





<b>Product Series :</b> GPOE	<b>Brand :</b> GOTREND ( Made in China )
<b>File Version :</b> GPOE-SERIES-V0R9	<b>Editor :</b> Jerry Chen
<b>Established Date :</b> 2022.09.07	<b>Description :</b> POE Transformer
<b>Latest Edit Date :</b> 2023.02.17	<b>Product Type :</b> <input type="checkbox"/> Standard <input checked="" type="checkbox"/> Customize

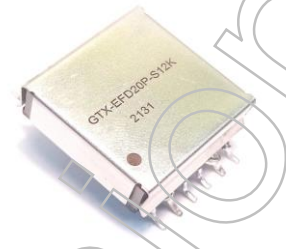
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- ◆ This catalog contains only typical specifications, please contact GOTREND Technology for further details if you can not find special components or information you need in this catalogue. Please also approve our product specifications or transact the approval sheet for product specifications before ordering.
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  - (1) Aerospace/Aviation equipment
  - (2) Atomic energy-related equipment
  - (3) Disaster prevention/crime prevention equipment
  - (4) Electric heating apparatus, burning equipment
  - (5) Medical equipment
  - (6) Military equipment
  - (7) Power-generation control equipment
  - (8) Public information-processing equipment
  - (9) Safety equipment
  - (10) Seabed equipment
  - (11) Transportation control equipment
  - (12) Transportation equipment (cars, electric trains, ships, etc.)
  - (13) Other applications that are not considered general-purpose applications
- ◆ Our manufacturing sites fully compliance with requirement regarding the quality management system in the automotive industry under the IATF 16949 standard. GOTREND Technology respect individual agreements with reference to customer requirements and customer specific requirements (CSR). We will like to emphasize that only requirements mutually agreed upon will in implemented in our Quality Management System taking into consideration that IATF 16949 may appear to support the acceptance of unilateral requirements. We will only legally bind to this individually agreed upon agreement under the IATF 16949 standard.
- ◆ The product itself is a powder metallurgy product, so the structure is relatively fragile, and it should not be used for products that are easy to fall. In addition, when this product is assembled, it should avoid collision with the tool or mechanism shell. 
- ◆ It is not recommended to use hot air gun for disassembling of this product. When using of hot air gun to repair other parts, please also take note that long time or high temperature exposure of this product will also damage the inductance device. If you need to use the hot air gun to disassemble the product, it is recommended to adjust the hot air gun temperature to 380 ° C ± 5 ° C . The blower head of the hot air gun should be perpendicular and at least 1cm away from the product. After heating the product to the tin material melting point, use tweezers to remove the product from the PCB. 

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### Features & Application :

- \* Design the effective , by following customer needs.
- \* Features & Electrical characteristics : Customize
- \* Input 33 – 57 V at 200 kHz, 90W
- \* Isolation: 1500 VAc
- \* Application IEEE 802.3bt ( UPoE+ )



( Picture for reference only )

### Part No. Example :

GPOE	-	EFD20	P	F	-	S12	W90	V12	A
1		2	3	4		5	6	7	8
1	:	GOTREND Series code : GPOE							
2	:	Core Structure & Size Code : EFD20							
3	:	Pb free Code : P = Pb free < 1000 ppm							
4	:	series code : F = Forward , K = Flyback							
5	:	Structure type : S12 = SMD 12Pin , D = DIP							
6	:	Watts : W90 = 90 W							
7	:	Volts : V12 = 12 V							
8	:	Serial Number : A							

### Basic Information :

- Made in China**
- Pin Foot SMD**
- Shielding Semi-Shielding**
- J-STD-020 MSL Level 1**
- RoHS Compliant**
- REACH Compliant**
- Halogen Free**

### Operating & Storage Condition :

- \* Operating Temp -40 ~ +125 ° C ( Including self - temperature rise )
- \* Storage Temp 1. -10 ~ +45 ° C , 50 ~ 60% RH ( Product with taping )  
2. -20 ~ +60 ° C ( On board )
- \* Storage Life Time 6 Month ( Less than 40 ° C and 60% RH )

### Attention & Caution :

- \* Keep out of Splashing water or salt water
- \* Avoid Toxic Gas (Hydrogen sulfide, Sulfurous acid, Chlorine, Ammonia)
- Vibrations or shocks which exceed the specified condition
- Dew condense
- Layout near the edge of PCB
- Over flexure after SMT mounting & PCBA

- \* Pin foot or SMD pad solderability: Pb free type is best within 6 months after delivery
- \* Humidity sensitive , IPC/JEDEC J-STD-020 MSL if over Level 1, recommend bake 30mins@150 degree before PCBA
- \* Caution for human life relative applications : PLS contact & consult with GOTREND team in design stage.

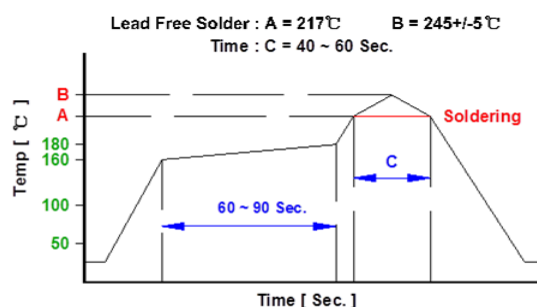
### Test Condition :

- \* Equipment WK3260B , WK3265B - L , Q , DCR , IDC  
KEISICHT E5061B Network analyzer - SRF  
TH9301A HI-POT TEST - AC , DC  
TH2511 - DCR

- \* Standard Atmosphere Conditions:  
Ambient Temperature 20 ± 15 ° C  
Humidity RH 65 ± 20%

- \* If there may be any doubt on the test result ,  
Measurement shall be made within the following limits:  
Ambient Temperature 25 ± 5 ° C  
Humidity RH 75 ± 10%

### Recommend IR Reflow Curve : GTX-IR-FILE001



Notice : Iron Soldering , Solder < 30 Watt ,  
Direct touch the terminal x 3 Sec. Max. @ 350°C

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POE Structure						
	POE	POE+	UPOE	UPOE+		
	13W	30W	45W	58W	65W	100W
Type1	802.3af					
	Class 0 - 3					
Type 2		802.3at				
		Class 4				
Type 3			802.3bt			
			Class 5	Class 6		
Type 4					802.3bt	
					Class 7	Class 8

