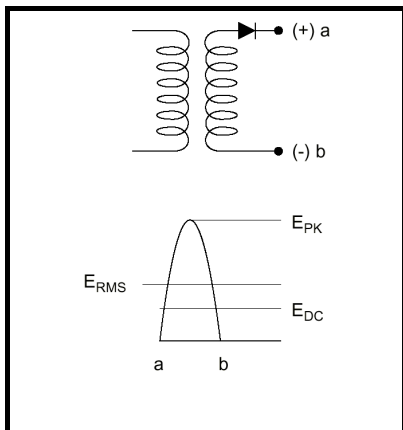
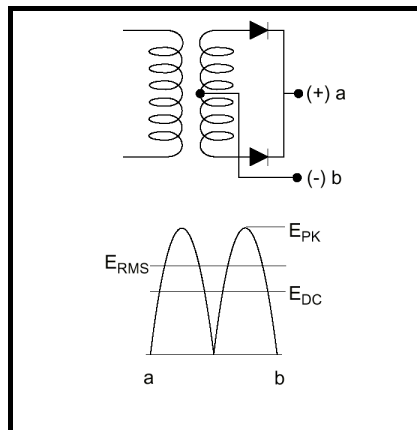


**SINGLE PHASE**

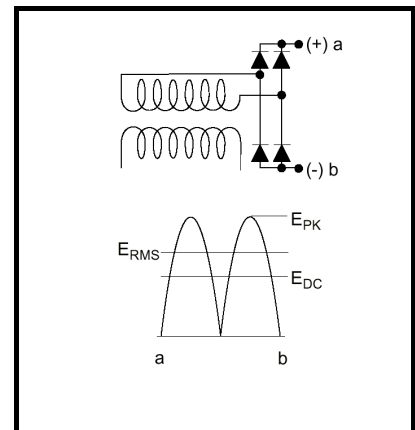
Circuit and output voltage waveform across a - b



**Fig. 1 : Half wave**



**Fig. 2 : Full wave centre tap**



**Fig. 3 : Full wave bridge**

	Fundamental Ripple Frequency	Current Ratios						Voltage Ratios			
		$I_{AV} / I_{DC}$	$I_{RMS} / I_{DC}^A$		$I_{PK} / I_{DC}^B$		$I_{PK} / I_{DC}^C$		$E_{RMS} / E_{DC}^D$	$E_{RMS} / E_{DC}^E$	$E_{PK} / E_{DC}^F$
			R	L	R	L	R	L			
Half Wave	1f	1.0	1.57	-	3.14	-	1.57	-	2.22	1.57	3.14
Half Wave Centre Tap	2f	0.5	0.785	0.707	1.57	1.0	0.785	0.707	1.11	2.22	1.57
Full Wave Bridge	2f	0.5	0.785	0.707	1.57	1.0	1.11	1.0	1.11	1.11	1.57

**NOTES**

R = Resistive load.

L = Inductive load.

A = Ratio of RMS current to DC output current. Arm fuses are rated for this RMS current.

B = Ratio of peak device current to DC output current.

C = Ratio of secondary RMS line current from supply to DC output current. Line fuses are rated for this RMS current.

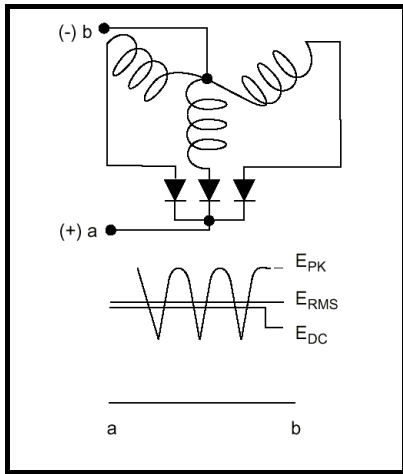
D = Ratio of no load RMS line to line voltage to no load DC voltage.

E = Ratio of RMS phase voltage to DC voltage.

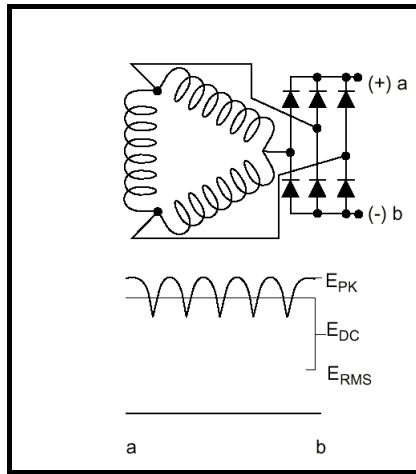
F = Ratio of peak phase voltage to DC voltage.

**THREE PHASE**

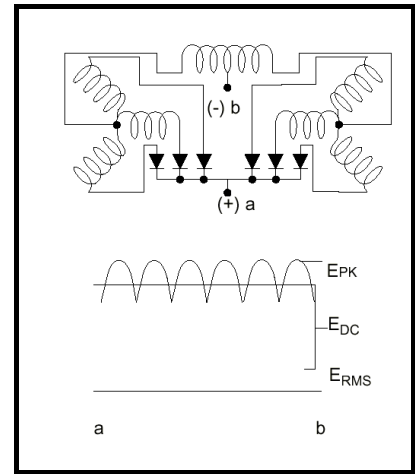
Circuit and output voltage waveform across a - b



**Fig. 4 : Half wave**



**Fig. 5 : Bridge**



**Fig. 6: Double star**

	Fundamental Ripple Frequency	Current Ratios						Voltage Ratios			
		$I_{AV} / I_{DC}$	$I_{RMS} / I_{DC}^A$		$I_{PK} / I_{DC}^B$		$I_{PK} / I_{DC}^C$		$E_{RMS} / E_{DC}^D$	$E_{RMS} / E_{DC}^E$	$E_{PK} / E_{DC}^F$
			R	L	R	L	R	L			
<b>Half Wave</b>	3f	0.33	0.588	0.577	1.21	1.0	0.588	0.577	1.48	0.855	2.1
<b>Bridge</b>	6f	0.33	0.588	0.577	1.05	1.0	0.816	0.816	0.74	0.427	1.05
<b>Double Star</b>	6f	0.167	0.293	0.289	0.525	0.5	0.293	0.289	1.48	0.855	2.42

**NOTES**

R = Resistive load.

