

Surface Mount Power Transformer

Features of the EFD20-6 Series

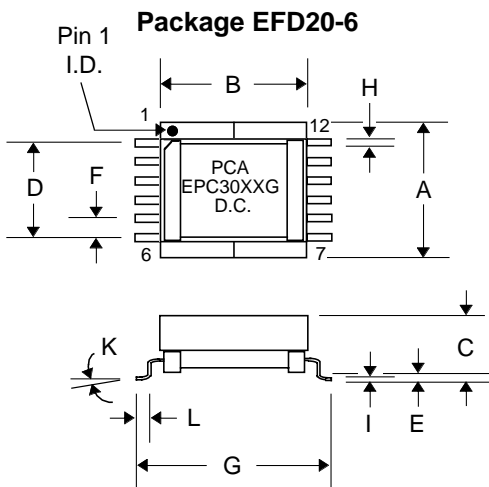
- Low Loss Material ensures operation in High Frequency Switching Converters such as Flyback, Buck, Boost Topology or as Coupled Inductors†
- Selected models can be used in Forward, Push-Pull or Half & Full Bridge Topology††
 - 500 Vrms Isolations •
 - Very Low Leakage Inductance •

Primary Specification : †For Flyback, Buck, Boost Topolgy or as Coupled Inductors

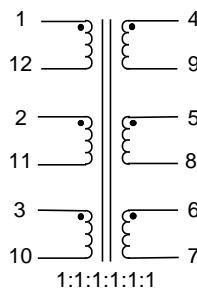
Part Number	Connection	DCR (Ω Max.)	Idc (Amps)	Inductance (μH ± 20%) @ 0 Adc	Inductance Change @ Idc (Typ.)	Vt 1 (V-μSec. Max.)	Temp. Rise @ Idc (°C Typ.)
EPC3030G	Series	.071 xNs	6.1 /Ks	22.3 x(Ns) ²	27%	98 xNs	39
	Parallel	.071 /Np	6.1 /Kp	22.3	27%	98	39
	Single Wdg	.071	2.5	22.3	7.5%	98	39
EPC3031G	Series	.047xNs	7.5 /Ks	9.9 x(Ns) ²	21%	65.3 xNs	39
	Parallel	.047 /Np	7.5 /Kp	9.9	21%	65.3	39
	Single Wdg	.047	3.06	9.9	9%	65.3	39
EPC3032G	Series	.071 xNs	6.1 /Ks	12.0 x(Ns) ²	1%	98 xNs	39
	Parallel	.071 /Np	6.1 /Kp	12.0	1%	98	39
	Single Wdg	.071	2.5	12.0	0%	98	39
EPC3033G	Series	.047 xNs	7.5 /Ks	5.3 x(Ns) ²	0.4%	65.3 xNs	39
	Parallel	.047 /Np	7.5 /Kp	5.3	0.4%	65.3	39
	Single Wdg	.047	3.06	5.3	0%	65.3	39
EPC3034G	Series	.071 xNs	6.1 /Ks	9.65 x(Ns) ²	0%	98 xNs	39
	Parallel	.071 /Np	6.1 /Kp	9.65	0%	98	39
	Single Wdg	.071	2.5	9.65	0%	98	39
EPC3035G	Series	.047 xNs	7.5 /Ks	4.3 x(Ns) ²	0%	65.3 xNs	39
	Parallel	.047 /Np	7.5 /Kp	4.3	0%	65.3	39
	Single Wdg	.047	3.06	4.3	0%	65.3	39

Notes :

1. Ns = Number of series connections
2. Np = Number of parallel connections
3. Ks = Ns x √6/Ns
4. Kp = √6/Np



Schematic



Dimensions

Dim.	(Inches)			(Millimeters)		
	Min.	Max.	Nom.	Min.	Max.	Nom.
A	---	.835	---	---	21.20	---
B	---	.854	---	---	21.70	---
C	---	.425	---	---	10.80	---
D	---	---	.591	---	---	15.00
E	---	---	.010	---	---	.250
F	---	---	.118	---	---	3.00
G	---	---	1.128	---	---	28.65
H	---	---	.028	---	---	.700
I	---	---	.016	---	---	.400
K	0°	8°	---	0°	8°	---
L	---	---	.080	---	---	2.03