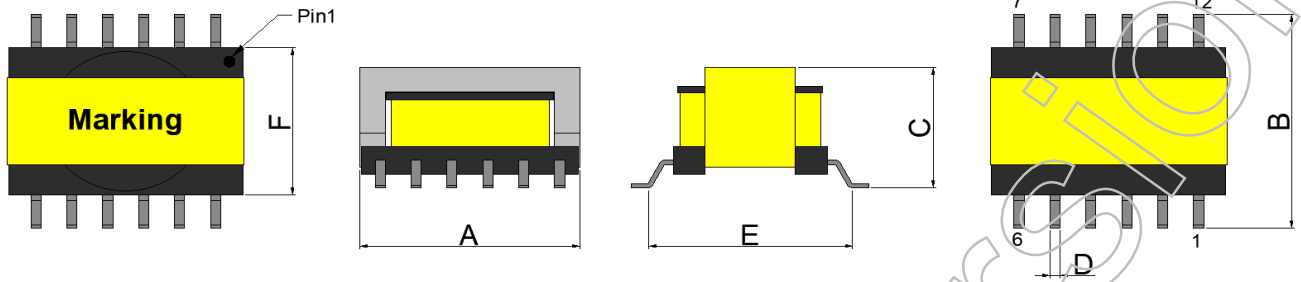
**ER14、EP07、EP13、EFD15、EFD20 Core..**

	PD Input power	3.3V	5V	12V	19.5V	24V	48V
POE	3W (Flyback)	GPOE-ER15PK -S12W03V33A	GPOE-ER15PK -S12W03V05A				
		ER15	ER15				
		GPOE-EP07PK -S08W03V33A	GPOE-EP07PK -S08W03V05A	GPOE-EP07PK -S08W03V12A			
		EP07	EP07	EP07			
	7W (Flyback)	GPOE-EP13PK -S10W07V33A	GPOE-EP13PK -S10W07V05A	GPOE-EP13PK -S10W07V12A			
		EP13	EP13	EP13			
13W (Flyback)	GPOE-EP13PK -S10W13V33A	GPOE-EP13PK -S10W13V05A	GPOE-EP13PK -S10W13V12A				
	EP13	EP13	EP13				
	GPOE-EFD15PK -S10W13V33A	GPOE-EFD15PK -S10W13V05A	GPOE-EFD15PK -S10W13V12A		GPOE-EFD15PK -S10W13V24A		
	EFD15	EFD15	EFD15		EFD15		
POE+	24W (Forward)	GPOE-EP13PF -S10W24V33A	GPOE-EP13PF -S10W24V05A	GPOE-EP13PF -S10W24V12A			
		EP13	EP13	EP13			
	30W (Flyback)		GPOE-EFD20PK -S12W30V05A		GPOE-EFD20PK -S12W30V19A	GPOE-EFD20PK -S12W30V24A	
			EFD20		EFD20	EFD20	
30W (Forward)	GPOE-EFD20PF -S12W30V33A	GPOE-EFD20PF -S12W30V05A	GPOE-EFD20PF -S12W30V12A	GPOE-EFD20PF -S12W30V19A	GPOE-EFD20PF -S12W30V24A		
	EFD20	EFD20	EFD20	EFD20	EFD20		
UPOE+	58W (Flyback)	GPOE-EFD20PK -S12W58V33A	GPOE-EFD20PK -S12W58V05A	GPOE-EFD20PK -S12W58V12A		GPOE-EFD20PK -S12W58V24A	GPOE-EFD20PK -S12W58V48A
		EFD20	EFD20	EFD20		EFD20	EFD20
	Preliminary version under development						
	60W (Forward)	GPOE-EFD20PF -S12W60V33A	GPOE-EFD20PF -S12W60V05A	GPOE-EFD20PF -S12W60V12A		GPOE-EFD20PF -S12W60V24A	
		EFD20	EFD20	EFD20		EFD20	
	Preliminary version under development						
	65W (Forward)	GPOE-EFD20PK -S12W65V33A	GPOE-EFD20PK -S12W65V05A	GPOE-EFD20PK -S12W65V12A		GPOE-EFD20PK -S12W65V24A	GPOE-EFD20PK -S12W65V48A
		EFD20	EFD20	EFD20		EFD20	EFD20
	Preliminary version under development						
	84W (Forward)					GPOE-EFD25PK -S12W84V24A	
					EFD25		
Preliminary version under development							
90W (Forward)			GPOE-EFD20PF -S12W90V12A				
			EFD20				
100W (Forward)			GPOE-EFD25PF -S12W100V12A				
			EFD25				
Preliminary version under development							

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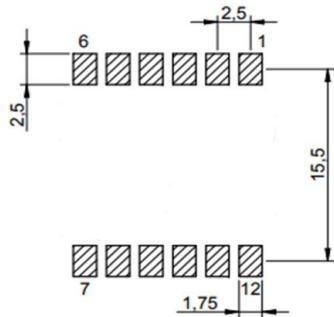
### GPOE-ER15PK-W03-SERIES

Dimension : [ mm ]

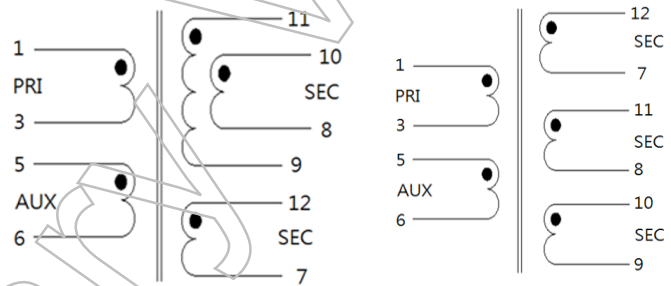


Dimension ( Unit : mm )					
A ( Max. )	B ( Max. )	C ( Max. )	D ( +/-0.1 )	E ( Typ. )	F ( Typ. )
16.3	16.8	7.8	0.7	13.85	12.0

Recommend Pad Layout :



Schematic :



GPOE-ER15PK-S12W03V33A GPOE-ER15PK-S12W03V05A

Electrical Characteristics :

Part Number	L(N1) (100KHz,0.1V)	Lk(N1) (100KHz,0.1V)	DCR(mΩ) Max.			Turns ratio Pri:Sec:Aux	Output	Isat @20%	Vaux
			Pri.	Sec.	Aux				
GPOE-ER15PK-S12W03V33A	210 uH +/-10%	4.5 uH Max.	310	12	230	12:1:1:3	3.3V,0.7A 3.3V,1.4A	0.6A	10V
GPOE-ER15PK-S12W03V05A	210 uH +/-10%	3.5 uH Max.	310	34	230	6:1:1:1:1.75	5V,0.47A x 3	0.7A	9V

NOTE :

\* HI-POT TEST ( Pri - Sec ) 1500 VAc 1.0mA / 2S

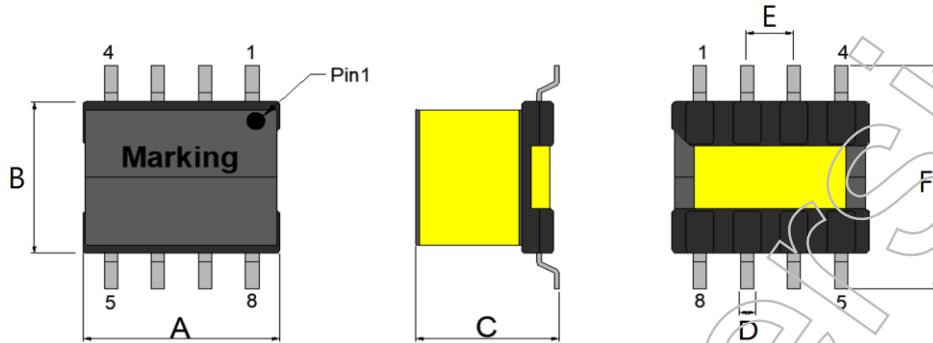
\* Input 36 – 57 V at 250 kHz , 3W , Flyback

\* PoE IEEE 802.3af

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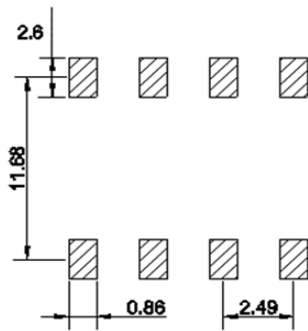
### GPOE-EP07PK-W03-SERIES

Dimension : [ mm ]

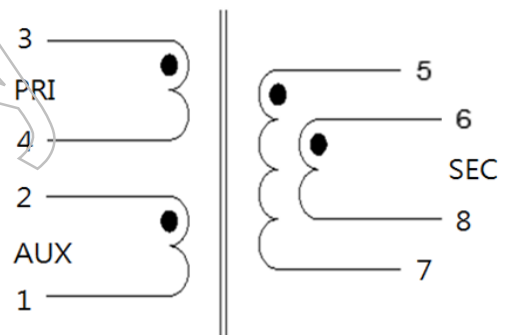


Dimension ( Unit : mm )						
A ( Max. )	B ( Max. )	C ( Max. )	D ( +/- 0.1 )	E ( +/- 0.5 )	F ( Max. )	
10.8	8.0	10.5	0.6	2.5	9.5	

Recommend Pad Layout :



Schematic :



Electrical Characteristics :

Part Number	L ( Pri ) (100KHz,0.1V)	LK ( Pri ) (100KHz,0.1V)	DCR(mΩ) Max.			Turns ratio Pri:Sec:Aux	Output	Isat @20%	Vaux
			Pri.	Sec.	Aux				
GPOE-EP07PK-S08W03V33A	500 uH +/-10%	17 uH Max.	1750	30	215	12:1:2.5	3.3V,0.91A	0.5A	8V
GPOE-EP07PK-S08W03V05A	500 uH +/-10%	17 uH Max.	1750	70	215	8:1:1.67	5V,0.6A	0.5A	8V
GPOE-EP07PK-S08W03V12A	521 uH +/-10%	17 uH Max.	1750	200	220	3.5:1:0.713	12V,0.25A	0.4A	8V

NOTE :

\* HI-POT TEST, ( Pri - Sec ) 1500 VAc 1.0mA / 2S

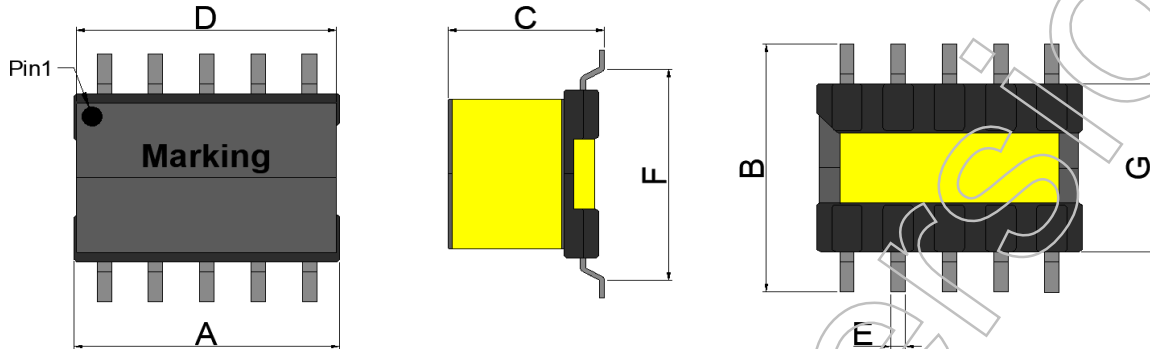
\* Input 33 – 57 V at 200 kHz , 3W , Flyback

