

SINGLE PHASE BRIDGE RECTIFIER

FBPC25005WN THRU FBPC2510WN

VOLTAGE RANGE
CURRENT

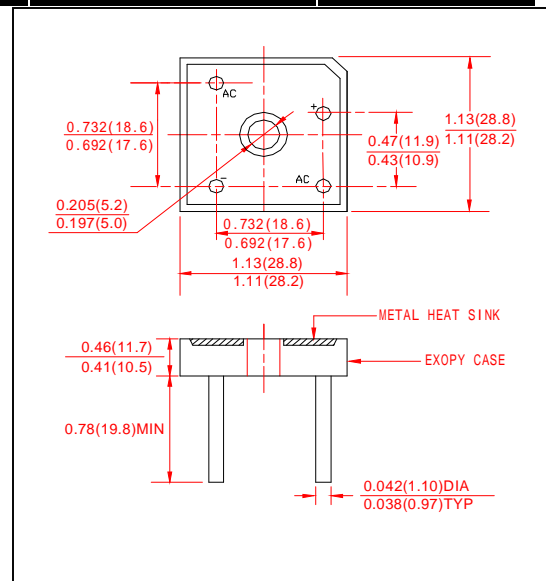
50 to 1000 Volts
25 Ampere

FEATURES

- **Low cost**
- **This series is UL recognized under component index file number E127707**
- **High forward surge current capability**
- **Fast switching for high efficiency**
- **Integrally molded heatsink provide very low thermal resistance**
- **High isolation voltage from case to leads**
- **High temperature soldering guaranteed: 260°C / 10 seconds, at 5 lbs. (2.3kg) tension.**

MECHANICAL DATA

- **Case: Molded plastic body**
- **Terminal: Plated 0.04" (1.02mm) diameter**
- **Polarity: Polarity symbols marked on case**
- **Mounting: Thru hole for #10 screw, 20 in.-lbs Torque Max.**
- **Weight: 0.47 ounce, 13.4 gram**
- **MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**
- **Ratings at 25°C ambient temperature unless otherwise specified**
- **Single Phase, half wave, 60Hz, resistive or inductive load**
- **For capacitive load derate current by 20%**



| | SYMBOL | FBPC 25005WN | FBPC 2501WN | FBPC 2502WN | FBPC 2504WN | FBPC 2506WN | FBPC 2508WN | FBPC 2510WN | UNIT |
|---|---------------------------|-----------------|----------------|----------------|----------------|----------------|----------------|----------------|---------------------------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum RMS Voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | Volts |
| Maximum DC Blocking Voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum Average Forward Rectified Output Current, at $T_C = 50^\circ\text{C}$ (Note 1,2) | $I_{(AV)}$ | 25 | | | | | | | Amps |
| Peak Forward Surge Current 8.3mS single half sine wave superimposed on rated load (JEDEC method) | I_{FSM} | 300 | | | | | | | Amps |
| Rating for Fusing ($t < 8.3\text{mS}$) | I^2t | 373 | | | | | | | A^2s |
| Maximum Instantaneous Forward Voltage Drop per Bridge element at 12.5 A | V_F | 1.2 | | | | 1.3 | | | Volts |
| Maximum DC Reverse Current at Rated DC Blocking Voltage per element | $T_A = 25^\circ\text{C}$ | 10 | | | | | | | μA |
| | $T_A = 100^\circ\text{C}$ | 1.0 | | | | | | | mA |
| Maximum DC Reverse recovery time (Note 3) | T_{rr} | 150 | | | | 250 | 500 | | NS |
| Isolation Voltage from case to lead | V_{ISO} | 2500 | | | | | | | V_{AC} |
| Typical Thermal Resistance (Note 1,2) | $R_{\theta Jc}$ | 2.0 | | | | | | | $^\circ\text{C}/\text{W}$ |
| Operating Temperature Rang | T_J | (-65 to +150) | | | | | | | $^\circ\text{C}$ |
| Storage Temperature Rang | T_{STG} | (-65 to +150) | | | | | | | $^\circ\text{C}$ |

Notes:

1. Unit mounted on 5" x 6" x 4.9" (12.8cm x 15.2cm x 12.4cm) AL finned Plate
2. Bolt down on heat-sink with silicon thermal compound between bridge and mounting surface for maximum heat transfer efficiency with #10 screw
3. Reverse recovery test conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$

SINGLE PHASE BRIDGE RECTIFIER

FBPC25005WN THRU FBPC2510WN

VOLTAGE RANGE
CURRENT

50 to 1000 Volts
25 Ampere

RATINGS AND CHARACTERISTIC CURVES FBR2505WN THRU FBR2510WN

FIG.1- DERATING CURVE FOR
OUTPUT RECTIFIED CURRENT

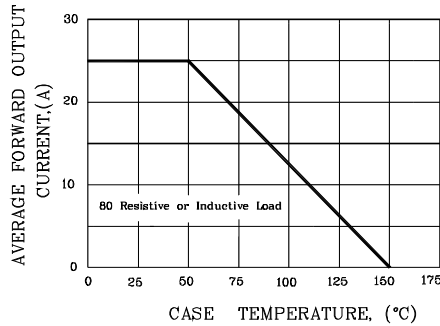


FIG.2- MAXIMUM NON-REPETITIVE PEAK
FORWARD SURGE CURRENT

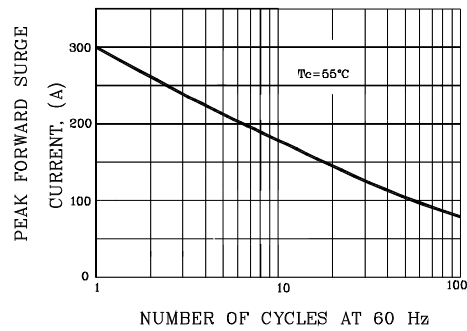


FIG.3- TYPICAL FORWARD CHARACTERISTICS
PER DIODE

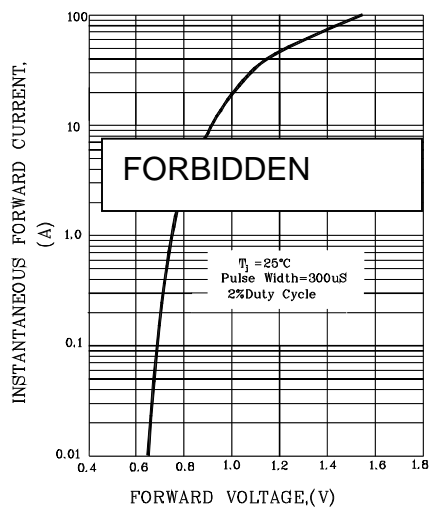


FIG.4- TYPICAL REVERSE CHARACTERISTICS
PER DIODE

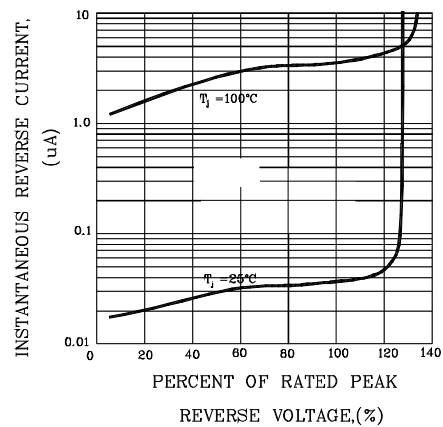


FIG.4- TYPICAL JUNCTION CAPACITANCE