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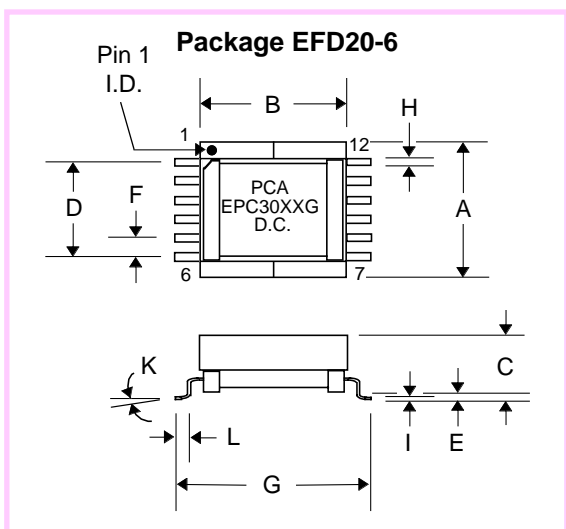
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 - 500 Vrms Isolations •
 - Very Low Leakage Inductance •

Primary Specification : †For Flyback, Buck, Boost Topology or as Coupled Inductors

Part Number	Connection	DCR (Ω Max.)	Idc (Amps)	Inductance (μH ± 20%) @ 0 Adc	Inductance Change @ Idc (Typ.)	Vt 1 (V-μSec. Max.)	Temp. Rise @ Idc (°C Typ.)
EPC3036G	Series	.071 xNs	6.1 /Ks	7.63 x(Ns) ²	0%	98 xNs	39
	Parallel	.071 /Np	6.1 /Kp	7.63	0%	98	39
	Single Wdg	.071	2.5	7.63	0%	98	39
EPC3037G	Series	.047xNs	7.5 /Ks	3.4 x(Ns) ²	0%	65.3 xNs	39
	Parallel	.047 /Np	7.5 /Kp	3.4	0%	65.3	39
	Single Wdg	.047	3.06	3.4	0%	65.3	39
EPC3055G	Series	.081xNs	5.2 /Ks	27.4 x(Ns) ²	14%	113 xNs	34
	Parallel	.081 /Np	5.2 /Kp	27.4	14%	113	34
	Single Wdg	.081	2.1	27.4	2%	113	34

Primary Specification : ††For Forward, Push-Pull, Half & Full Bridge Topology

Part Number	Connection	DCR (Ω Max.)	Irms (Amps)	Inductance (μH ± 30%) @ 0 Adc	Inductance Change	Vt 1 (V-μSec. Max.)	Temp. Rise @ Irms (°C Typ.)
EPC3028G	Series	.071 xNs	6.1 /Ks	173 x(Ns) ²	---	98 xNs	39
	Parallel	.071 /Np	6.1 /Kp	173	---	98	39
	Single Wdg	.071	2.5	173	---	98	39
EPC3029G	Series	.047xNs	7.5 /Ks	76.8 x(Ns) ²	---	65.3 xNs	39
	Parallel	.047 /Np	7.5 /Kp	76.8	---	65.3	39
	Single Wdg	.047	3.06	76.8	---	65.3	39



Notes :

1. Ns = Number of series connections
2. Np = Number of parallel connections
3. Ks = $Ns \times \sqrt{6/Ns}$
4. Kp = $\sqrt{6/Np}$

Dimensions

Dim.	(Inches)			(Millimeters)		
	Min.	Max.	Nom.	Min.	Max.	Nom.
A	---	.835	---	---	21.20	---
B	---	.854	---	---	21.70	---
C	---	.425	---	---	10.80	---
D	---	---	.591	---	---	15.00
E	---	---	.010	---	---	.250
F	---	---	.118	---	---	3.00
G	---	---	1.128	---	---	28.65
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I	---	---	.016	---	---	.400
K	0°	8°	---	0°	8°	---
L	---	---	.080	---	---	2.03