\* PoE IEEE 802.3af

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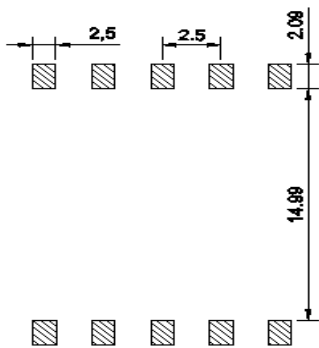
### GPOE-EP13PK-W07-SERIES

Dimension : [ mm ]

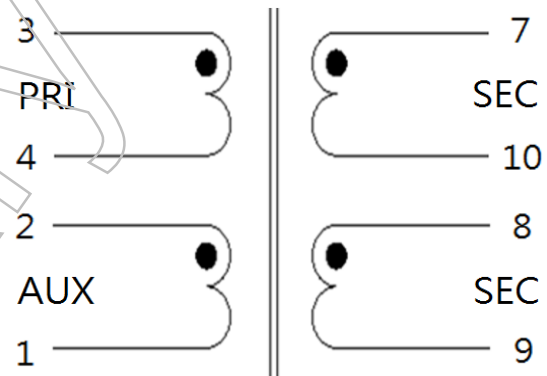


Dimension ( Unit : mm )						
A ( Max. )	B ( Max. )	C ( Max. )	D ( Typ. )	E ( +/-0.1 )	F ( Typ. )	G ( Typ. )
13.5	17.5	13.0	13.0	0.7	15.0	13.0

Recommend Pad Layout :



Schematic :



Electrical Characteristics :

Part Number	L ( N1 ) (100KHz,0.1V)	LK ( N1 ) (100KHz,0.1V)	DCR(mΩ) Max.			Turns ratio Pri:Sec:Aux	Output	Isat @25%	Vaux
			Pri.	Sec.	Aux.				
GPOE-EP13PK-S10W07V33A	127 uH +/-10%	1.3 uH Max.	200	55/55	300	6:1:1:3	( 3.3V,2A ) x2	1.42A	12V
GPOE-EP13PK-S10W07V05A	127 uH +/-10%	1.3 uH Max.	220	50/50	290	4:1:1:2	( 5V,1.3A ) x2	1.6A	12V
GPOE-EP13PK-S10W07V12A	127 uH +/-10%	1.3 uH Max.	200	105/105	280	2:1:1:1	( 12V,0.55A ) x2	1.3A	12V

NOTE :

\* HI-POT TEST ( Pri - Sec ) 1500 VAc 1.0mA / 2S

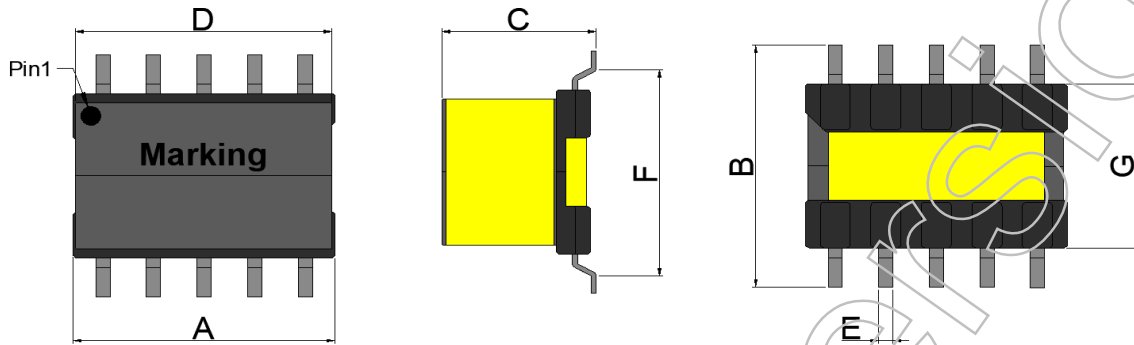
\* Input 36 – 57 V at 250 kHz, 7W , Flyback

\* PoE IEEE 802.3af

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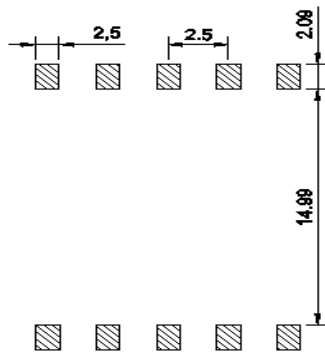
### GPOE-EP13PK-W13-SERIES

Dimension : [ mm ]

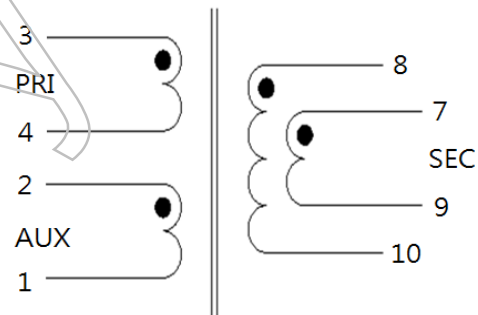


Dimension ( Unit : mm )						
A ( Max. )	B ( Max. )	C ( Max. )	D ( Typ. )	E ( +/-0.1 )	F ( Typ. )	G ( Typ. )
14.0	17.5	13.0	13.0	0.7	15.0	13.0

Recommend Pad Layout :



Schematic :



Electrical Characteristics :

Part Number	L ( Pri ) (100KHz,0.1V)	LK ( Pri ) (100KHz,0.1V)	DCR(mΩ) Max.			Turns ratio Pri:Sec:Aux	Output	Isat @20%	Vaux
			Pri.	Sec.	Aux				
GPOE-EP13PK-S10W13V33A	127 uH +/- 10%	1.3 uH Max.	140	24	295	1:0.166:0.5	3.3V,4A	1A	12V
GPOE-EP13PK-S10W13V05A	127 uH +/- 10%	1.3 uH Max.	150	40	295	1:0.25:0.47	5V,2.6A	1A	12V
GPOE-EP13PK-S10W13V12A	127 uH +/- 10%	1.3 uH Max.	150	65	305	1:0.5:0.5	12V,1.1A	1A	12V

NOTE :

\* HI-POT TEST ( Pri - Sec ) 1500 VAc 1.0mA / 2S

\* Input 36 – 72 V at 250 kHz, 13W ,Flyback

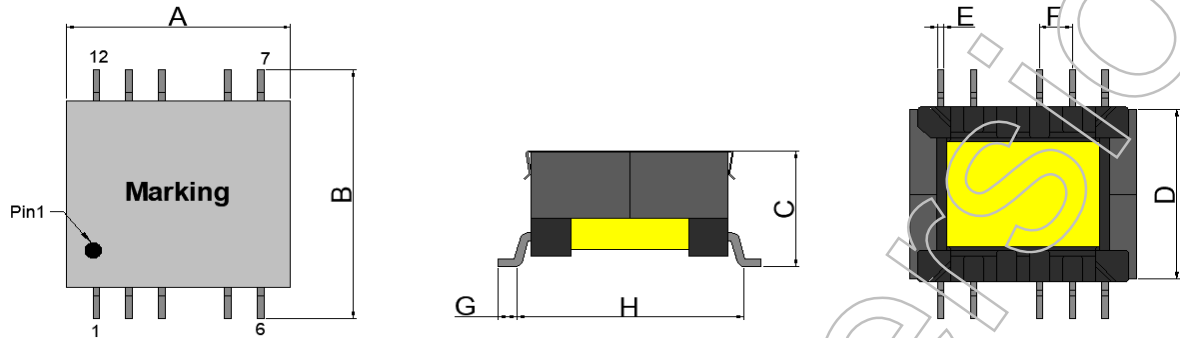
\* PoE IEEE 802.3af



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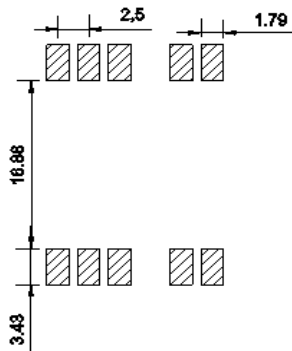
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Dimension : [ mm ]

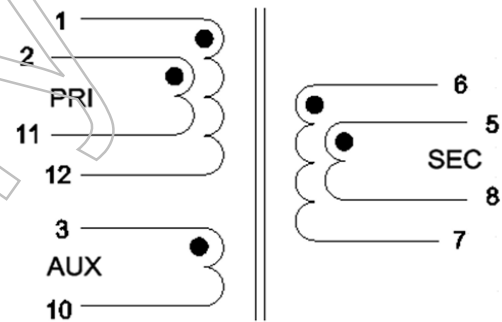


Dimension ( Unit : mm )							
A ( Max. )	B ( Max. )	C ( Max. )	D ( Typ. )	E ( +/-0.1 )	F ( Typ. )	G ( Typ. )	H ( Typ. )
17.3	22.3	9.2	15.0	0.7	2.5	2.0	18.0

