

Table 27. Rectifier Applications

| Typical Circuit | Total Supply Power | Input Rectifiers Standard Recovery for Line Voltage Operation | | | |
|--|--------------------|--|---|------------------------------|----------------------------------|
| | | Input Current | Suggested Devices* | | |
| | | | Type | I _O | V _R * |
| <p>BASIC FLYBACK CONFIGURATION</p> <p>$P_O \approx I_{C(OP)} V_{in}^6$</p> <ul style="list-style-type: none"> • NO FILTER INDUCTANCE • LOW POWER MULTIPLE OUTPUT SYSTEMS • REFERENCE EB-87 <p>Total Supply Power — 10, 50, 75 W Input Current — < 1A to 2A</p> | 10 W | < 1 A | 1N4004 | 1 A | 400 V |
| | 50 W | 1 A | 1N4004 | 1 A | 400 V |
| | 75 W | 2 A | MR504 1N5404 | 3 A 3 A | 400 V 400 V |
| <p>BASIC FORWARD CONVERTER</p> <p>$P_O \approx I_{C(OP)} V_{in}^3$</p> <ul style="list-style-type: none"> • HIGHER OUTPUT POWER THAN FLYBACK • LOWER OUTPUT RIPPLE THAN FLYBACK <p>Total Supply Power — 75, 100 W Input Current — 2A to 3A</p> | 75 W | 2 A | MR504 1N5404 | 3 A 3 A | 400 V 400 V |
| | 100 W | 3 A | MR504 1N5404 | 3 A 3 A | 400 V 400 V |
| <p>BASIC HALF-BRIDGE CONFIGURATION</p> <p>$P_O \approx I_{C(OP)} V_{in}^3$</p> <ul style="list-style-type: none"> • NO SYMMETRY CORRECTION NEEDED • BEST TRANSFORMER UTILIZATION • HIGH FREQUENCY RIPPLE • REFERENCE AN-767 EB-78 AND EB-86 <p>Total Power Supply — 250, 100, 2500 W Input Current — 6A to 25A</p> | 250 W | 6 A | MR754 1N1204, A, B, C MR1124 | 6 A 12 A 12 A | 400 V 400 V 400 V |
| | 1000 W | 12 A | 1N1204, A, B, C MR1124 MDA2504 MR2004S | 12 A 12 A 25 A 20 A | 400 V 400 V 400 V 400 V |
| | 2500 W | 25 A | MDA2504 MDA3504 1N1183, A | 25 A 35 A 40 A | 400 V 400 V 400 V |