts	Vdc nominal voltage				
74200	E16	5w	5v	12v			
74201	E16	6w	5v				
74202	E16	6w	12v				
74203	E16	6w	3.3v	5v			
74210	E16	12w	5v	12v			
74214	E16	12w	24v	24v			
74215	E16	12w	5v	15v	24v		
74020	EL19	18w	5v	12v			
74021	EL19	18w	5v	12v			
74023	EL19	16w	3.3v	5v	12v	18v	30v
74030	E25	30w	5v	12v	12v		
74032	E25	35w	24v				
74040	ETD29	60w	5v	12v	5v	12v	
74043	ERL28	60w	3.3v	5v	12v	18v	30v
74050	ETD34	90w	5v	12v	5v	12v	
74060	ETD39	140w	5v	12v	5v	12v	
74070	ETD44	180w	5v	12v	5v	12v	
74087	EF20	24w	12v	12v			
74088	EF20	20w	3.3v	5v	12v		
74089	EF20	20w	5v	5v			
74290	E16	1.5w	5v				
74291	E16	1.5w	12v				
74292	E16	3.1w	5v				
74293	E16	3.1w	12v				
74294	E16	9w	5v				
74295	E16	9w	12v				

Note : "5 volts" outputs can generally be used for 3.3 to 6volts; "12 volts" outputs can be used for 9 to 16volts.
See detailed characteristics.

- Primary / Secondary Insulation $\geq 4000V$
- PD2 - creepage distances $\geq 6mm$
- Ambient Temperature $< 85^{\circ}C$
- Construction conforms to the certified MYRRA class B UL Electrical Insulation System E113497-B1
- Construction conforms to IEC60335-1, IEC60950-1, IEC61558-2-16 for reinforced insulation
- Exclusively uses UL94-V0 listed materials

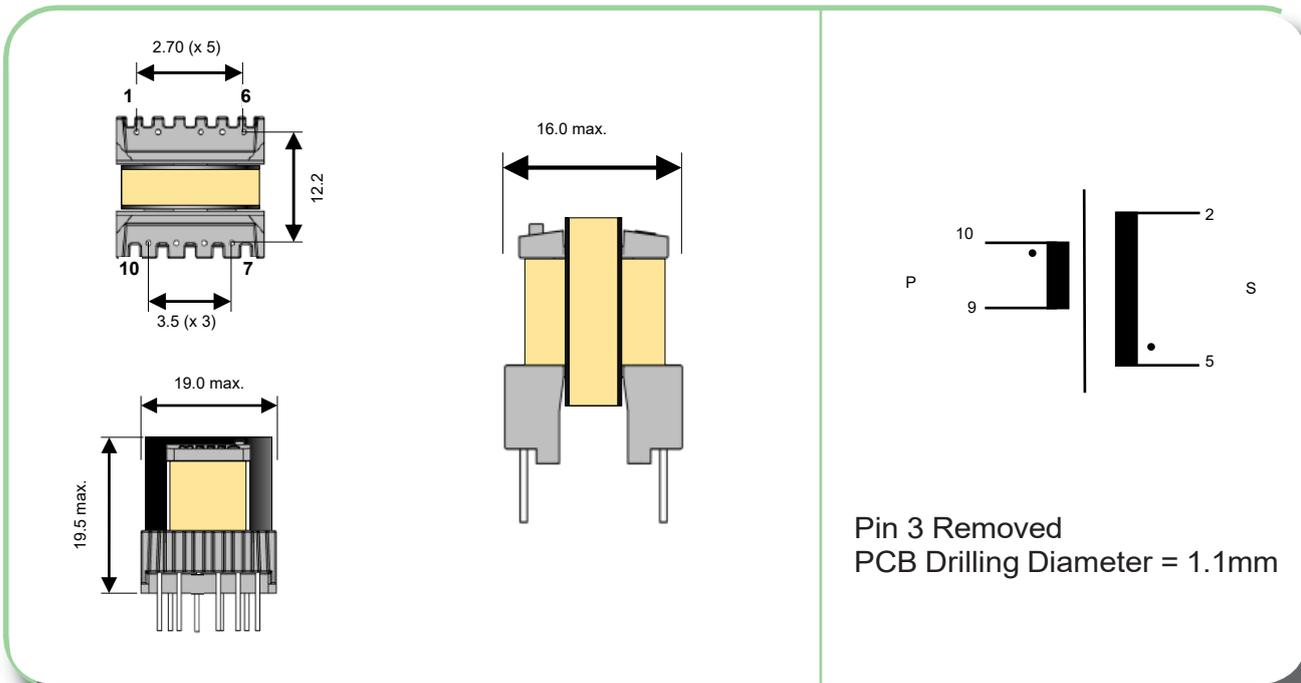


MYRRA P / N	Output Power maximum	Windings					
			Pins	Turns	Voltage	Current maximum	Inductance (+/-10%)
74290	1.5 w	Pri	10 – 9	228	85 - 265Vrms	0.28 Apeak	6.0 mH
		S1	5 – 2	16	3.3 – 6 Vdc	0.4 Adc	
74291	1.5 w	Pri	10 – 9	228	85 - 265Vrms	0.28 Apeak	6.0 mH
		S1	5 – 2	28	7.5 – 15 Vdc	0.2 Adc	

Examples of application with Integrated Circuits :

MYRRA P / N	Control IC Manufacturer	Input voltage	Power	Frequency
74290	Power Integrations	85 - 265Vrms	1.5w	44kHz
74291	Power Integrations	85 - 265Vrms	1.5w	44kHz

- Primary / Secondary Insulation $\geq 4000V$
- PD2 - creepage distances $\geq 6mm$
- Ambient Temperature $< 85^{\circ}C$
- Construction conforms to the certified MYRRA class B UL Electrical Insulation System E113497-B1
- Construction conforms to IEC60335-1, IEC60950-1, IEC61558-2-16 for reinforced insulation
- Exclusively uses UL94-V0 listed materials



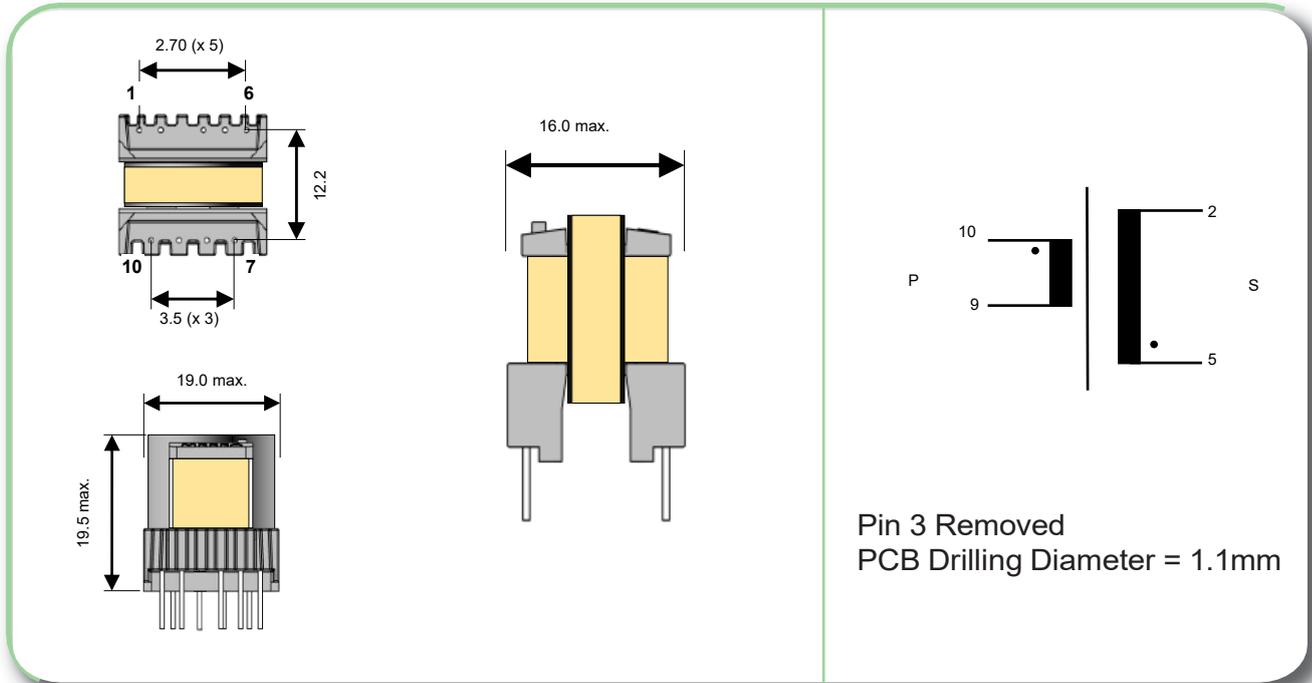
MYRRA P / N	Output Power maximum	Windings					
			Pins	Turns	Voltage	Current maximum	Inductance (+/-10%)
74292	3.1 w	Pri	10 - 9	191	85 - 265Vrms	0.34 Apeak	4.2 mH
		S1	5 - 2	13	3.3 - 6 Vdc	0.9 Adc	
74293	3.1 w	Pri	10 - 9	191	85 - 265Vrms	0.34 Apeak	4.2 mH
		S1	5 - 2	24	7.5 - 15 Vdc	0.4 Adc	

Examples of application with Integrated Circuits :

MYRRA P / N	Control IC Manufacturer	Input voltage	Power	Frequency
74292	Power Integrations	85 - 265Vrms	3.1w	44kHz
74293	Power Integrations	85 - 265Vrms	3.1w	44kHz

HIGH FREQUENCY FERRITE
POWER FERRITE TRANSFORMERS

- Primary / Secondary Insulation $\geq 4000V$
- PD2 - creepage distances $\geq 6mm$
- Ambient Temperature $< 60^{\circ}C$
- Construction conforms to the certified MYRRA class B UL Electrical Insulation System E113497-B1
- Construction conforms to IEC60335-1, IEC60950-1, IEC61558-2-16 for reinforced insulation
- Exclusively uses UL94-V0 listed materials



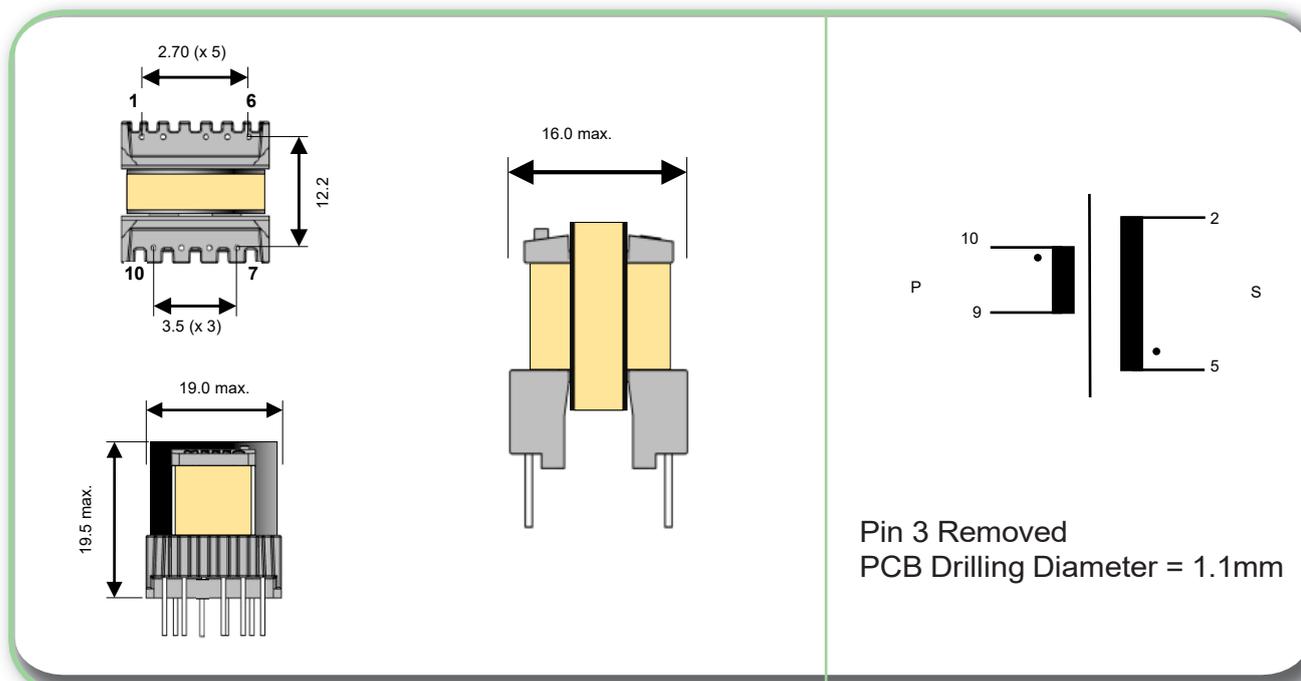
MYRRA P / N	Output Power maximum	Windings					
			Pins	Turns	Voltage	Current maximum	Inductance (+/-10%)
74294	9 w	Pri	10 – 9	135	85 - 265Vrms	0.48 Apeak	2.1 mH
		S1	5 – 2	9	3.3 – 6 Vdc	1.5 Adc	
74295	9 w	Pri	10 – 9	135	85 - 265Vrms	0.48 Apeak	2.1 mH
		S1	5 – 2	17	7.5 – 15 Vdc	0.9 Adc	