Recommend Pad Layout :



Schematic :



Electrical Characteristics :

Part Number	L ( Pri ) (100KHz,0.3V)	LK ( Pri ) (100KHz,0.3V)	DCR(mΩ) Max.			Turns ratio Pri:Sec:Aux	Output	Isat @20%	Vaux
			Pri.	Sec.	Aux				
GPOE-EFD15PK-S10W13V33A	40 uH +/- 10%	3.2 uH Max.	110	7	180	1:0.12:0.36	3.3V,3.9A	2.2A	12V
GPOE-EFD15PK-S10W13V05A	40 uH +/- 10%	3.0uH Max.	110	10	160	1:0.16:0.36	5V,2.6A	2.1A	12V
GPOE-EFD15PK-S10W13V12A	35 uH +/- 10%	0.7 uH Max.	95	17	120	1:0.33:0.33	12V,1.1A	2A	12V
GPOE-EFD15PK-S10W13V24A	37 uH +/- 10%	0.5 uH Max.	70	37	120	1:0.65:0.35	24V,0.54A	2A	12V

NOTE :

\* HI-POT TEST ( Pri - Sec ) 1500 VAc 1.0mA / 2S

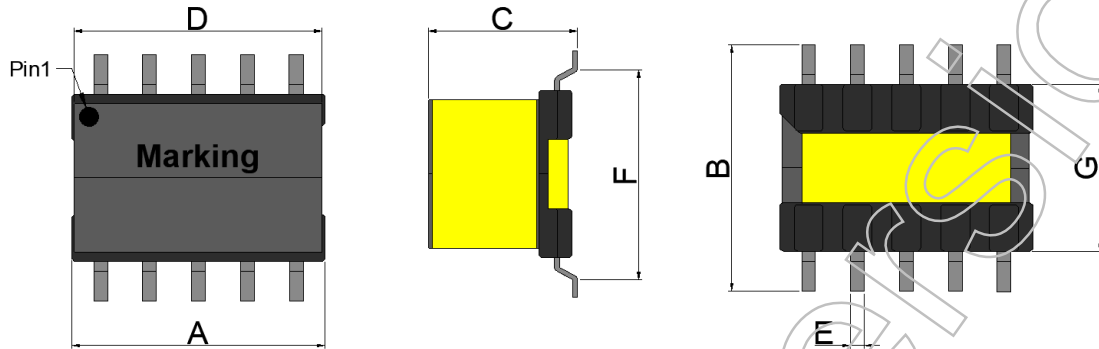
\* Input 36 – 72 V at 250 kHz, 13W , Flyback

\* PoE IEEE 802.3af

Product Series : GPOE	Brand : GOTREND ( Made in China )
File Version : GPOE-SERIES-V0R9	Editor : Jerry Chen
Established Date : 2022.09.07	Description : POE Transformer
Latest Edit Date : 2023.02.17	Product Type : <input type="checkbox"/> Standard <input checked="" type="checkbox"/> Customize

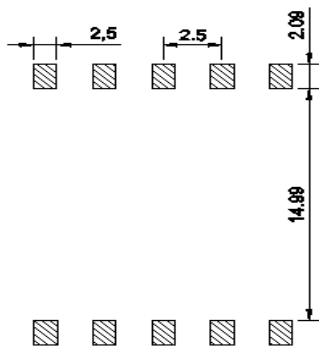
### GPOE-EP13PF-W24-SERIES

Dimension : [ mm ]

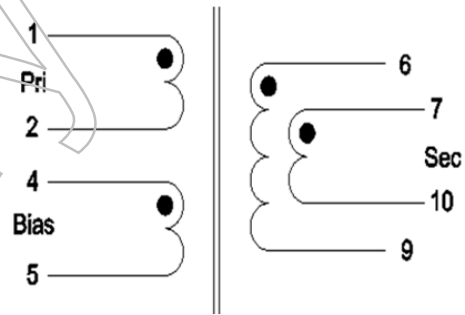


Dimension ( Unit : mm )						
A ( Max. )	B ( Max. )	C ( Max. )	D ( Typ. )	E ( +/-0.1 )	F ( Typ. )	G ( Typ. )
14.0	17.5	13.0	13.0	0.7	15.0	13.0

Recommend Pad Layout :



Schematic :



Electrical Characteristics :

Part Number	L ( Pri ) (100KHz,0.1V)	LK ( Pri ) ( 100KHz,0.1V )	DCR(mΩ) Max.			Turns ratio Pri:Sec:Aux	Output	Isat @20%	Vaux
			Pri.	Sec.	Bias				
GPOE-EP13PF-S10W24V33A	95 uH +/- 10%	1.1 uH Max.	115	9	320	1:0.16:0.64	3.3V,7.2A	1.4A	12V
GPOE-EP13PF-S10W24V05A	95 uH +/- 10%	0.88 uH Max.	135	18	280	1:0.26:0.52	5V,4.8A	1.3A	12V
GPOE-EP13PF-S10W24V12A	95 uH +/- 10%	1.2 uH Max.	150	82	280	1:0.52:0.52	12V,2A	1.0A	12V

NOTE :

\* HI-POT TEST, ( Pri - Sec. ) 1500 VAc 1.0mA / 2S

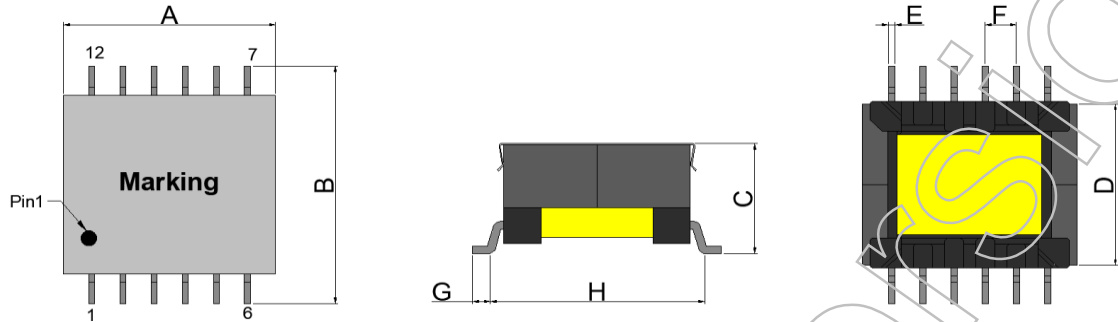
\* Input 33 – 57 V at 250 kHz , 25W , Forward

\* PoE+ IEEE 802.3at

<b>Product Series :</b> GPOE	<b>Brand :</b> GOTREND ( Made in China )
<b>File Version :</b> GPOE-SERIES-V0R9	<b>Editor :</b> Jerry Chen
<b>Established Date :</b> 2022.09.07	<b>Description :</b> POE Transformer
<b>Latest Edit Date :</b> 2023.02.17	<b>Product Type :</b> <input type="checkbox"/> Standard <input checked="" type="checkbox"/> Customize

### GPOE-EFD20PK-W30-SERIES

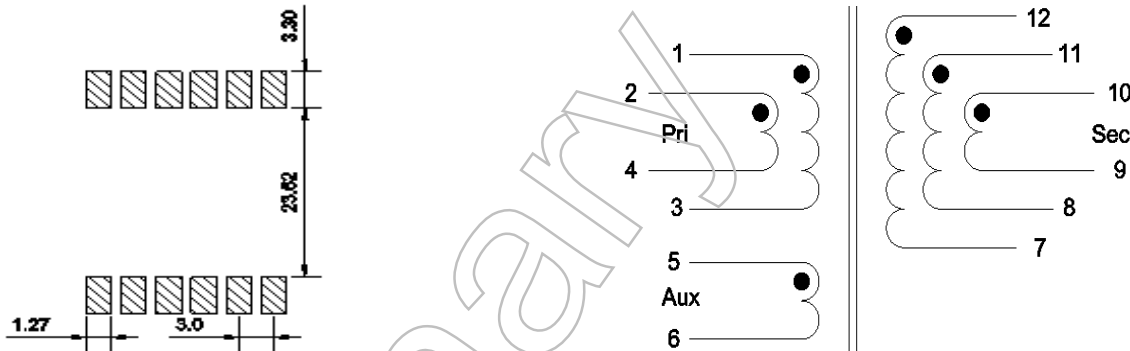
Dimension : [ mm ]



Dimension ( Unit : mm )							
A ( Max. )	B ( Max. )	C ( Max. )	D ( Typ. )	E ( +/-0.1 )	F ( Typ. )	G ( Typ. )	H ( Typ. )
22.0	30.0	11.8	21.0	0.72	3.0	2.13	24.6

Recommend Pad Layout :

Schematic :



Electrical Characteristics :

