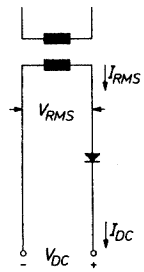
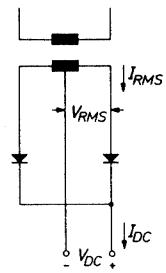
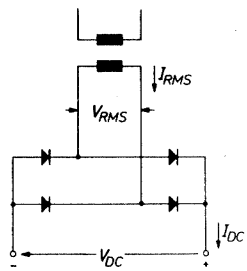
Technical Information

Design Invormation for Single-Phase Circuits

	Halfe-wave	Full-wave	Bridge
Circuit Diagrams			

Resistive load

Charactoeristics (each diode):

V_{RRM} >	$3.45 \cdot V_{DC}$	$3.45 \cdot V_{DC}$	$1.73 \cdot V_{DC}$
V_{RRM} >	$1.56 \cdot V_{RMS}$	$3.12 \cdot V_{RMS}$	$1.56 \cdot V_{RMS}$
I_{FAV} >	$1.0 \cdot I_{DC}$	$0.5 \cdot I_{DC}$	$0.5 \cdot I_{DC}$

Circuit parameters:

V_{RMS}	$2.22 \cdot V_{DC}$	$1.11 \cdot V_{DC}$	$1.11 \cdot V_{DC}$
I_{RMS}	$1.57 \cdot I_{DC}$	$0.78\ (0.71) \cdot I_{DC}$	$1.11\ (1.0) \cdot I_{DC}$
P_t	$3.1 \cdot P_{DC}$	$1.48\ (1.34) \cdot P_{DC}$	$1.24\ (1.11) \cdot P_{DC}$
V_{BR}	$1.21 \cdot V_{DC}$	$0.48 \cdot V_{DC}$	$0.48 \cdot V_{DC}$
f_{BR}	$1 \cdot f_{in}$	$2 \cdot f_{in}$	$2 \cdot f_{in}$

Load with back EMF

Characteristics (each diode):

V_{RRM} >	$2.65 \cdot V_{DC}$	$2.5 \cdot V_{DC}$	$1.25 \cdot V_{DC}$
V_{RRM} >	$3.12 \cdot V_{RMS}$	$3.12 \cdot V_{RMS}$	$1.56 \cdot V_{RMS}$

Circuit parameters:

V_{RMS}	$0.85 \cdot V_{DC}$	$0.8 \cdot V_{DC}$	$0.8 \cdot V_{DC}$
I_{RMS}	$2.1 \cdot I_{DC}$	$1.1 \cdot I_{DC}$	$1.57 \cdot I_{DC}$
P_t	$1.73 \cdot P_{DC}$	$1.48 \cdot P_{DC}$	$1.24 \cdot P_{DC}$
V_{BR}	to $0.05 \cdot V_{DC}$	to $0.05 \cdot V_{DC}$	to $0.05 \cdot V_{DC}$
f_{BR}	$1 \cdot f_{in}$	$2 \cdot f_{in}$	$2 \cdot f_{in}$

Values in brackets apply to circuits with resistive loads and incorporting a high inductance choke.