Examples of application with Integrated Circuits :

MYRRA P / N	Control IC Manufacturer	Input voltage	Power	Frequency
74294	Power Integrations	85 - 265Vrms	4.2w	44kHz
	Power Integrations	85 - 265Vrms	5w	132kHz
	Power Integrations	85 - 265Vrms	9w	132kHz
74295	Power Integrations	85 - 265Vrms	5w	44kHz
	Power Integrations	85 - 265Vrms	5w	132kHz
	Power Integrations	85 - 265Vrms	9w	132kHz

HIGH FREQUENCY FERRITE
POWER FERRITE TRANSFORMERS

- Primary / Secondary Insulation $\geq 4000V$
- Primary / Auxiliary Insulation $\geq 1500V$
- PD2 - creepage distances $\geq 6mm$
- Ambient Temperature $< 70^{\circ}C$
- Construction conforms to the certified MYRRA class B UL Electrical Insulation System E113497-B1
- Construction conforms to IEC60335-1, IEC60950-1, IEC61558-2-16 for reinforced insulation
- Exclusively uses UL94-V0 listed materials



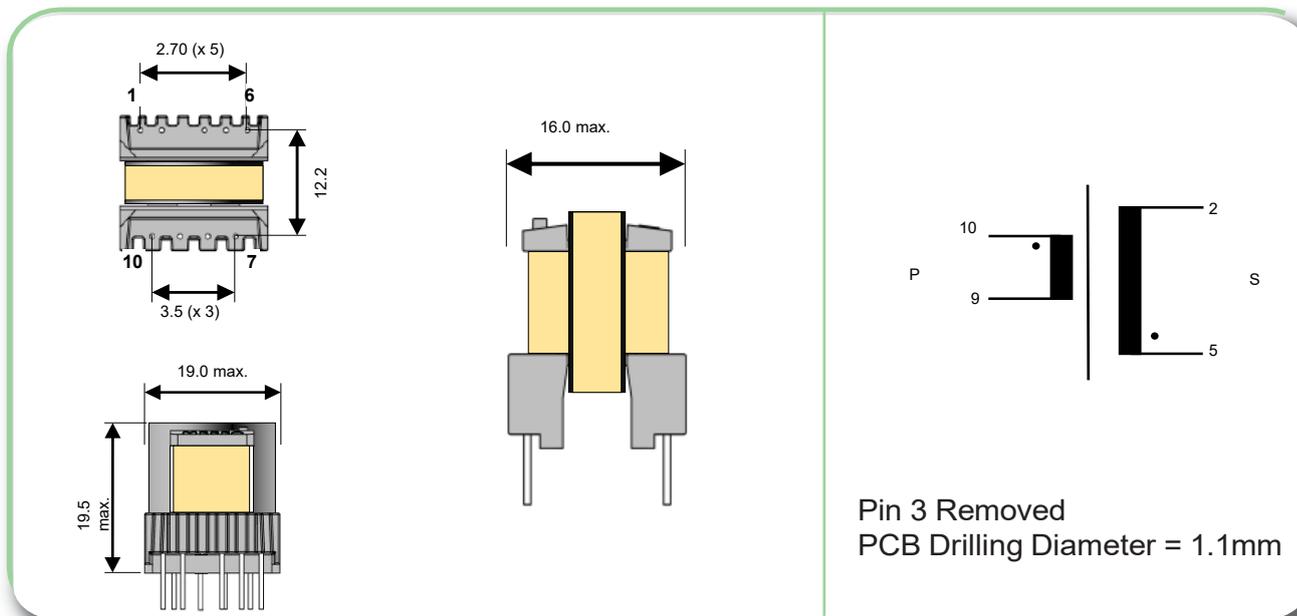
MYRRA P / N	Output Power maximum	Windings					
			Pins	Turns	Voltage	Current maximum	Inductance (+/-10%)
74200	5 w	Pri	4 - 6	138	85 - 265Vrms	0.27 Apeak	3.9 mH
		Aux	2 - 1	16	7 - 14 Vdc	0.1 Adc	
		S1	9 - 10	8	3.3 - 7 Vdc	1.2 Adc	
		S2	7 - 8	19	8 - 17 Vdc	0.4 Adc	

Examples of application with Integrated Circuits :

MYRRA P / N	Control IC Manufacturer	Input voltage	Power	Frequency
74200	Power Integrations	85 - 265Vrms	5w	132kHz
	ST Microelectronics	85 - 265Vrms	4w	70kHz

HIGH FREQUENCY FERRITE
POWER FERRITE TRANSFORMERS

- Primary / Secondary Insulation $\geq 4000V$
- Primary / Auxiliary Insulation $\geq 1500V$
- PD2 - creepage distances $\geq 6mm$
- Ambient Temperature $< 60^{\circ}C$
- Construction conforms to the certified MYRRA class B UL Electrical Insulation System E113497-B1
- Construction conforms to IEC60335-1, IEC60950-1, IEC61558-2-16 for reinforced insulation
- Exclusively uses UL94-V0 listed materials

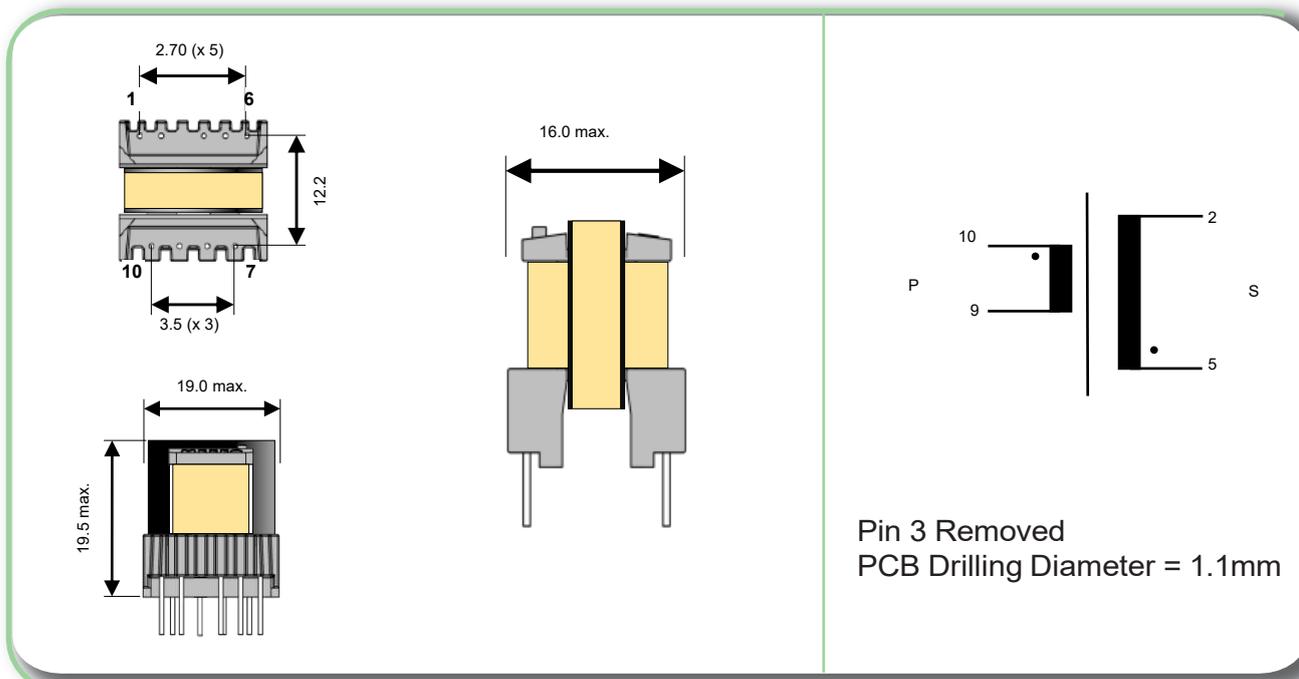


MYRRA P / N	Output Power maximum	Windings					
			Pins	Turns	Voltage	Current maximum	Inductance (+/-10%)
74201	6 w	Pri	4 - 6	138	85 - 265Vrms	0.35 Apeak	3.0 mH
		Aux	2 - 1	20	8 - 16 Vdc	0.1 Adc	
		S1	9 - 10	8	3 - 6 Vdc	1.2 Adc	
74202	6 w	Pri	4 - 6	150	85 - 265Vrms	0.38 Apeak	3.0 mH
		Aux	2 - 1	22	8.5 - 17 Vdc	0.1 Adc	
		S1	9 - 10	24	9 - 18 Vdc	0.5 Adc	

Examples of application with Integrated Circuits :

MYRRA P / N	Control IC Manufacturer	Input voltage	Power	Frequency
74201	Power Integrations	85 - 265Vrms	6w	132kHz
	ST Microelectronics	85 - 265Vrms	6w	70kHz
	ST Microelectronics	85 - 265Vrms	3w	40kHz
	Motorola	85 - 265Vrms	6w	100kHz
	Infineon	185 - 265Vrms	6w	100kHz
74202	Power Integrations	85 - 265Vrms	6w	132kHz
	ST Microelectronics	85 - 265Vrms	6w	70kHz
	ST Microelectronics	85 - 265Vrms	3w	40kHz
	Motorola	85 - 265Vrms	6w	100kHz
	Infineon	185 - 265Vrms	6w	100kHz

- Primary / Secondary Insulation $\geq 4000V$
- Primary / Auxiliary Insulation $\geq 1500V$
- PD2 - creepage distances $\geq 6mm$
- Ambient Temperature $< 70^{\circ}C$
- Construction conforms to the certified MYRRA class B UL Electrical Insulation System E113497-B1
- Construction conforms to IEC60335-1, IEC60950-1, IEC61558-2-16 for reinforced insulation
- Exclusively uses UL94-V0 listed materials



MYRRA P / N	Output Power maximum	Windings					
			Pins	Turns	Voltage	Current maximum	Inductance (+/-10%)
74203	6 w	Pri	4 - 6	120	85 - 265Vrms	0.3 Apeak	3.0 mH
		Aux	2 - 1	17	8 - 16 Vdc	0.1 Adc	
		S1	9 - 10	5	2 - 4 Vdc	1.8 Adc	
		S2	7 - 10	7	3 - 6 Vdc	1.2 Adc	