Part Number	L ( Pri ) (100KHz,0.1V)	LK ( Pri ) (100KHz,0.1V)	DCR(mΩ) Max.			Turns ratio Pri:Sec:Aux	Output	Isat @20%	Vaux
			Pri.	Sec.	Aux				
GPOE-EFD20PK-S12W30V05A	42 uH +/- 10%	1.6 uH Max.	70	5	190	1:0.14:0.33	5V,6A	2.6A	12V
GPOE-EFD20PK-S12W30V19A	42 uH +/- 10%	0.55 uH Max.	60	20	195	1:0.56:0.39	19.5V,0.15A	2.6A	12V
GPOE-EFD20PK-S12W30V24A	42 uH +/- 10%	0.4 uH Max.	60	38	195	1:0.67:0.39	24V,1.25A	2.6A	12V

NOTE :

\* HI-POT TEST ( Pri - Sec ) 1500 VAc 1.0mA / 2S

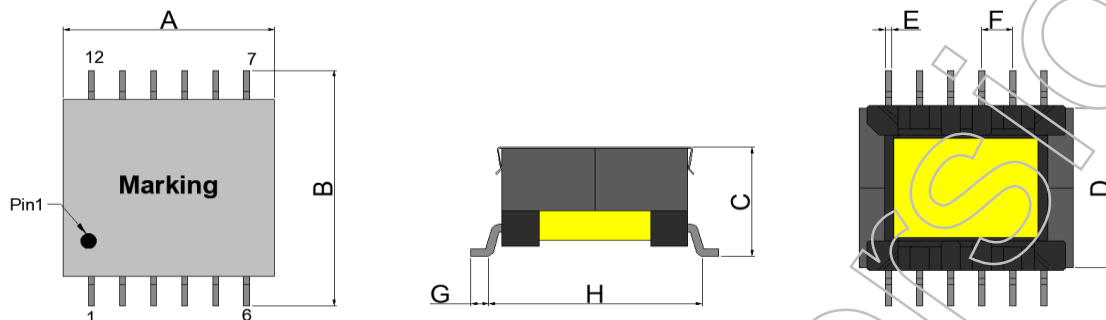
\* Input 36 – 72 V at 250 kHz, 30W , Flyback

\* PoE+ IEEE 802.3at

<b>Product Series :</b> GPOE	<b>Brand :</b> GOTREND ( Made in China )
<b>File Version :</b> GPOE-SERIES-V0R9	<b>Editor :</b> Jerry Chen
<b>Established Date :</b> 2022.09.07	<b>Description :</b> POE Transformer
<b>Latest Edit Date :</b> 2023.02.17	<b>Product Type :</b> <input type="checkbox"/> Standard <input checked="" type="checkbox"/> Customize

### GPOE-EFD20PF-W30-SERIES

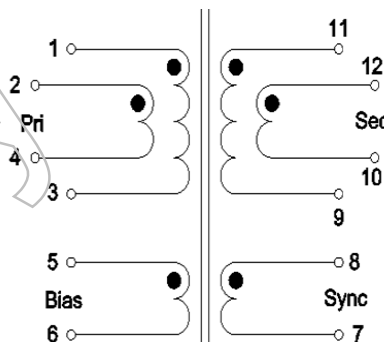
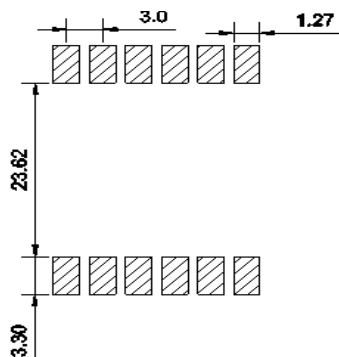
Dimension : [ mm ]



Dimension ( Unit : mm )							
A ( Max. )	B ( Max. )	C ( Max. )	D ( Typ. )	E ( +/-0.1 )	F ( Typ. )	G ( Typ. )	H ( Typ. )
22.0	30.0	11.8	21.0	0.72	3.0	2.13	24.6

Recommend Pad Layout :

Schematic :



Electrical Characteristics :

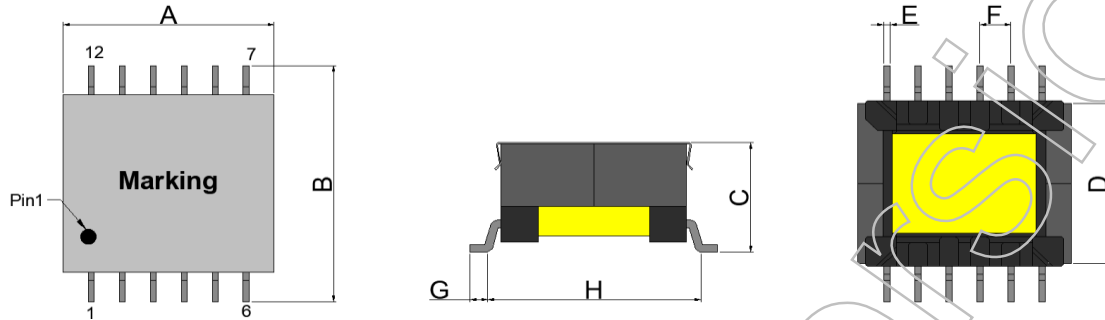
Part Number	L ( Pri ) (100KHz,0.1V)	LK ( Pri ) (100KHz,0.1V)	DCR(mΩ) Max.			Turns ratio Pri:Sec:Sync:Bias	Output	Vaux	Sync
			Pri.	Sec.	Bias.				
GPOE-EFD20PF-S12W30V33A	72.9 uH +/-10%	0.43 uH Max.	28	5.0	250	1:0.33:0.56:1	3.3V,9A	12V	5V
GPOE-EFD20PF-S12W30V05A	72.9 uH +/-10%	0.26 uH Max.	28	8.0	250	1:0.44:0.56:1	5V,6A	12V	5V
GPOE-EFD20PF-S12W30V12A	72.9 uH +/-10%	0.26 uH Max.	28	28.5	250	1:1:0.56:1	12V,2.5A	12V	5V
GPOE-EFD20PF-S12W30V19A	72.9 uH +/-10%	0.29 uH Max.	28	38	220	1:1.44:0.44:0.89	19.5V,0.155A	12V	5V
GPOE-EFD20PF-S12W30V24A	72.9 uH +/-10%	0.24 uH Max.	28	73	220	1:1.78:0.44:0.89	24V,1.25A	12V	5V

<b>NOTE :</b>
* HI-POT TEST ( Pri - Sec ) 1500 VAc 1.0mA / 2S
* Input 36 – 72 V at 250 kHz, 30W , Forward
* PoE+ IEEE 802.3at

<b>Product Series :</b> GPOE	<b>Brand :</b> GOTREND ( Made in China )
<b>File Version :</b> GPOE-SERIES-V0R9	<b>Editor :</b> Jerry Chen
<b>Established Date :</b> 2022.09.07	<b>Description :</b> POE Transformer
<b>Latest Edit Date :</b> 2023.02.17	<b>Product Type :</b> <input type="checkbox"/> Standard <input checked="" type="checkbox"/> Customize

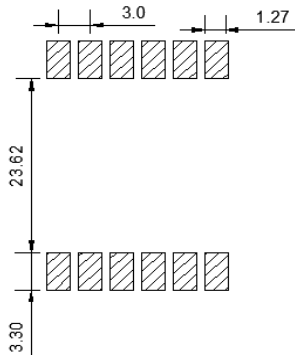
### GPOE-EFD20PK-W57-SERIES

Dimension : [ mm ]

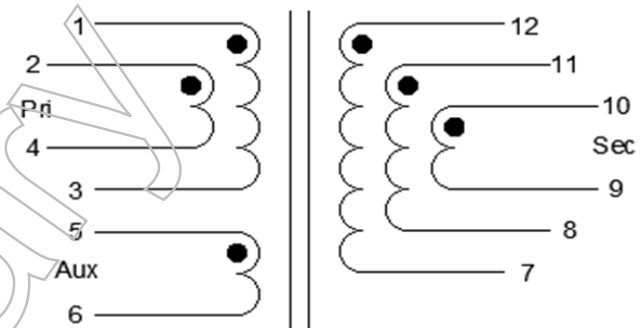


Dimension ( Unit : mm )							
A ( Max. )	B ( Max. )	C ( Max. )	D ( Typ. )	E ( +/-0.1 )	F ( Typ. )	G ( Typ. )	H ( Typ. )
22.0	30.0	11.8	21.0	0.711	3.0	2.03	24.6

Recommend Pad Layout :



Schematic :



Electrical Characteristics :