L = Inductive load.

A = Ratio of RMS current to DC output current. Arm fuses are rated for this RMS current.

B = Ratio of peak device current to DC output current.

C = Ratio of secondary RMS line current from supply to DC output current. Line fuses are rated for this RMS current.

D = Ratio of no load RMS line to line voltage to no load DC voltage.

E = Ratio of RMS phase voltage to DC voltage.

F = Ratio of peak phase voltage to DC voltage.

SIX PHASE

Circuit and output voltage waveform across a - b

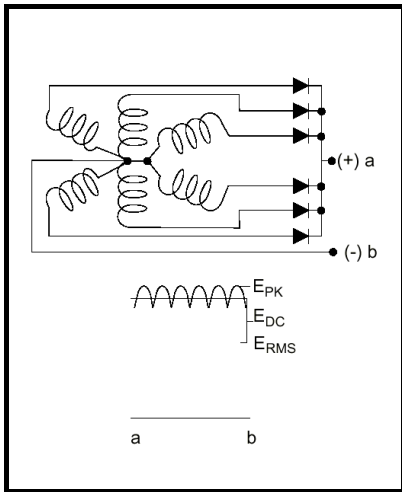


Fig. 7 : 5 Star limb core

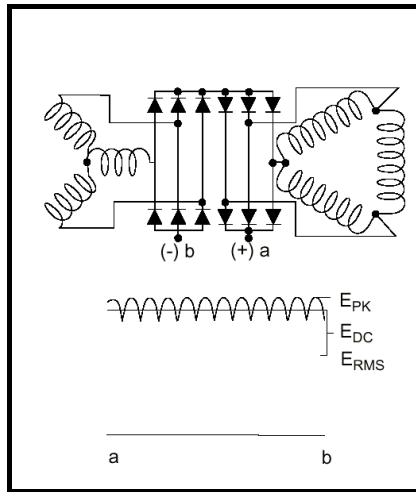


Fig. 8 : Series bridges

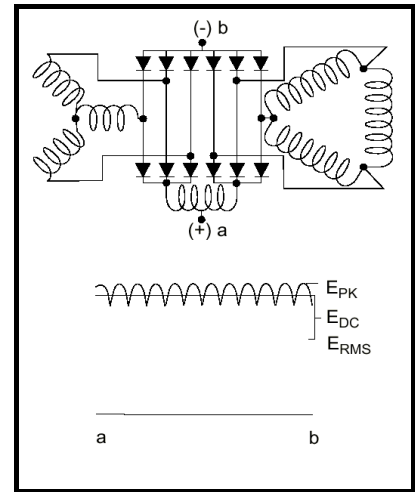


Fig. 9 : Star delta with IPT

	Fundamental Ripple Frequency	Current Ratios							Voltage Ratios		
		$I_{AV} / I_{DC}$	$I_{RMS} / I_{DC}^A$		$I_{PK} / I_{DC}^B$		$I_{PK} / I_{DC}^C$		$E_{RMS} / E_{DC}^D$	$E_{RMS} / E_{DC}^E$	$E_{PK} / E_{DC}^F$
			R	L	R	L	R	L			
5 Star Limb Core	6f	0.167	0.408	0.408	1.05	0.5	0.408	0.408	1.48	0.74	2.1
Series Bridges	12f	0.33	0.588	0.577	1.05	1.0	0.816	0.816	0.37	-	1.05
Star Delta with IPT	12f	0.167	0.293	0.289	0.525	0.5	0.408	0.408	0.74	-	1.05

NOTES

R = Resistive load.

L = Inductive load.

A = Ratio of RMS current to DC output current. Arm fuses are rated for this RMS current.

B = Ratio of peak device current to DC output current.

C = Ratio of secondary RMS line current from supply to DC output current. Line fuses are rated for this RMS current.

D = Ratio of no load RMS line to line voltage to no load DC voltage.

E = Ratio of RMS phase voltage to DC voltage.

F = Ratio of peak phase voltage to DC voltage.

## POWER ASSEMBLY CAPABILITY

The Power Assembly group was set up to provide a support service for those customers requiring more than the basic semiconductor, and has developed a flexible range of heatsink and clamping systems in line with advances in device voltages and current capability of our semiconductors.

We offer an extensive range of air and liquid cooled assemblies covering the full range of circuit designs in general use today. The Assembly group offers high quality engineering support dedicated to designing new units to satisfy the growing needs of our customers.

Using the latest CAD methods our team of design and applications engineers aim to provide the Power Assembly Complete Solution (PACs).

## HEATSINKS

The Power Assembly group has its own proprietary range of extruded aluminium heatsinks, which have been, designed to optimise the performance of Dynex semiconductors. Data with respect to air natural, forced air and liquid cooling (with flow rates) is available on request.

For further information on device clamps, heatsinks and assemblies, please contact your nearest sales representative or Customer Services.



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**No Annotation:** The product parameters are fixed and the product is available to datasheet specification.

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