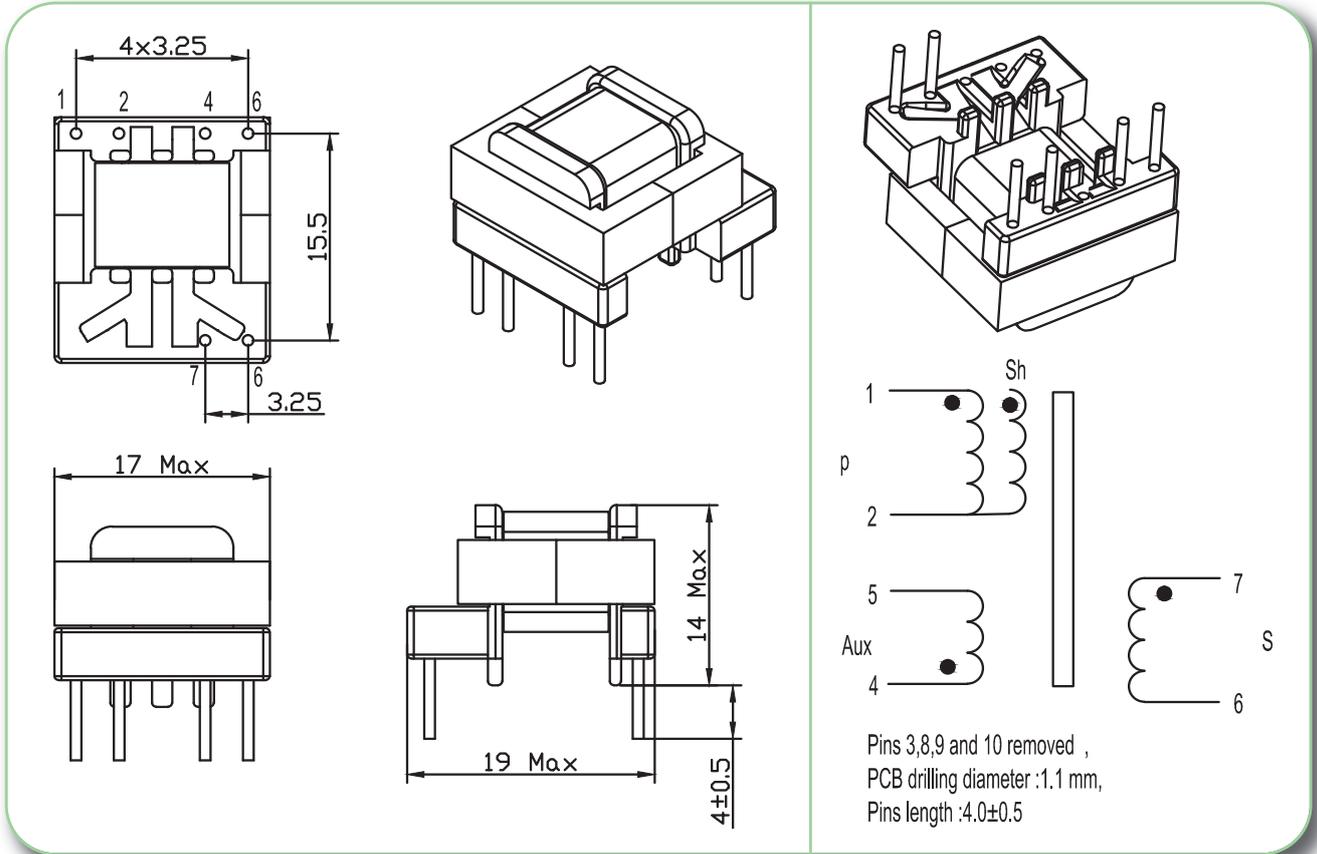
Examples of application with Integrated Circuits :

MYRRA P / N	Control IC Manufacturer	Input voltage	Power	Frequency
74203	Power Integrations	85 - 265Vrms	5w	132kHz
	ST Microelectronics	85 - 265Vrms	6w	70kHz
	ST Microelectronics	85 - 265Vrms	3w	40kHz
	Motorola	85 - 265Vrms	6w	100kHz
	Infineon	185 - 265Vrms	6w	100kHz

HIGH FREQUENCY FERRITE
POWER FERRITE TRANSFORMERS



- Primary / Secondary Insulation ≥ 4000 V
- Primary / Auxiliary Insulation ≥ 1500 V
- Creepage distance Primary / Secondary ≥ 6 mm
- Ambient temperature $< 50^{\circ}\text{C}$
- Construction conforms to IEC60335-1, IEC60950-1, IEC61558-2-16 for reinforced insulation
- Exclusively uses UL94 V-0 listed materials



MYRRA P/N	Output Power maximum	Windings					
			Pins	Turns	Voltage	Current maximum	Inductance (+/-10%)
74004	1.7 w	Pri	1 - 2	108	85 - 265Vrms	0.28 Apeak	2700 μH
		Aux	5 - 4	25	22 Vdc	0.1 Adc	
		S	7 - 6	8	6 Vdc	0.5 Adc	
		Shield	NC - 2	8			

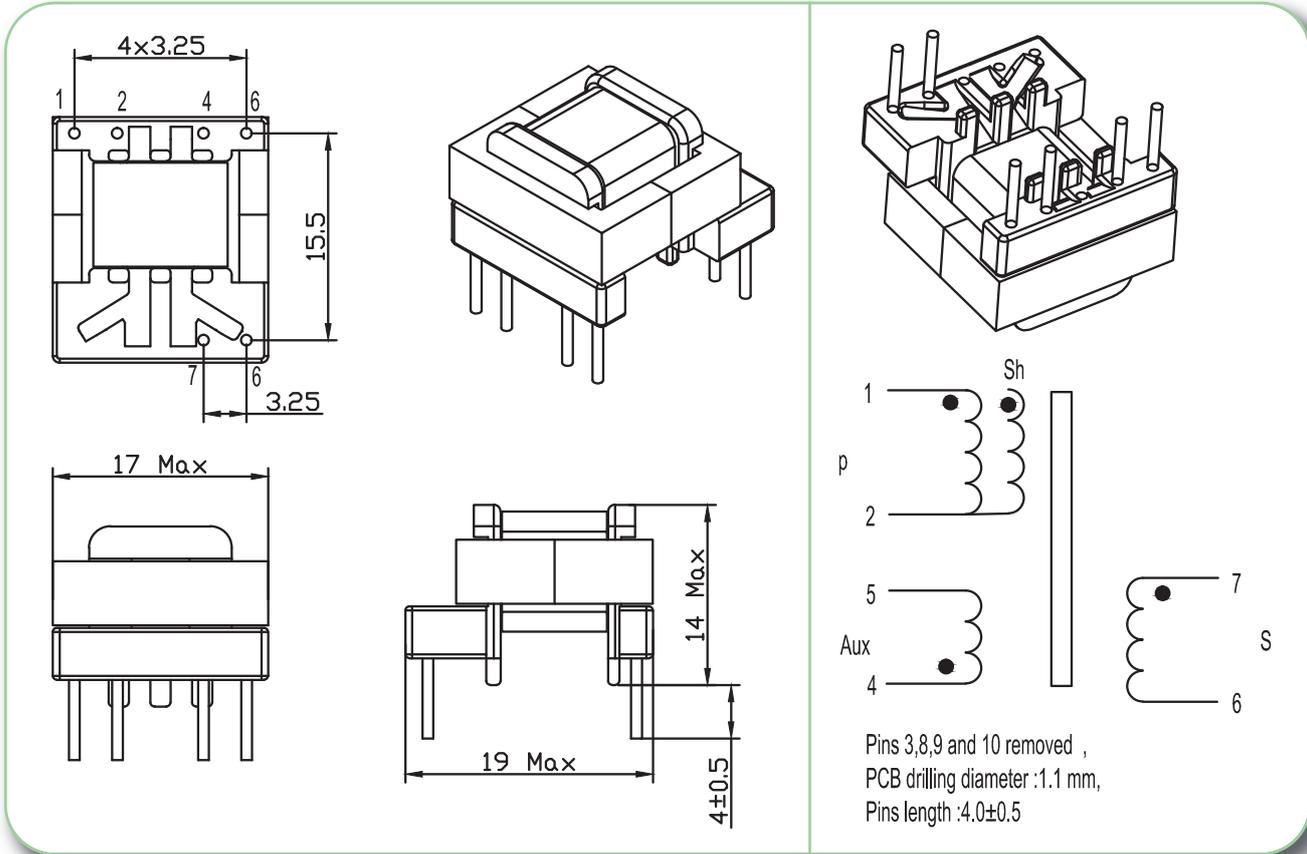
Examples of application with Integrated Circuits :

MYRRA P/N	Control IC Manufacturer	Control IC P/N	Input voltage	Power	Frequency
74004	Power Integrations	LNK562	185 - 265 Vrms	1.3 W	66 kHz
	Power integrations	LNK562	85 - 265 Vrms	1.3 W	66 kHz
	Power Integrations	LNK563	185 - 265 Vrms	1.7 W	83 kHz
	Power Integrations	LNK563	85 - 265 Vrms	1.7 W	83 kHz
	Power Integrations	LNK564	185 - 265 Vrms	2.0 W	100 kHz
	Power Integrations	LNK564	85 - 265 Vrms	2.0 W	100 kHz

Remarks : This transformer perfectly fulfils the specification of Power Integrations AN-39 Appendix - A.



- Primary / Secondary Insulation ≥ 4000 V
- Primary / Auxiliary Insulation ≥ 1500 V
- Creepage distance Primary / Secondary ≥ 6 mm
- Ambient temperature $< 50^{\circ}\text{C}$
- Construction conforms to IEC60335-1, IEC60950-1, IEC61558-2-16 for reinforced insulation
- Exclusively uses UL94 V-0 listed materials



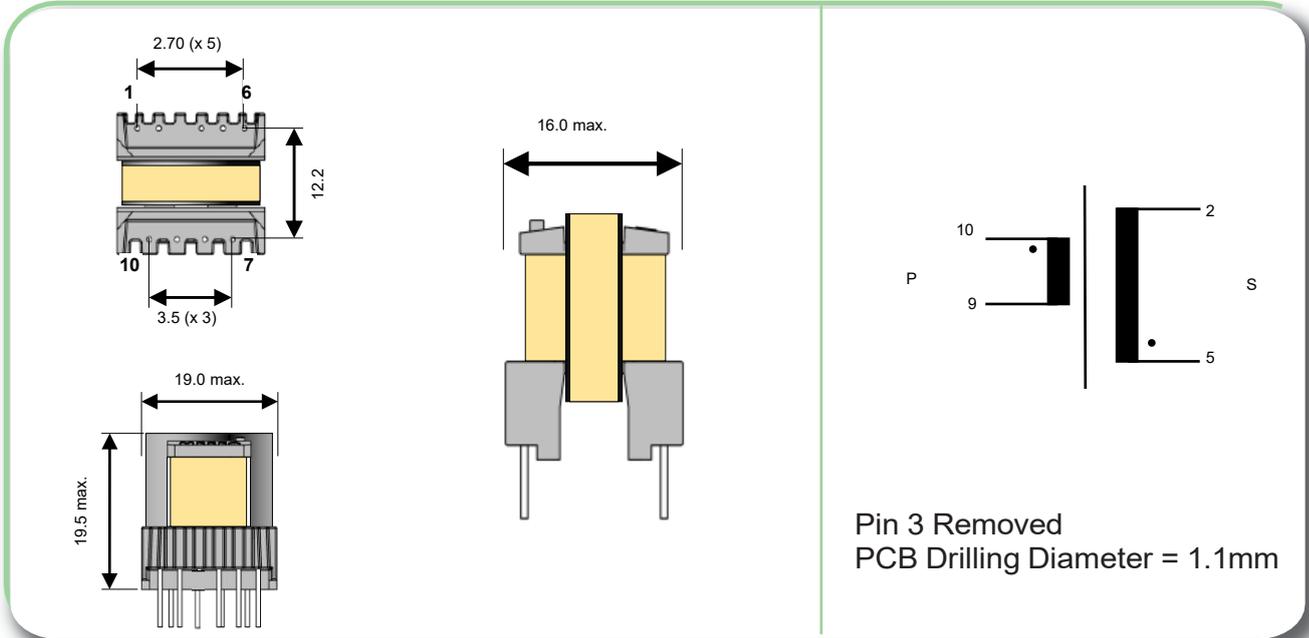
MYRRA P/N	Output Power maximum	Windings					
			Pins	Turns	Voltage	Current maximum	Inductance (+/-10%)
74005	1.7 w	Pri	1 - 2	108	85 - 265Vrms	0.28 Apeak	2700 μH
	Aux	5 - 4	25	22 Vdc	0.1 Adc		
	S	7 - 6	12	10 Vdc	0.2 Adc		
	Shield	NC - 2	8				