Part Number	L ( Pri ) ( 100KHz,0.1V )	LK ( Pri ) ( 100KHz,0.1V )	DCR(mΩ) Max.			Turns ratio Pri:Sec:Aux	Output	Isat @20%	Vaux
			Pri.	Sec.	Bias.				
GPOE-EFD20PK -S12W58V33A	22.2 uH +/-10%	0.50 uH Max.	34.9	2	130	1:0.143:0.50	3.3V,17.1A	5.4A	12V
GPOE-EFD20PK -S12W58V05A	22.2 uH +/-10%	0.38 uH Max.	34.9	2.8	130	1:0.214:0.50	5V,11.3A	5.4A	12V
GPOE-EFD20PK -S12W58V12A	17.8 uH +/-10%	0.17 uH Max.	18.9	9.2	108	1:0.5:0.50	12V,4.7A	5.7A	12V
GPOE-EFD20PK -S12W58V24A	17.8 uH +/-10%	0.12 uH Max.	18.9	36.3	108	1:1:0.50	24V,2.4A	5.7A	12V
GPOE-EFD20PK -S12W58V48A	17.8 uH +/-10%	0.11 uH Max.	18.9	140	108	1:2:0.50	48V,1.2A	5.7A	12V

NOTE :

\* HI-POT TEST ( Pri - Sec ) 1500 VAc 1.0mA / 2S

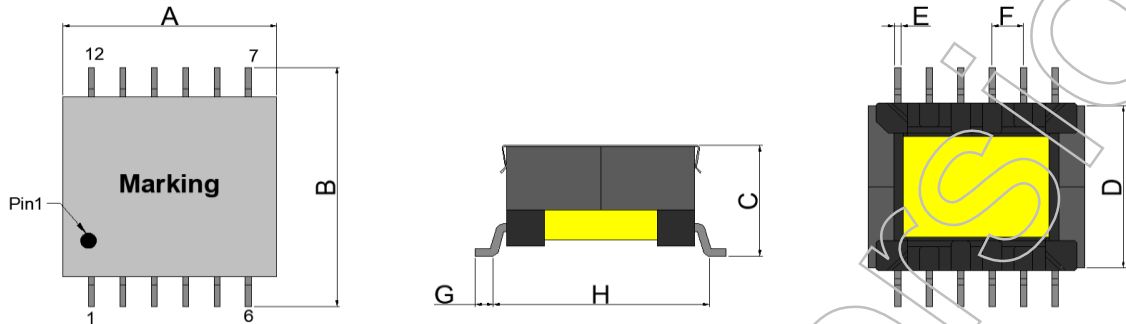
\* Input 36 - 57 V at 250 kHz, 60W , Flyback

\* UPoE IEEE 802.3bt

<b>Product Series :</b> GPOE	<b>Brand :</b> GOTREND ( Made in China )
<b>File Version :</b> GPOE-SERIES-V0R9	<b>Editor :</b> Jerry Chen
<b>Established Date :</b> 2022.09.07	<b>Description :</b> POE Transformer
<b>Latest Edit Date :</b> 2023.02.17	<b>Product Type :</b> <input type="checkbox"/> Standard <input checked="" type="checkbox"/> Customize

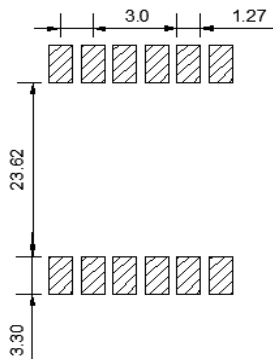
### GPOE-EFD20PF-W60-SERIES

Dimension : [ mm ]

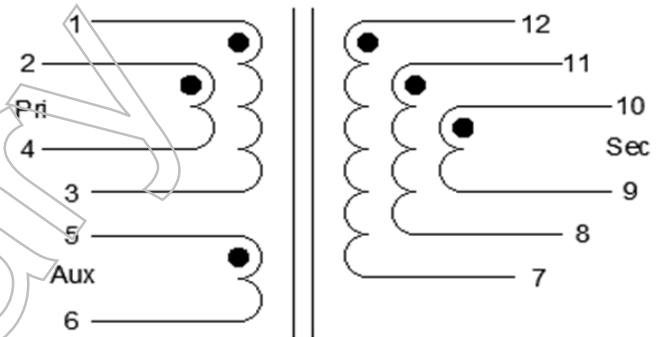


Dimension ( Unit : mm )							
A ( Max. )	B ( Max. )	C ( Max. )	D ( Typ. )	E ( +/-0.1 )	F ( Typ. )	G ( Typ. )	H ( Typ. )
22.0	30.0	11.8	20.0	0.7	3.0	2.7	24.6

Recommend Pad Layout :



Schematic :



Electrical Characteristics :

Part Number	L ( Pri ) ( 100KHz,0.1V )	LK ( Pri ) ( 100KHz,0.1V )	DCR(mΩ) Max.			Turns ratio Pri:Sec:Aux	Output	Vaux
			Pri.	Sec.	Bias.			
GPOE-EFD20PF-S12W60V33A	100 uH +/- 20%	0.55 uH Max.	35	2.3	185	6:1:3.5	3.3V,18.18A	12V
GPOE-EFD20PF-S12W60V05A	100 uH +/- 20%	0.30 uH Max.	35	2.7	185	4:1:2.3	5.0V,12A	12V
GPOE-EFD20PF-S12W60V12A	100 uH +/- 20%	0.17 uH Max.	35	8	156	2:1:1	12V,5.0A	12V
GPOE-EFD20PF-S12W60V24A	100 uH +/- 20%	0.14 uH Max.	35	30	156	1:1:0.5	24V,2.5A	12V

NOTE :

\* HI-POT TEST ( Pri - Sec ) 1500 VAc 1.0mA / 2S

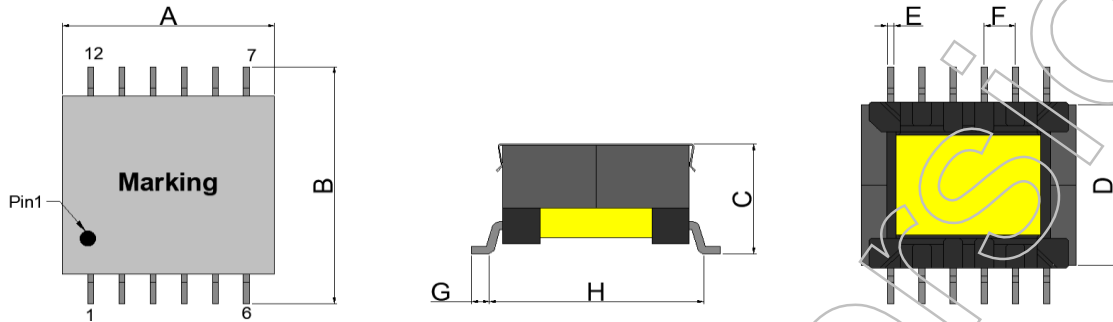
\* Input 36 – 72 V at 200 kHz, 60W , Forward

\* UPoE IEEE 802.3bt

<b>Product Series :</b> GPOE	<b>Brand :</b> GOTREND ( Made in China )
<b>File Version :</b> GPOE-SERIES-V0R9	<b>Editor :</b> Jerry Chen
<b>Established Date :</b> 2022.09.07	<b>Description :</b> POE Transformer
<b>Latest Edit Date :</b> 2023.02.17	<b>Product Type :</b> <input type="checkbox"/> Standard <input checked="" type="checkbox"/> Customize

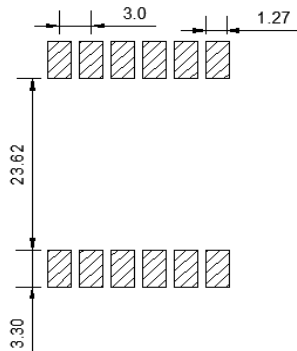
### GPOE-EFD20PK-W65-SERIES

**Dimension : [ mm ]**

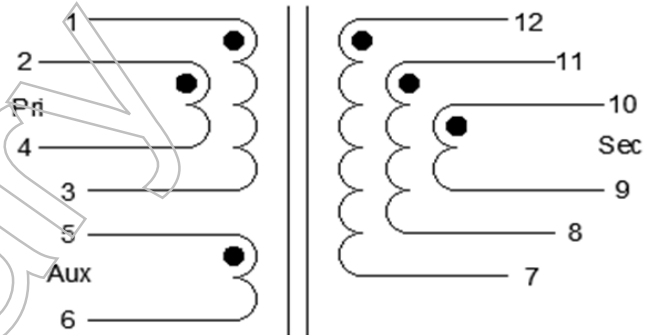


Dimension ( Unit : mm )							
A ( Max. )	B ( Max. )	C ( Max. )	D ( Typ. )	E ( +/-0.1 )	F ( Typ. )	G ( Typ. )	H ( Typ. )
22.0	30.0	11.8	21.0	0.711	3.0	2.03	24.6