Examples of application with Integrated Circuits :

MYRRA P/N	Control IC Manufacturer	Control IC P/N	Input voltage	Power	Frequency
74005	Power Integrations	LNK562	185 - 265 Vrms	1.3 W	66 kHz
	Power integrations	LNK562	85 - 265 Vrms	1.3 W	66 kHz
	Power Integrations	LNK563	185 - 265 Vrms	1.7 W	83 kHz
	Power Integrations	LNK563	85 - 265 Vrms	1.7 W	83 kHz
	Power Integrations	LNK564	185 - 265 Vrms	2.0 W	100 kHz
	Power Integrations	LNK564	85 - 265 Vrms	2.0 W	100 kHz

Remarks : This transformer perfectly fulfils the specification of Power Integrations AN-39 Appendix - B.

- Primary / Secondary Insulation $\geq 4000V$
- PD2 - creepage distances $\geq 6mm$
- Ambient Temperature $< 50^{\circ}C$
- Construction conforms to the certified MYRRA class B UL Electrical Insulation System E113497-B1
- Construction conforms to IEC60335-1, IEC60950-1, IEC61558-2-16 for reinforced insulation
- Exclusively uses UL94-V0 listed materials



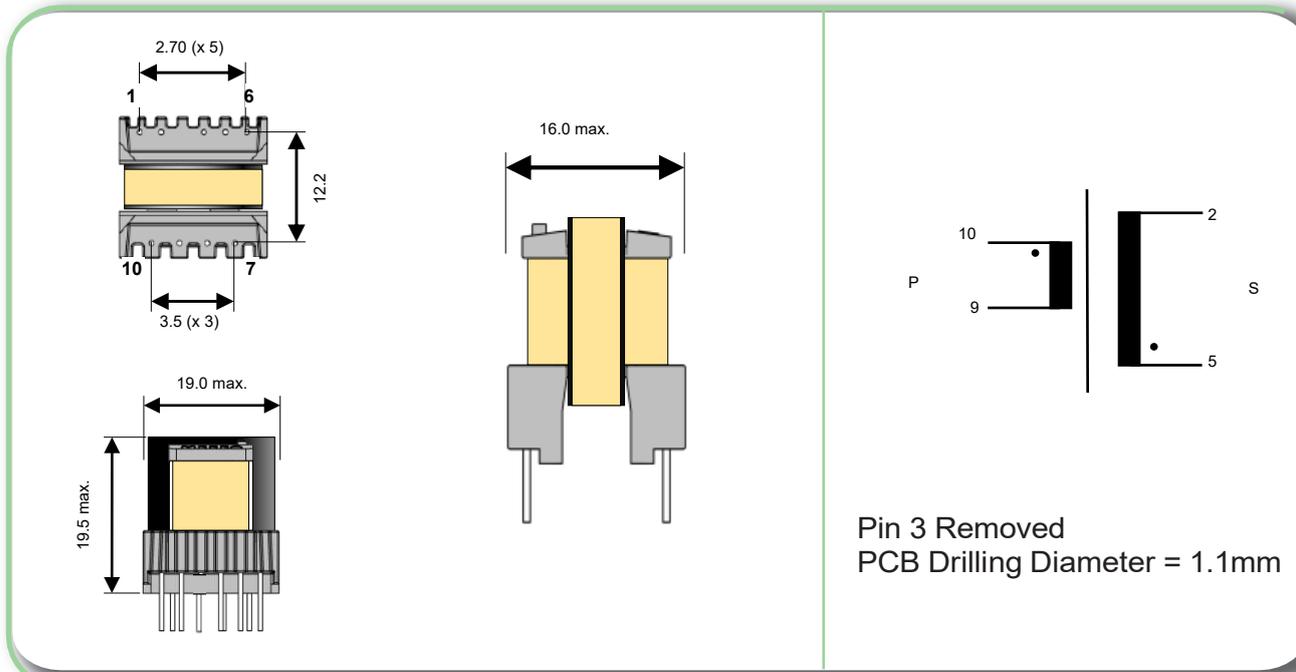
MYRRA P / N	Output Power maximum	Windings					
			Pins	Turns	Voltage	Current maximum	Inductance (+/-10%)
74210	12 w	Pri	4 - 6	120	85 - 265Vrms	0.55 Apeak	1.66 mH
		Aux	2 - 1	14	7 - 14 Vdc	0.1 Adc	
		S1	9 - 10	7	3.3 - 7 Vdc	2 Adc	
		S2	7 - 8	17	8 - 17 Vdc	1 Adc	

Examples of application with Integrated Circuits :

MYRRA P / N	Control IC Manufacturer	Input voltage	Power	Frequency
74210	Power Integrations	185 - 265Vrms	12w	132kHz
	Power Integrations	85 - 265Vrms	10w	132kHz
	Power Integrations	185 - 265Vrms	12w	132kHz
	Power Integrations	85 - 265Vrms	10w	132kHz
	Power Integrations	185 - 265Vrms	12w	132kHz
	ST Microelectronics	85 - 265Vrms	8w	70kHz
	ST Microelectronics	185 - 265Vrms	10w	70kHz
	Motorola	85 - 265Vrms	8w	100kHz
	Motorola	185 - 265Vrms	10w	100kHz
	Infineon	92 - 265Vrms	7,5w	100kHz
	Infineon	185 - 265Vrms	10w	100kHz
	Fairchild	85 - 265Vrms	7w	50kHz
Fairchild	185 - 265Vrms	10w	100kHz	

HIGH FREQUENCY FERRITE
POWER FERRITE TRANSFORMERS

- Primary / Secondary Insulation $\geq 4000V$
- Primary / Auxiliary Insulation $\geq 1500V$
- PD2 - creepage distances $\geq 6mm$
- Ambient Temperature $< 50^{\circ}C$
- Construction conforms to the certified MYRRA class B UL Electrical Insulation System E113497-B1
- Construction conforms to IEC60335-1, IEC60950-1, IEC61558-2-16 for reinforced insulation
- Exclusively uses UL94-V0 listed materials



MYRRA P / N	Output Power maximum	Windings					
			Pins	Turns	Voltage	Current maximum	Inductance (+/-10%)
74214	12 w	Pri	4 - 6	120	85 - 265Vrms	0.5 Apeak	1.80 mH
		Aux	2 - 1	17	9 - 18 Vdc	0.2 Adc	
		S1	9 - 10	27	15 - 30 Vdc	0.4 Adc	
		S2	7 - 8	27	15 - 30 Vdc	0.4 Adc	

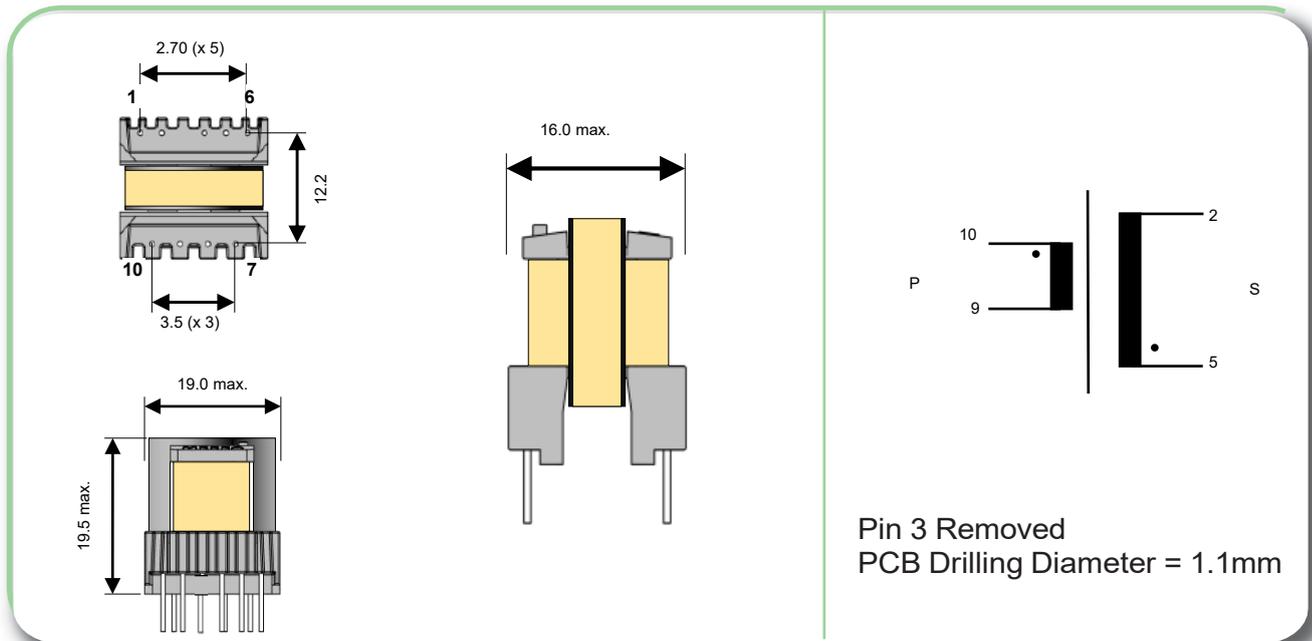
Typical outputs :
 +24V 0.5A with S1 – S2 in parallel
 +48V 0.25A with S1 – S2 in series (8-9 connected)
 +15V / -15V 0.4A with pins 8-9 connected to 0V

Examples of application with Integrated Circuits :

MYRRA P / N	Control IC Manufacturer	Input voltage	Power	Frequency
74214	Power Integrations	185 - 265Vrms	12w	
	Power Integrations	85 - 265Vrms	8w	
	Power Integrations	185 - 265Vrms	12w	132kHz
	Power Integrations	85 - 265Vrms	8w	132kHz

HIGH FREQUENCY FERRITE
POWER FERRITE TRANSFORMERS

- Primary / Secondary Insulation $\geq 4000V$
- Primary / Auxiliary Insulation $\geq 1500V$
- PD2 - creepage distances $\geq 6mm$
- Ambient Temperature $< 60^{\circ}C$
- Construction conforms to the certified MYRRA class B UL Electrical Insulation System E113497-B1
- Construction conforms to IEC60335-1, IEC60950-1, IEC61558-2-16 for reinforced insulation
- Exclusively uses UL94-V0 listed materials



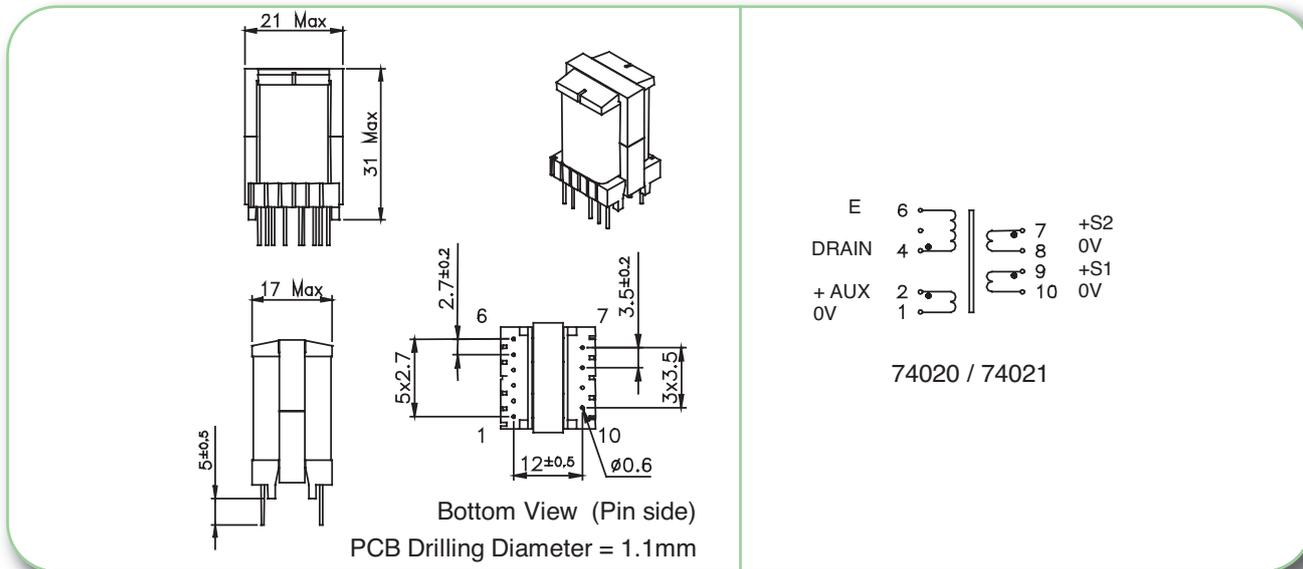
MYRRA P / N	Output Power maximum	Windings					
			Pins	Turns	Voltage	Current maximum	Inductance (+/-10%)
74215	12 w	Pri	4 - 6	120	85 - 265Vrms	0.5 Apeak	1.80 mH
		Aux	2 - 1	14	12 Vdc	0.2 Adc	
		S1	9 - 10	6	5 Vdc	1.5 Adc	
		S2	8 - 10	17	15 Vdc	0.6 Adc	
		S3	7 - 10	27	24 Vdc	0.4 Adc	

Examples of application with Integrated Circuits :

MYRRA P / N	Control IC Manufacturer	Input voltage	Power	Frequency
74215	Power Integrations	185 - 265Vrms	10w	
	Power Integrations	85 - 265Vrms	8w	
	Power Integrations	185 - 265Vrms	12w	132kHz
	Power Integrations	85 - 265Vrms	9w	132kHz



- Primary / Secondary Insulation $\geq 4000V$
- Primary / Auxiliary Insulation $\geq 1500V$
- Creepage distance Primary / Secondary $\geq 6mm$
- Ambient temperature $< 50^{\circ}C$
- Construction conforms to IEC60335-1, IEC60950-1, IEC61558-2-16 for reinforced insulation
- Exclusively uses UL94-V0 listed materials



MYRRA P / N	Output Power maximum	Windings					
			Pins	Turns	Voltage	Current maximum	Inductance (+/-10%)
74020	18 w	Pri	4 - 6	108	85 - 265Vrms	0.8 Apeak	1250µH
		Aux	2 - 1	12	7 - 14 Vdc	0.1 Adc	
		S1	9 - 10	6	3.3 - 7 Vdc	3 Adc	
		S2	7 - 8	14	8 - 16.5 Vdc	1.4 Adc	
74021	18 w	Pri	4 - 6	108	85 - 265Vrms	1.1 Apeak	900µH
		Aux	2 - 1	12	7 - 14 Vdc	0.1 Adc	
		S1	9 - 10	6	3.3 - 7 Vdc	3 Adc	
		S2	7 - 8	14	8 - 16.5 Vdc	1.4 Adc	

Examples of application with Integrated Circuits :

MYRRA P / N	Control IC Manufacturer	Input voltage	Power	Frequency
74020	Power Integrations	85 - 265Vrms	15w	132kHz
	Power Integrations	185 - 265Vrms	18w	132kHz
	Power Integrations	85 - 265Vrms	12w	132kHz
	ST Microelectronics	85 - 265Vrms	10w	100kHz
	ST Microelectronics	185 - 265Vrms	12w	100kHz
	ST Microelectronics	185 - 265Vrms	16w	100kHz
	Motorola	185 - 265Vrms	16w	100kHz
	Infineon	185 - 265Vrms	16w	100kHz
74021	ST Microelectronics	85 - 265Vrms	13w	70kHz
	Motorola	85 - 265Vrms	13w	100kHz
	Infineon	92 - 265Vrms	10w	100kHz



- Primary / Secondary Insulation $\geq 4000V$
- Creepage distance Primary / Secondary $\geq 8mm$
- Ambient temperature $< 50^{\circ}C$
- Construction conforms to IEC60335-1, IEC60950-1, IEC61558-2-16 for reinforced insulation
- Exclusively uses UL94-V0 listed materials
- Primary / Auxiliary Insulation $\geq 1500V$

74087 - 74088 - 74089 // Drawing

Pinout - Viewed from pins side

74087 - 74089

74088

PIN 3 Removed
PCB Drilling Diameter = 1.2mm

MYRRA P / N	Output Power maximum	Windings					
			Pins	Turns	Voltage	Current maximum	Inductance (+/-10%)
74087	24 w	Pri	4-5	86	85 - 265Vrms	1.0 Apeak	1000µH
		Aux	2-1	12	11 - 18 Vdc	0.3 Adc	
		S1	6-7	10	9 - 15 Vdc	1.5 Adc	
		S2	9-10	10	9 - 15 Vdc	1.5 Adc	
74088	20 w	Pri	4-5	80	85 - 265Vrms	0.9 Apeak	1100µH
		Aux	2-1	17	15 Vdc	0.3 Adc	
		S1	7-8	4	3.3 Vdc	S1 + S2 : 7 Adc	
		S2	6-8	6	5 Vdc	S1 + S2 : 7 Adc	
		S3	9-10	14	12 Vdc	1.3 Adc	
74089	20 w	Pri	4-5	86	85 - 265Vrms	0.85 Apeak	1300µH
		Aux	2-1	12	7 - 18 Vdc	0.3 Adc	
		S1	6-7	5	3 - 7.5 Vdc	2.0 Adc	
		S2	9-10	5	3 - 7.5 Vdc	2.0 Adc	

Examples of application with Integrated Circuits :

MYRRA P / N	Control IC Manufacturer	Input voltage	Power	Frequency
74087	Power Integrations	185 - 265Vrms	24w	132kHz
	Power Integrations	85 - 265Vrms	15w	132kHz
74088	Power Integrations	185 - 265Vrms	20w	132kHz
	Power Integrations	85 - 265Vrms	12w	132kHz
74089	Power Integrations	185 - 265Vrms	20w	132kHz
	Power Integrations	85 - 265Vrms	14w	132kHz
	Power Integrations	185 - 265Vrms	17w	< 120kHz

HIGH FREQUENCY FERRITE POWER FERRITE TRANSFORMERS



- Primary / Secondary Insulation $\geq 4000V$
- Primary / Auxiliary Insulation $\geq 1500V$
- Creepage distance Primary / Secondary $\geq 6mm$
- Ambient temperature $< 50^{\circ}C$
- Construction conforms to IEC60335-1, IEC60950-1, IEC61558-2-16 for reinforced insulation
- Exclusively uses UL94-V0 listed materials

Bottom View
(Pin side)

74030

74032

PIN 4 Removed
PCB Drilling Diameter = 1.4mm

MYRRA P / N	Output Power maximum	Windings					
			Pins	Turns	Voltage	Current maximum	Inductance (+/-10%)
74030	30 w	Pri	3-5	70	85 - 265Vrms	1.5 Apeak	750µH
		Aux	2-1	8	7 - 14.5 Vdc	1 Adc	
		S1	7-8	4	3.3 - 7	3 Adc	
		S2	6-8	9	8 - 16 Vdc	1.5 Adc	
		S3	9-10	9	8 - 16 Vdc	1.5 Adc	
74032	35 w	Pri	3-5	72	85 - 265Vrms	1.1 Apeak	1100µH
		Aux	2-1	10	8 - 16 Vdc	1 Adc	
		S1	6-10	18	15 - 30 Vdc	1.4 Adc	

Note for 74030 : S2 and S3 can be connected in series or in parallel

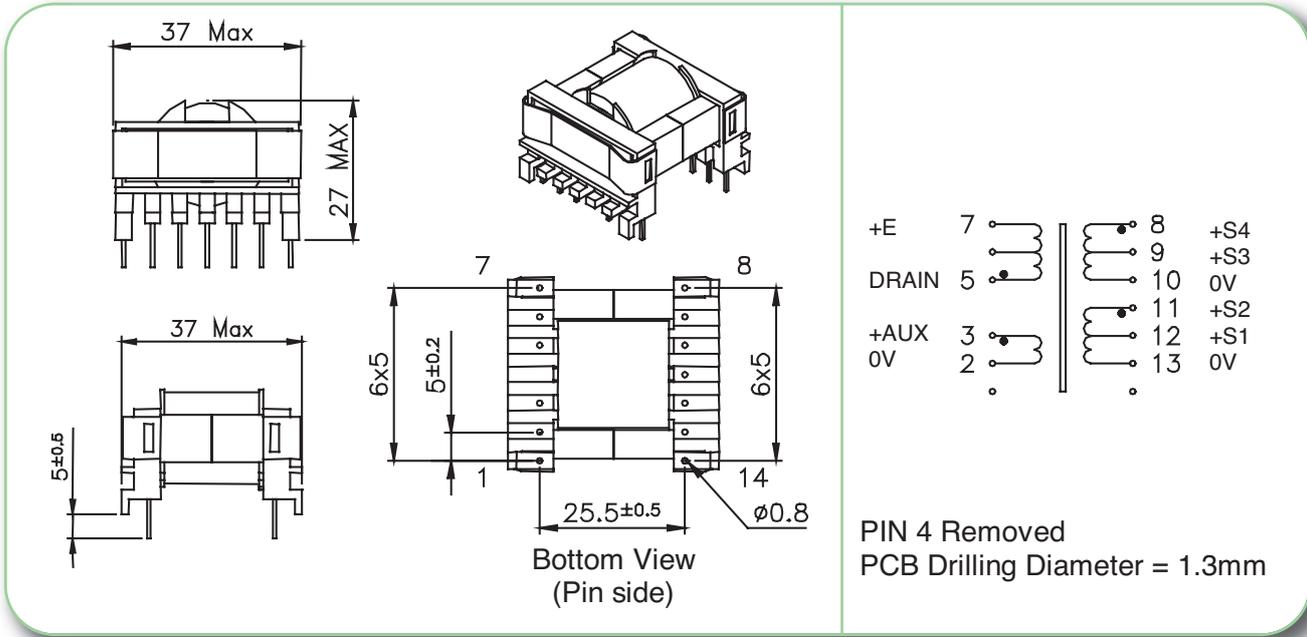
Examples of application with Integrated Circuits :

MYRRA P / N	Control IC Manufacturer	Input voltage	Power	Frequency
74030	Power Integrations	185 - 265Vrms	30w	132kHz
	Power Integrations	85 - 265Vrms	25w	66 or 132kHz
	ST Microelectronics	85 - 265Vrms	22w	70kHz
	ST Microelectronics	185 - 265Vrms	30w	70kHz
	Motorola	85 - 265Vrms	22w	100kHz
	Motorola	185 - 265Vrms	30w	100kHz
	Infineon	185 - 265Vrms	30w	100kHz
	Fairchild	85 - 265Vrms	22w	100kHz
74032	Power Integrations	185 - 265Vrms	25w	132kHz