**Recommend Pad Layout :**



**Schematic :**



**Electrical Characteristics :**

Part Number	L ( Pri ) (100KHz,0.1V)	LK ( Pri ) (100KHz,0.1V)	DCR(mΩ) Max.			Turns ratio Pri:Sec:Aux	Output	Isat @20%	Vaux
			Pri.	Sec.	Bias.				
GPOE-EFD20PK -S12W65V33A	18.9 uH +/-10%	0.50 uH Max.	34.9	2	130	1:0.143:0.50	3.3V,19.7A	6.3A	12V
GPOE-EFD20PK -S12W65V05A	18.9 uH +/-10%	0.38 uH Max.	34.9	2.8	130	1:0.214:0.50	5V,13A	6.3A	12V
GPOE-EFD20PK -S12W65V12A	15.5 uH +/-10%	0.17 uH Max.	18.9	9.2	108	1:0.5:0.50	12V,5.4A	6.6A	12V
GPOE-EFD20PK -S12W65V24A	15.5 uH +/-10%	0.12 uH Max.	18.9	36.3	108	1:1:0.50	24V,2.7A	6.6A	12V
GPOE-EFD20PK -S12W65V48A	15.5 uH +/-10%	0.11 uH Max.	18.9	140	108	1:2:0.50	48V,1.35A	6.6A	12V

**NOTE :**

\* HI-POT TEST ( Pri - Sec ) 1500 VAc 1.0mA / 60S

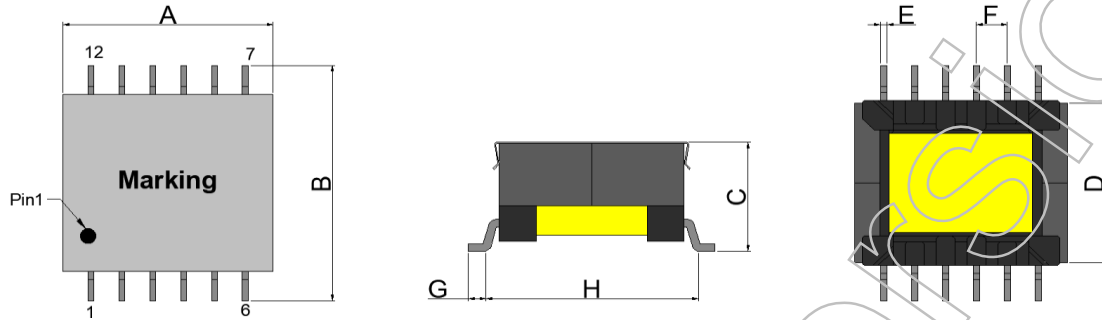
\* Input 36 ~ 57 V at 250 kHz, 65W , Flyback

\* UPoE+ IEEE 802.3bt

<b>Product Series :</b>	<b>GPOE</b>	<b>Brand :</b>	<b>GOTREND ( Made in China )</b>
<b>File Version :</b>	<b>GPOE-SERIES-V0R9</b>	<b>Editor :</b>	<b>Jerry Chen</b>
<b>Established Date :</b>	<b>2022.09.07</b>	<b>Description :</b>	<b>POE Transformer</b>
<b>Latest Edit Date :</b>	<b>2023.02.17</b>	<b>Product Type :</b>	<input type="checkbox"/> Standard <input checked="" type="checkbox"/> Customize

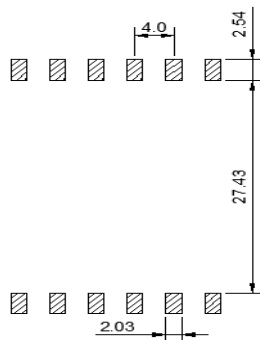
### GPOE-EFD25PK-W84-SERIES

Dimension : [ mm ]

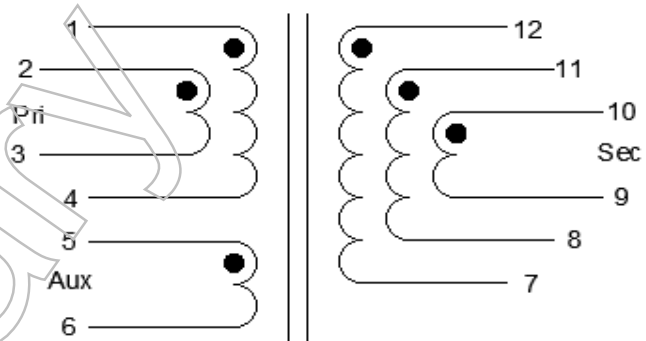


Dimension ( Unit : mm )							
A ( Max. )	B ( Max. )	C ( Max. )	D ( +/-0.3 )	E ( +/-0.1 )	F ( Max.. )	G ( Typ. )	H ( Typ. )
26.31	32.30	14.20	27.43	1.0	4.0	1.9	28.5

Recommend Pad Layout :



Schematic :



Electrical Characteristics :

Part Number	L ( Pri ) (100KHz,0.1V)	LK ( Pri ) (100KHz,0.1V)	DCR(mΩ) Max.			Turns ratio Pri:Sec:Aux	Output	Vaux
			Pri.	Aux.	Sec.			
GPOE-EFD25PK-S12W84V24A	15 uH +/-8%	0.20 uH Max.	15.0	150	17.5	8:8:3	24V,3.5A	9V

NOTE :

\* HI-POT TEST ( Pri - Sec ) 1500 VAc 1.0mA / 60S

\* Input 40 – 57 V at 250 kHz, 84W , Flyback

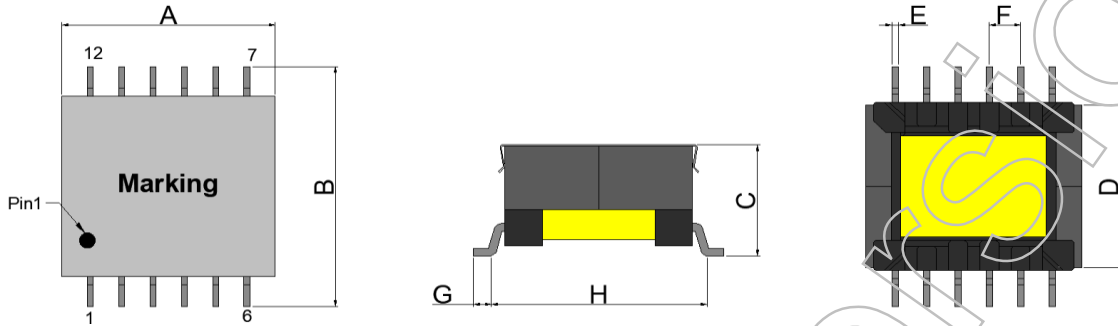
\* UPoE+ IEEE 802.3bt



<b>Product Series :</b> GPOE	<b>Brand :</b> GOTREND ( Made in China )
<b>File Version :</b> GPOE-SERIES-V0R9	<b>Editor :</b> Jerry Chen
<b>Established Date :</b> 2022.09.07	<b>Description :</b> POE Transformer
<b>Latest Edit Date :</b> 2023.02.17	<b>Product Type :</b> <input type="checkbox"/> Standard <input checked="" type="checkbox"/> Customize

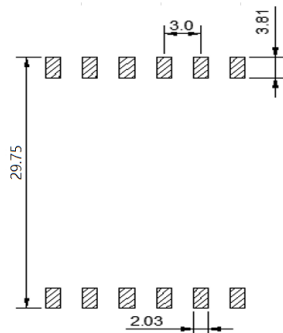
### GPOE-EFD20PF-W90-SERIES

Dimension : [ mm ]

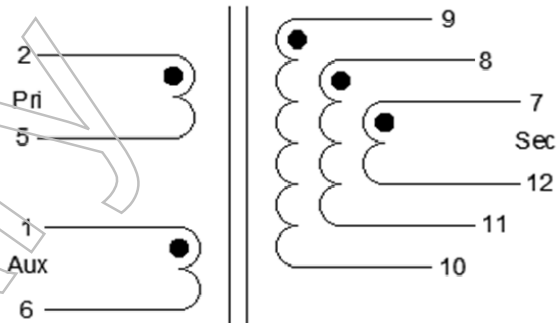


Dimension ( Unit : mm )							
A ( Max. )	B ( Max. )	C ( Max. )	D ( +/-0.25 )	E ( +/-0.1 )	F ( Max. )	G ( Typ. )	H ( Typ. )
22.0	29.5	11.8	23.0	0.7	3.0	1.5	26.5

Recommend Pad Layout :



Schematic :



Electrical Characteristics :

Part Number	L ( Pri ) (100KHz,0.1V)	LK ( Pri ) (100KHz,0.1V)	DCR(mΩ) Max.			Turns ratio Pri:Sec:Aux	Output	Vaux
			Pri.	Aux.	Sec.			
GPOE-EFD20PF-S12W90V12A	180 uH +/- 20%	0.45 uH Max.	25	200	11	1.5:0.875:1	12V,7.5A	10V

NOTE :