HIGH FREQUENCY FERRITE
POWER FERRITE TRANSFORMERS



- Primary / Secondary Insulation $\geq 4000V$
- Primary / Auxiliary Insulation $\geq 1500V$
- Creepage distance Primary / Secondary $\geq 6mm$
- Ambient temperature $< 50^{\circ}C$
- Construction conforms to IEC60335-1, IEC60950-1, IEC61558-2-16 for reinforced insulation
- Exclusively uses UL94-V0 listed materials



MYRRA P / N	Output Power maximum	Windings					
			Pins	Turns	Voltage	Current maximum	Inductance (+/-10%)
74040	60 w	Pri	5 - 7	50	85 - 265Vrms	3.0 Apeak	500µH
		Aux	3 - 2	6	7 - 14.5 Vdc	0.5 Adc	
		S1	12 - 13	3	3.3 - 7	4 Adc	
		S2	11 - 13	7	8 - 16.5 Vdc	2.5 Adc	
		S3	9 - 10	3	3.3 - 7	4 Adc	
		S4	8 - 10	7	8 - 16.5 Vdc	2.5 Adc	

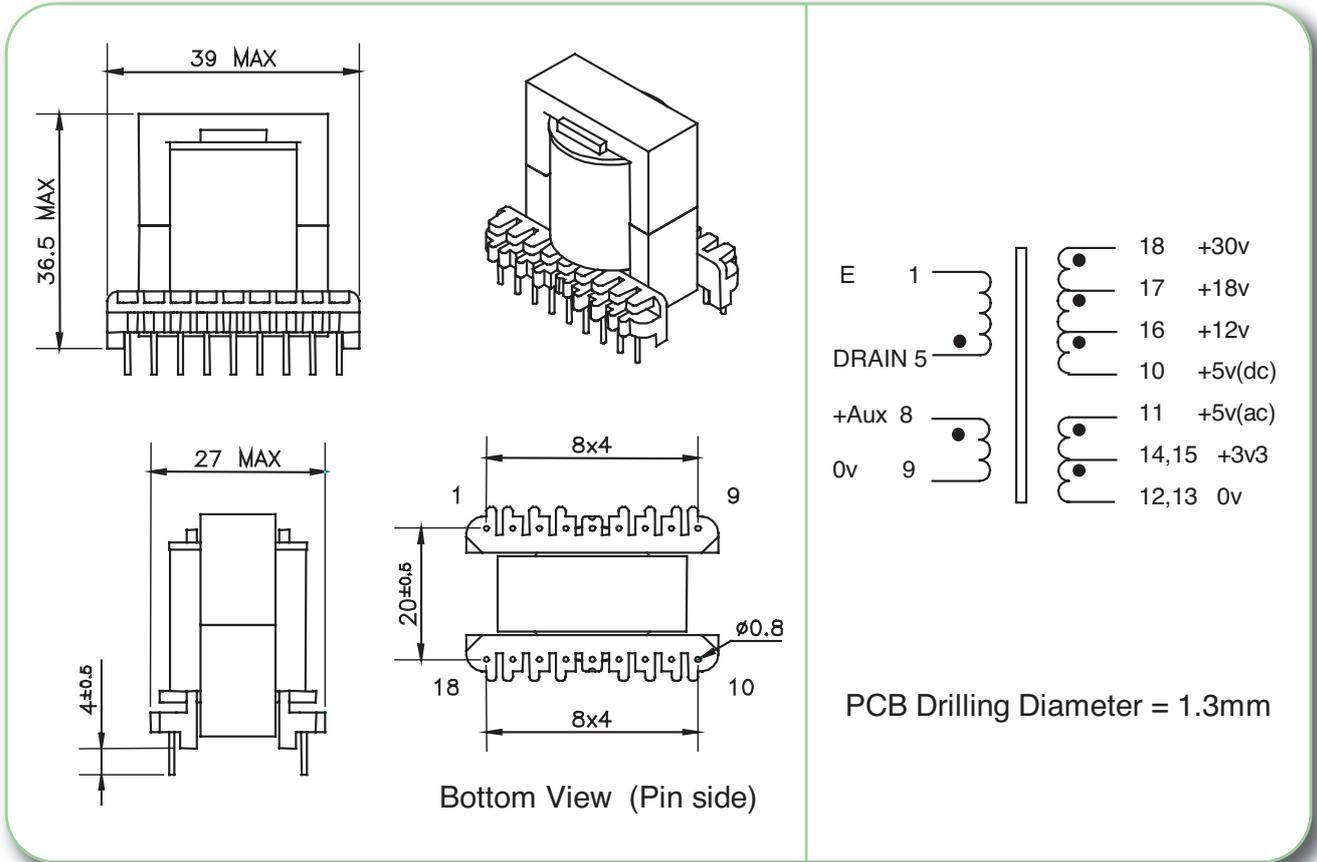
Note : S1 / S3 or S2 / S4 can be connected in series or in parallel

Examples of application with Integrated Circuits :

MYRRA P / N	Control IC Manufacturer	Input voltage	Power	Frequency
74040	Power Integrations	185 - 265Vrms	60w	66 or 132kHz
	Power Integrations	85 - 265Vrms	45w	66 or 132kHz
	ST Microelectronics	85 - 265Vrms	35w	100kHz
	ST Microelectronics	185 - 265Vrms	45w	100kHz
	Motorola	85 - 265Vrms	35w	100kHz
	Motorola	185 - 265Vrms	45w	100kHz
	Infineon	92 - 265Vrms	35w	100kHz
	Infineon	185 - 265Vrms	45w	100kHz



- Primary / Secondary Insulation $\geq 4000V$
- Primary / Auxiliary Insulation $\geq 1500V$
- Creepage distance Primary / Secondary $\geq 6mm$
- Ambient temperature $< 50^{\circ}C$
- Construction conforms to IEC60335-1, IEC60950-1, IEC61558-2-16 for reinforced insulation
- Exclusively uses UL94-V0 listed materials



HIGH FREQUENCY FERRITE
POWER FERRITE TRANSFORMERS

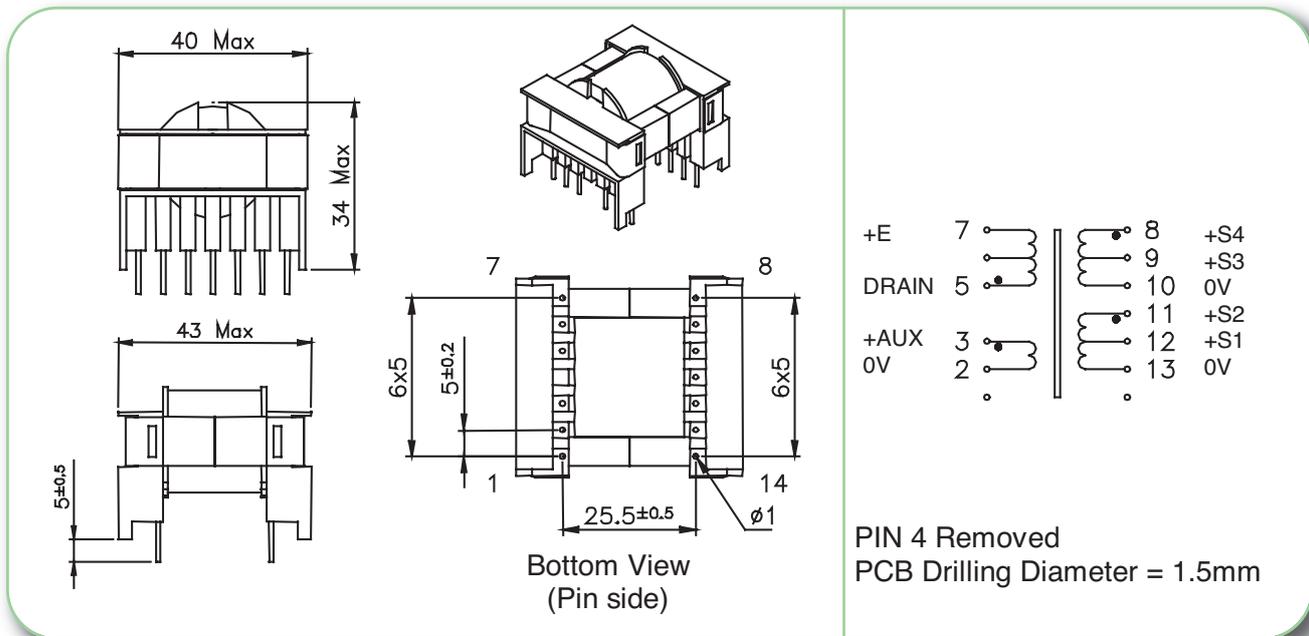
MYRRA P / N	Output Power maximum	Windings					
			Pins	Turns	Voltage	Current maximum	Inductance (+/-10%)
74043	60w	Pri	5 – 1	45	85 - 265Vrms	3 Apeak	500µH
		Aux	8 – 9	7	15 Vdc	0.5 Adc	
		S1	14+15 / 12+13	2	3.3 Vdc	S1+S2 : 7 Adc	
		S2	11 / 12+13	3	5 Vdc	S1+S2 : 7 Adc	
		S3	16 – 10	4	12 Vdc	2 Adc	
		S4	17 – 10	7	18 Vdc	2 Adc	
		S5	18 – 10	13	30 Vdc	0.5 Adc	

Examples of application with Integrated Circuits :

MYRRA P / N	Control IC Manufacturer	Input voltage	Power	Frequency
74043	Power Integrations	185 - 265Vrms	60w	66 or 132kHz
	Power Integrations	85 - 265Vrms	45w	66 or 132kHz



- Primary / Secondary Insulation $\geq 4000V$
- Primary / Auxiliary Insulation $\geq 1500V$
- Creepage distance Primary / Secondary $\geq 8mm$
- Ambient temperature $< 50^{\circ}C$
- Construction conforms to IEC60335-1, IEC60950-1, IEC61558-2-16 for reinforced insulation
- Exclusively uses UL94-V0 listed materials



MYRRA P / N	Output Power maximum	Windings					
			Pins	Turns	Voltage	Current maximum	Inductance (+/-10%)
74050	90 w	Pri	5 – 7	36	85 - 265Vrms	2.8 Apeak	500µH
		Aux	3 – 2	4	7 – 14 Vdc	0.5 Adc	
		S1	12 – 13	2	3.3 – 6.5	5 Adc	
		S2	11 – 13	5	8.5 – 17 Vdc	3 Adc	
		S3	9 – 10	2	3.3 – 6.5	5 Adc	
		S4	8 - 10	5	8.5 – 17 Vdc	3 Adc	

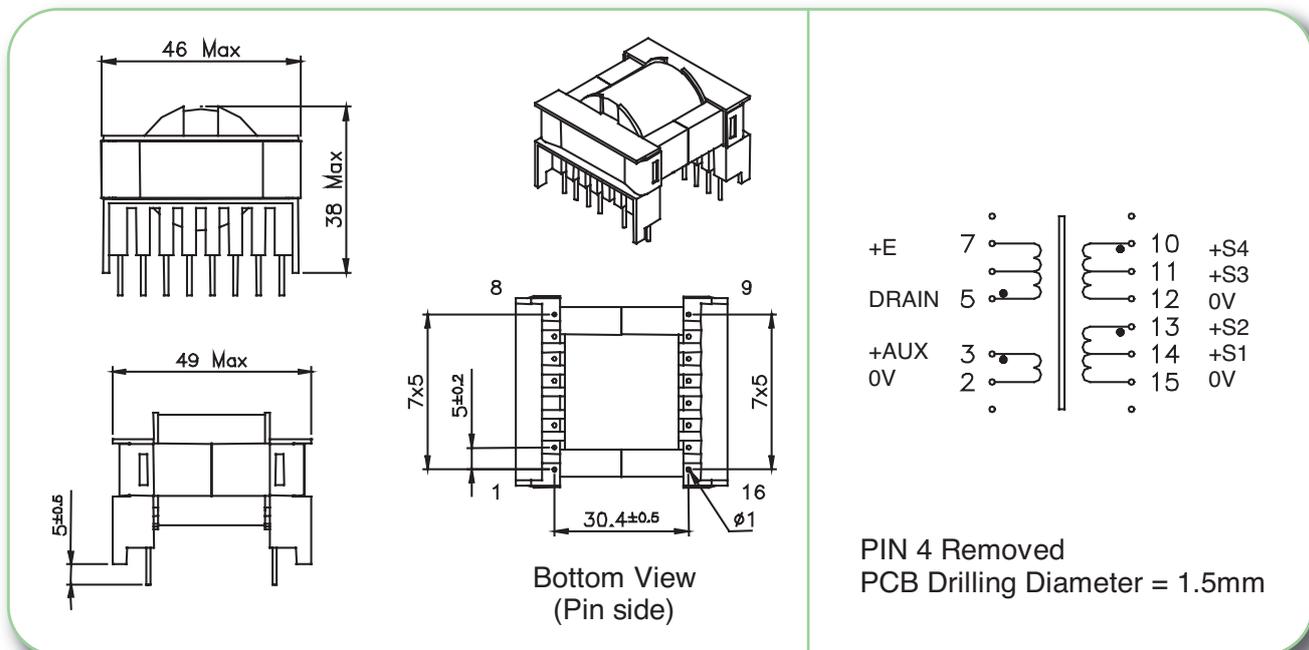
Note : S1 / S3 or S2 / S4 can be connected in series or in parallel

Examples of application with Integrated Circuits :

MYRRA P / N	Control IC Manufacturer	Input voltage	Power	Frequency
74050	Power Integrations	185 - 265Vrms	90w	132kHz
	Power Integrations	85 - 265Vrms	60w	66 or 132kHz
	ST Microelectronics	185 - 265Vrms	80w	70kHz
	ST Microelectronics	85 - 265Vrms	60w	70kHz
	Motorola	185 - 265Vrms	80w	100kHz
	Motorola	85 - 265Vrms	60w	100kHz
	Infineon	185 - 265Vrms	80w	100kHz
	Infineon	85 - 265Vrms	60w	100kHz



- Primary / Secondary Insulation $\geq 4000V$
- Primary / Auxiliary Insulation $\geq 1500V$
- Creepage distance Primary / Secondary $\geq 8mm$
- Ambient temperature $< 50^{\circ}C$
- Construction conforms to IEC60335-1, IEC60950-1, IEC61558-2-16 for reinforced insulation
- Exclusively uses UL94-V0 listed materials



MYRRA P / N	Output Power maximum	Windings					
			Pins	Turns	Voltage	Current maximum	Inductance (+/-10%)
74060	140 w	Pri	5 – 7	36	85 - 265Vrms	4 Apeak	440μH
		Aux	3 – 2	4	7 – 14 Vdc	0.5 Adc	
		S1	14 – 15	2	3.3 – 6.5	5 Adc	
		S2	13 – 15	5	8.5 – 17 Vdc	5 Adc	
		S3	11 – 12	2	3.3 – 6.5	5 Adc	
		S4	10 – 12	5	8.5 – 17 Vdc	5 Adc	

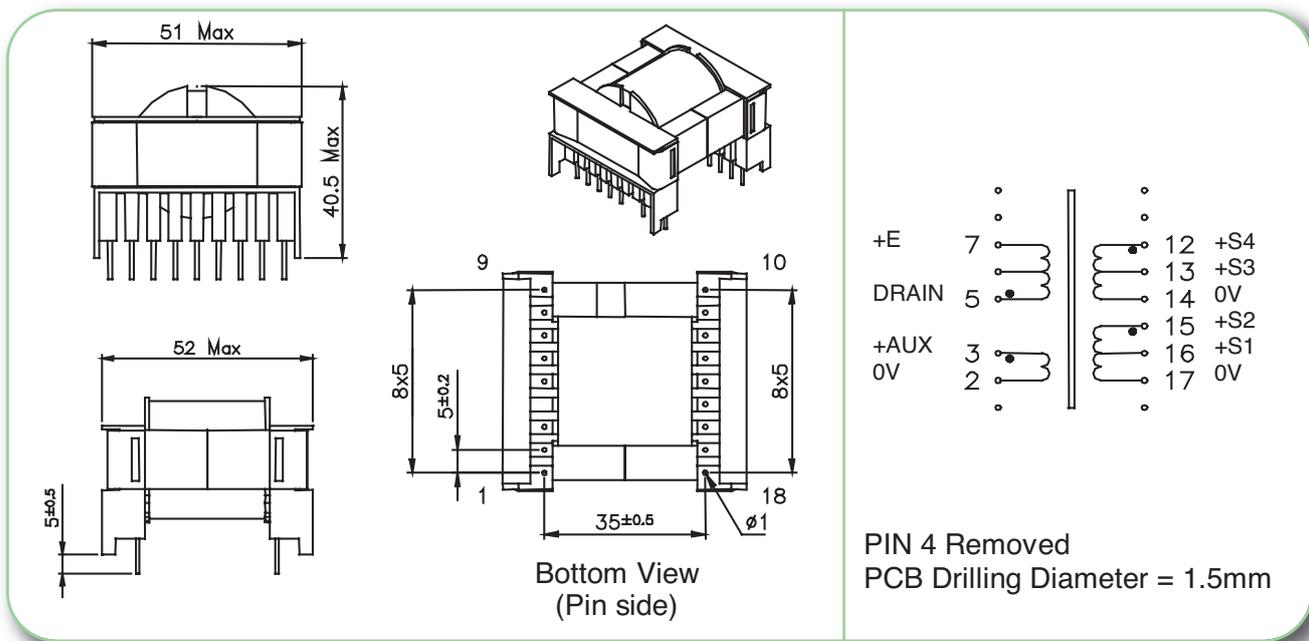
Note : S1 / S3 or S2 / S4 can be connected in series or in parallel

Examples of application with Integrated Circuits :

MYRRA P / N	Control IC Manufacturer	Input voltage	Power	Frequency
74060	Power Integrations	185 - 265Vrms	140w	132kHz
	Power Integrations	85 - 265Vrms	90w	66 or 132kHz
	ST Microelectronics	85 - 265Vrms	70w	70kHz
	ST Microelectronics	185 - 265Vrms	120w	100kHz
	Motorola	85 - 265Vrms	70w	100kHz
	Motorola	185 - 265Vrms	120w	100kHz
	Infineon	85 - 265Vrms	70w	100kHz
	Infineon	185 - 265Vrms	120w	100kHz
	Fairchild	85 - 265Vrms	70w	100kHz
Fairchild	185 - 265Vrms	120w	100kHz	



- Primary / Secondary Insulation $\geq 4000V$
- Primary / Auxiliary Insulation $\geq 1500V$
- Creepage distance Primary / Secondary $\geq 8mm$
- Ambient temperature $< 50^{\circ}C$
- Construction conforms to IEC60335-1, IEC60950-1, IEC61558-2-16 for reinforced insulation
- Exclusively uses UL94-V0 listed materials



MYRRA P / N	Output Power maximum	Windings					
			Pins	Turns	Voltage	Current maximum	Inductance (+/-10%)
74070	180 w	Pri	5 – 7	38	85 - 265Vrms	8 Apeak	300µH
		Aux	3 – 2	4	7 – 14 Vdc	0.5 Adc	
		S1	16 – 17	2	3.3 – 6.5	6 Adc	
		S2	15 – 17	5	8.5 – 17 Vdc	5 Adc	
		S3	13 – 14	2	3.3 – 6.5	6 Adc	
		S4	12 – 14	5	8.5 – 17 Vdc	5 Adc	

Note : S1 / S3 or S2 / S4 can be connected in series or in parallel

Examples of application with Integrated Circuits :

MYRRA P / N	Control IC Manufacturer	Input voltage	Power	Frequency
74070	Power Integrations	185 - 265Vrms	180w	66 or 132kHz
	Power Integrations	85 - 265Vrms	120w	66kHz
	Infineon	185 - 265Vrms	160w	100kHz
	Fairchild	185 - 265Vrms	160w	100kHz
	Philips	185 - 265Vrms	120w	50kHz

HIGH FREQUENCY FERRITE
POWER FERRITE TRANSFORMERS



1W

2W

3W

4W

5W

6W

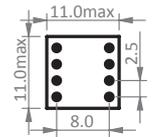
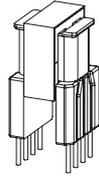
8W

10W

15W

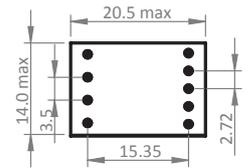
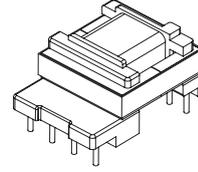
20W

30W



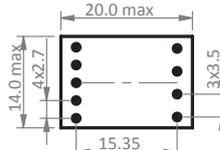
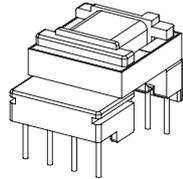
Height : 19.0mm max

E 10
reinforced insulation
creepage distances: 6mm



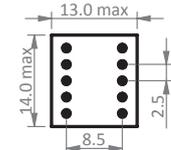
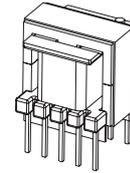
Height : 11mm max

EF 12.6
reinforced insulation
creepage distances: 6mm



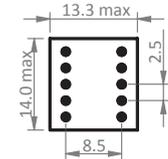
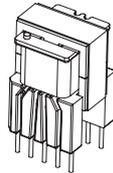
Height : 12.5mm max

EF 12.6
reinforced insulation
creepage distances: 6mm



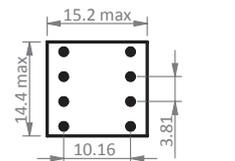
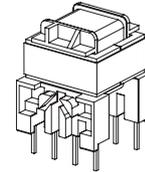
Height : 14.8mm max

E 13
basic insulation



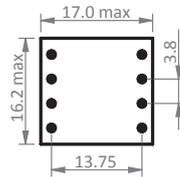
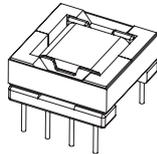
Height : 19.2mm max

E 13
reinforced insulation
creepage distances: 6mm



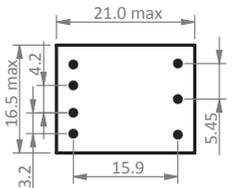
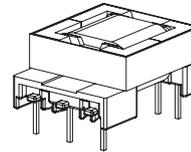
Height : 17.7mm max

E 13
reinforced insulation
creepage distances: 6mm



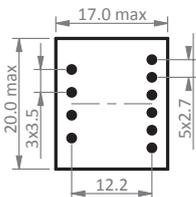
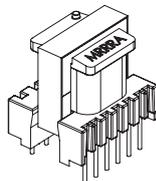
Height : 11mm max

EFD 15
basic insulation



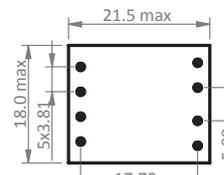
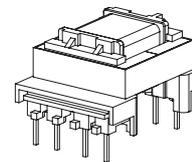
Height : 10.0mm max

EFD 15
reinforced insulation
creepage distances: 6mm



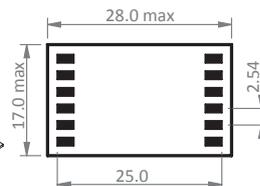
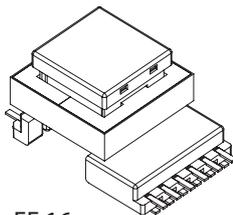
Height : 21.0 mm max