\* HI-POT TEST ( Pri - Sec ) 1500 VAc 1.0mA / 60S

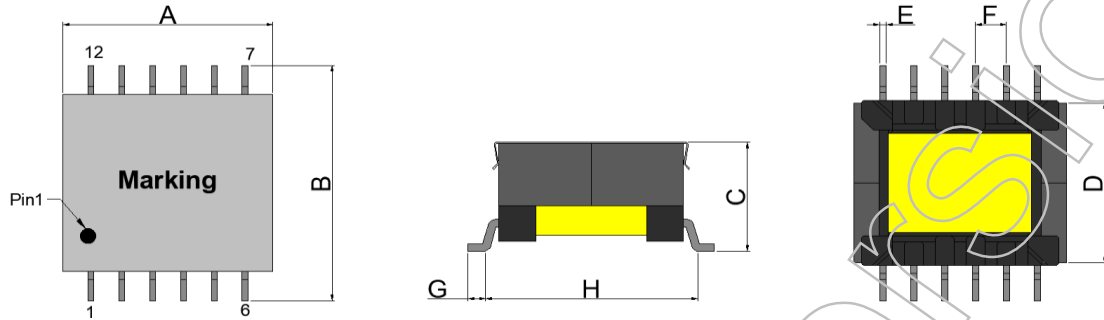
\* Input 33 – 57 V at 200 kHz, 90W , Forward

\* UPoE+ IEEE 802.3bt

<b>Product Series :</b> GPOE	<b>Brand :</b> GOTREND ( Made in China )
<b>File Version :</b> GPOE-SERIES-V0R9	<b>Editor :</b> Jerry Chen
<b>Established Date :</b> 2022.09.07	<b>Description :</b> POE Transformer
<b>Latest Edit Date :</b> 2023.02.17	<b>Product Type :</b> <input type="checkbox"/> Standard <input checked="" type="checkbox"/> Customize

### GPOE-EFD25PF-W100-SERIES

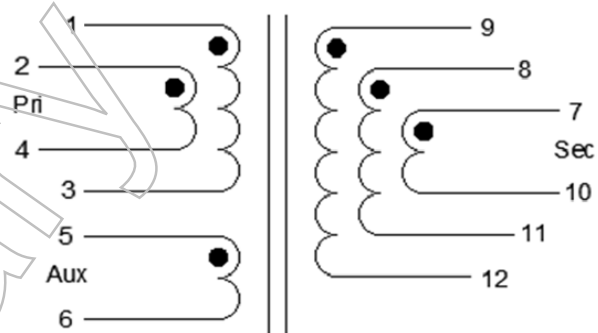
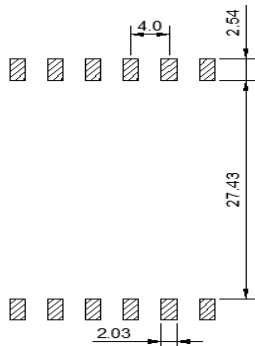
Dimension : [ mm ]



Dimension ( Unit : mm )							
A ( Max. )	B ( Max. )	C ( Max. )	D ( +/-0.3 )	E ( +/-0.1 )	F ( Max. )	G ( Typ. )	H ( Typ. )
26.31	32.30	14.20	27.43	1.0	4.0	1.9	28.5

Recommend Pad Layout :

Schematic :



Electrical Characteristics :

Part Number	L ( Pri ) (100KHz,0.1V)	LK ( Pri ) (100KHz,0.1V)	DCR(mΩ) Max.			Turns ratio Pri:Sec:Aux	Output	Vaux
			Pri.	Aux.	Sec.			
GPOE-EFD25PF-S12W100V12A	115 uH Min.	1.0 uH Max.	10.	170	6.0	1:0.75:0.625	12V,8.33	10V

NOTE :

\* HI-POT TEST ( Pri - Sec ) 1500 VAc 1.0mA / 60S

\* Input 33 – 57 V at 200 kHz, 100W , Forward

\* UPoE+ IEEE 802.3bt

<b>Product Series :</b>	<b>GPOE</b>	<b>Brand :</b>	<b>GOTREND ( Made in China )</b>
<b>File Version :</b>	<b>GPOE-SERIES-V0R9</b>	<b>Editor :</b>	<b>Jerry Chen</b>
<b>Established Date :</b>	<b>2022.09.07</b>	<b>Description :</b>	<b>POE Transformer</b>
<b>Latest Edit Date :</b>	<b>2023.02.17</b>	<b>Product Type :</b>	<input type="checkbox"/> Standard <input checked="" type="checkbox"/> Customize

**Care note :**

Care note for Use :

(1) Model :

When this product was used in a similar or as new product to the original one, sometimes it might be unable to satisfy the specifications due to difference in condition of usage.

(2) Drop :

If this product suffered mechanical stress such as drop, characteristics may become poor ( due to damage on coil / bobbin / ferrite ... etc. )

Never use such stressed product.

Care note for Safety :

(1) Provision to Abnormal Condition :

This product itself does not have any protective function in abnormal condition such as overload, short-circuit and open-circuit conditions, etc.

Therefore, it shall be confirmed from the end product that there is no risk of smoking, fire, dielectric withstand voltage insulation resistance, etc. in abnormal conditions to provide protective devices and /or protection circuit in the end product.

(2) Temperature Rise :

Temperature rise on this product depends on the installation condition on end products.

It shall be confirmed on the actual end product that temperature rise of this product is within the specified temperature class limit.

(3) Dielectric Strength :

Dielectric withstanding test with higher voltage than specific value will damage insulating material and shorten its life.

(4) Water :

This product must not be used in wet condition resulted from water, coffee or any liquid contact because insulation strength becomes very low under such condition.

(5) Potting :

If this product is potted in some compound, coating material of magnet wire might be occasionally damaged. Please ask us if you intend to pot this product.

(6) Detergent :

Please consult our company immediately once under such circumstances because product reliability confirmation etc. is needed when this product come in contact with these chemicals.

<b>Product Series :</b> GPOE	<b>Brand :</b> GOTREND ( Made in China )
<b>File Version :</b> GPOE-SERIES-V0R9	<b>Editor :</b> Jerry Chen
<b>Established Date :</b> 2022.09.07	<b>Description :</b> POE Transformer
<b>Latest Edit Date :</b> 2023.02.17	<b>Product Type :</b> <input type="checkbox"/> Standard <input checked="" type="checkbox"/> Customize

**Reliability :**

SN	Test Item	Test Condition	Specification																
1	<b>Thermal Shock (Temperature Cycle)</b>	Temperature : -40 ° C ~ +125° C kept stabilized for 30 minutes each Cycle : 100 Cycles.	There must be no deformation or change in dimension. Inductance must not change more than the stated tolerance.																
2	<b>Humidity Resistance</b>	Humidity : 90%~ 95% RH Temperature : 40 ± 2 ° C Test Time : 500 ± 12 Hours	There must be no case deformation or change in dimensions. Inductance must as specification stated.																
3	<b>HighTemperature</b>	Temperature : 125 ± 2 ° C Humidity : 20% Test Time : 500 ± 12 Hours	There must be no case deformation or change in dimensions. Inductance must as specification stated.																
4	<b>Low Temperature</b>	Temperature : -40 ± 2 ° C Test Time : 500 ± 12 Hours	There must be no case deformation or change in dimensions. Inductance must as specification stated.																
5	<b>Temperature and Humidity Cycle</b>	<table border="1"> <thead> <tr> <th>Step</th> <th>Temp</th> <th>Humidity</th> <th>Time</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>25 ± 2 ° C</td> <td>95 ~ 100% RH</td> <td>3.0Hr</td> </tr> <tr> <td>2</td> <td>55 ± 2 ° C</td> <td>95 ~ 96% RH</td> <td>9.5Hr</td> </tr> <tr> <td>3</td> <td>25 ± 2 ° C</td> <td>95 ~ 100% RH</td> <td>9.5Hr</td> </tr> </tbody> </table>	Step	Temp	Humidity	Time	1	25 ± 2 ° C	95 ~ 100% RH	3.0Hr	2	55 ± 2 ° C	95 ~ 96% RH	9.5Hr	3	25 ± 2 ° C	95 ~ 100% RH	9.5Hr	There must be no case deformation or change in dimensions. Inductance must as specification stated.
		Step	Temp	Humidity	Time														
		1	25 ± 2 ° C	95 ~ 100% RH	3.0Hr														
2	55 ± 2 ° C	95 ~ 96% RH	9.5Hr																
3	25 ± 2 ° C	95 ~ 100% RH	9.5Hr																
6	<b>Vibration</b>	Frequency : 10Hz ~ 50Hz Amplitude : 1.5 mm Direction : X , Y , Z Time : 2 Hours each	Solder inductors on the test PCB.After vibration, there must be no deformation or change in dimension. Inductance must not change more than the stated tolerance.																
7	<b>Soldering Heat Resistance</b>	Preheat : 120 ~ 150 ° C ( 60 sec ) Solder : H63A ( eutectic solder ) Solder Temp. : 260 ± 5 ° C Flux : Rosin Dip time : 10 ± 1 second	The chip must have no cracks.More than 75% of the terminal electrode must be covered with solder. For 96.5 Sn / 3.5 Ag Solder Past: > 217 oC / 90 Seconds. For 63.0 Sn / 37 Pb Solder Past: > 183 oC / 120 Seconds.																

**Packaging Information :**

Box Package ( cm ) :