E 16
reinforced insulation
creepage distances: 6mm



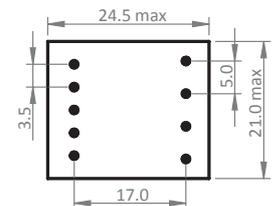
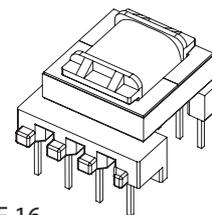
Height : 14.0mm max

EF 16
reinforced insulation
creepage distances: 6mm



Height : 14.7mm max

EF 16
reinforced insulation
creepage distances: 6mm



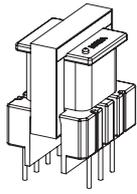
Height : 17mm max

EF 16
reinforced insulation
creepage distances: 6mm

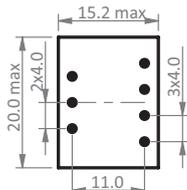
*non-exhaustive list



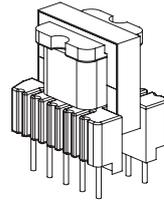
20W



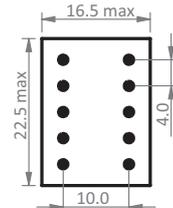
E 19
reinforced insulation
creepage distances: 6mm



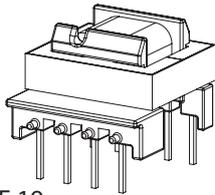
Height : 23.5mm max



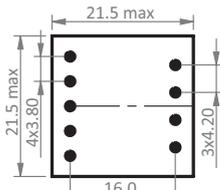
E 19
reinforced insulation
creepage distances: 6mm



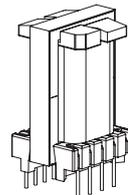
Height : 23.5mm max



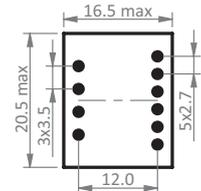
E 19
reinforced insulation
creepage distances: 6mm



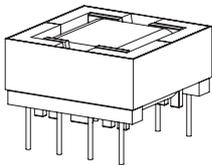
Height : 15.0mm max



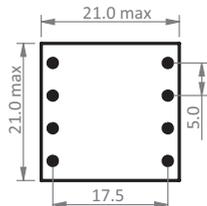
EL 19
reinforced insulation
creepage distances: 6mm



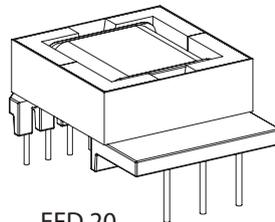
Height : 31.0mm max



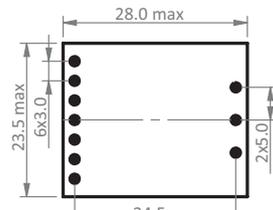
EFD 20
basic insulation



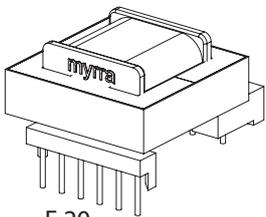
Height : 11.0mm max



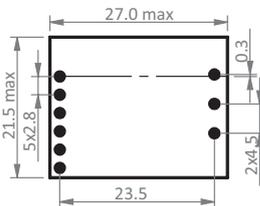
EFD 20
reinforced insulation
creepage distances: 6mm



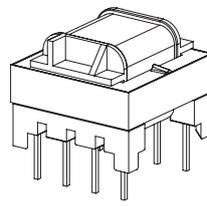
Height : 11.5mm max



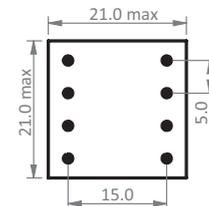
E 20
reinforced insulation
creepage distances: 6mm



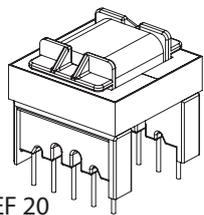
Height : 13.0mm max



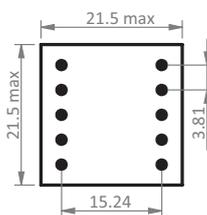
EF 20
basic insulation



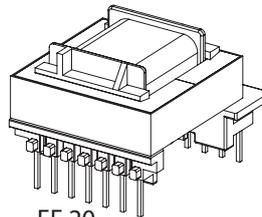
Height : 16.0mm max



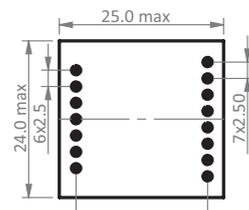
EF 20
reinforced insulation
creepage distances: 6mm



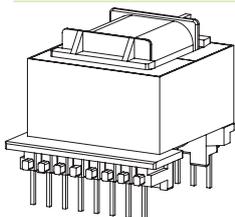
Height : 21.0mm max



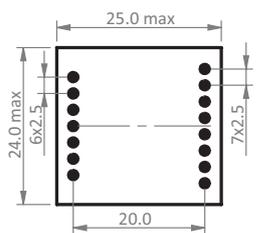
EF 20
reinforced insulation
creepage distances: 8mm



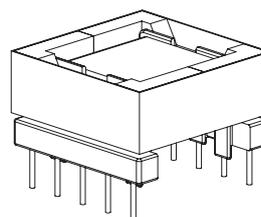
Height : 16.0mm max



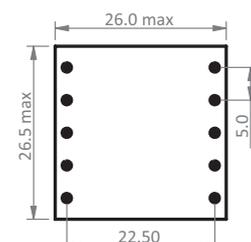
EF 20/11
reinforced insulation
creepage distances: 6mm



Height : 22.0mm max



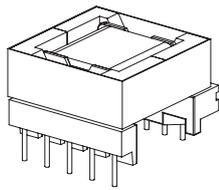
EFD 25
basic insulation



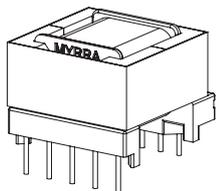
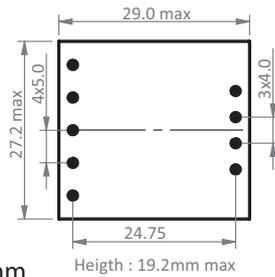
Height : 16.0mm max

HIGH FREQUENCY FERRITE
POWER FERRITE TRANSFORMERS

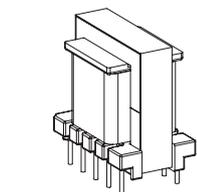
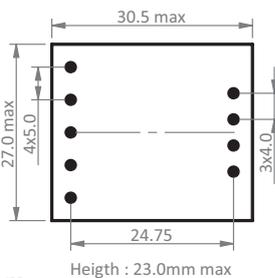
*non-exhaustive list



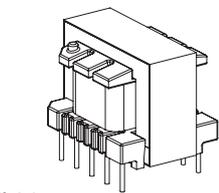
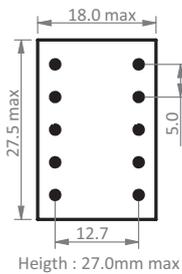
EFD 25
reinforced insulation
creepage distances: 6mm



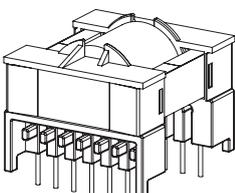
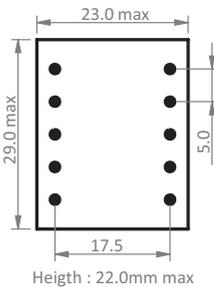
EVD 25
reinforced insulation
creepage distances: 6mm



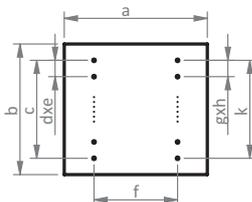
EF 25
reinforced insulation
creepage distances: 6mm



EI 28
reinforced insulation
creepage distances: 6mm



ETD Horizontal
reinforced insulation
creepage distances: 6mm



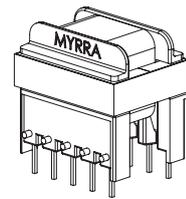
unit:mm

Size	Pin Qty.	a (max)	b (max)	c	dx	e	gx	h	k	height (max)
ETD29	7+7	36.5	36.5	30.48	6x5.08	25.4	6x5.08	30.48	25.5	
ETD34	7+7	43.0	41.0	30.0	6x5.0	25.5	6x5.0	30.0	34.5	
ETD39	8+8	45.0	45.0	35.0	7x5.0	30.2	7x5.0	35.0	34.0	
ETD44	9+9	52.5	50.0	40.0	8x5.0	35.56	8x5.0	40.0	40.0	
ETD49	10+10	58.0	57.0	45.0	9x5.0	40.8	9x5.0	45.0	43.5	

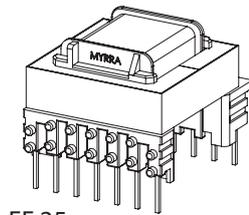
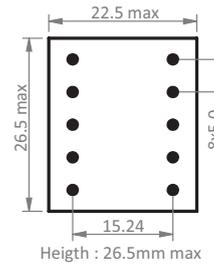
50W

100W

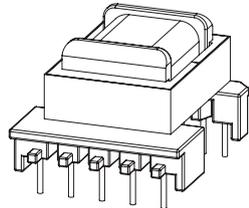
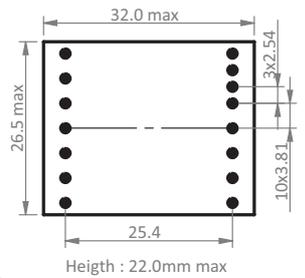
200W



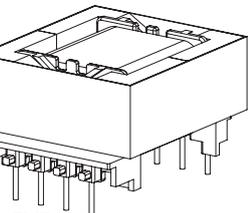
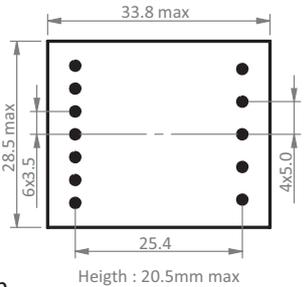
E 25
reinforced insulation
creepage distances: 8mm



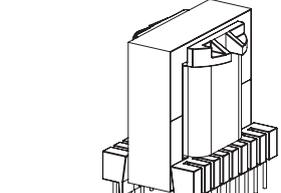
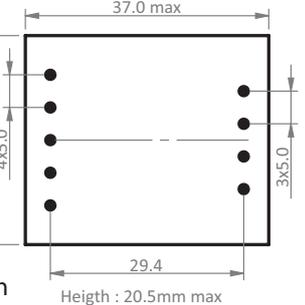
EF 25
reinforced insulation
creepage distances: 8mm



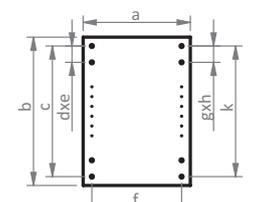
EF 25
reinforced insulation
creepage distances: 6mm



EVD 30
reinforced insulation
creepage distances: 6mm



ETD Vertical
reinforced insulation
creepage distances: 6mm



unit:mm

Size	Pin Qty.	a (max)	b (max)	c	dx	e	gx	h	k	height (max)
ETD29	7+7	25.0	35.5	30.48	6x5.08	20.32	6x5.08	30.48	41.5	
ETD34	7+7	28.0	35.5	30.48	6x5.08	22.85	6x5.08	30.48	35.5	
ETD39	8+8	31.5	41.0	35.0	7x5.0	25.4	7x5.0	35.0	47.0	
ETD44	9+9	33.5	46.0	40.0	8x5.0	27.5	8x5.0	40.0	51.0	
ETD49	11+11	50.0	68.2	50.8	10x5.08	33.02	10x5.08	50.8	72.5	

HIGH FREQUENCY FERRITE
POWER FERRITE TRANSFORMERS

*non-exhaustive list

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