





## YJB190C80BZJ

### ■ Electrical Characteristics

| Parameter                         | Symbol       | Conditions                               | Min | Typ  | Max      | Units      |
|-----------------------------------|--------------|------------------------------------------|-----|------|----------|------------|
| <b>Static Parameter</b>           |              |                                          |     |      |          |            |
| Drain-Source Breakdown Voltage    | $BV_{DSS}$   | $V_{GS}=0V, I_D=250\mu A, T_j=25$        | 800 | -    | -        | V          |
| Zero Gate Voltage Drain Current   | $I_{DSS}$    | $V_{DS}=800V, V_{GS}=0V, T_j=25$         | -   | -    | 1        | $\mu A$    |
|                                   |              | $V_{DS}=800V, V_{GS}=0V, T_j=125$        | -   | -    | 100      |            |
| Gate-Source Leakage Current       | $I_{GSS}$    | $V_{GS}=\pm 20V, V_{DS}=0V, T_j=25$      | -   | -    | $\pm 10$ | $\mu A$    |
| Gate Threshold Voltage            | $V_{GS(th)}$ | $V_{DS}=V_{GS}, I_D=250\mu A, T_j=25$    | 3   | 3.8  | 4.6      | V          |
| Static Drain-Source On-Resistance | $R_{DS(on)}$ | $V_{GS}=10V, I_D=12A, T_j=25$            | -   | 153  | 190      | m $\Omega$ |
|                                   |              | $V_{GS}=10V, I_D=12A, T_j=150$           | -   | 405  | 503      | m $\Omega$ |
| Diode Forward Voltage             | $V_{SD}$     | $I_S=22A, V_{GS}=0V, T_j=25$             | -   | 0.86 | 1.2      | V          |
| Gate Resistance                   | $R_G$        | $f=1MHz, T_j=25$                         | -   | 4    | -        | $\Omega$   |
| <b>Dynamic Parameters</b>         |              |                                          |     |      |          |            |
| Input Capacitance                 | $C_{iss}$    | $V_{DS}=400V, V_{GS}=0V, f=1MHz, T_j=25$ | -   | 2944 | -        |            |
| Output Capacitance                | $C_{oss}$    |                                          | -   | 44.3 | -        |            |
| Reverse Transfer Capacitance      | $C_{rss}$    |                                          | -   |      |          |            |



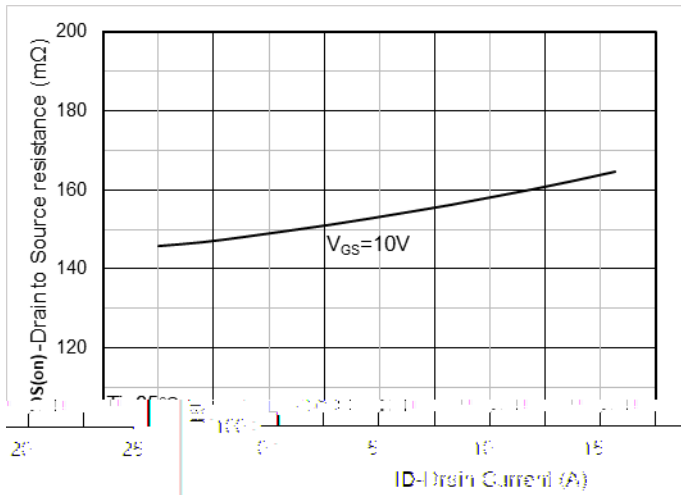


Figure 7. RDS(on) vs. Drain Current; typical values

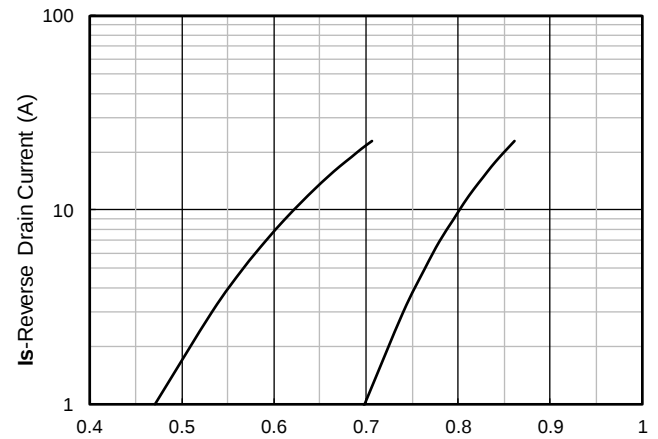


Figure 8. Forward characteristics of reverse diode; typical values

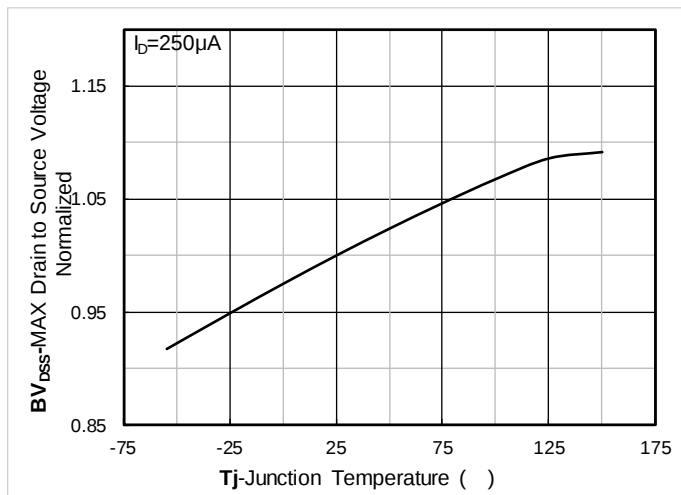


Figure 9. Normalized breakdown voltage

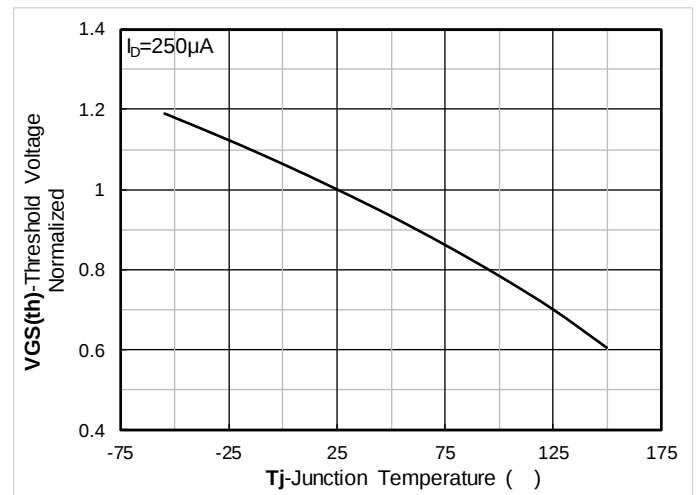


Figure 10. Normalized Threshold voltage

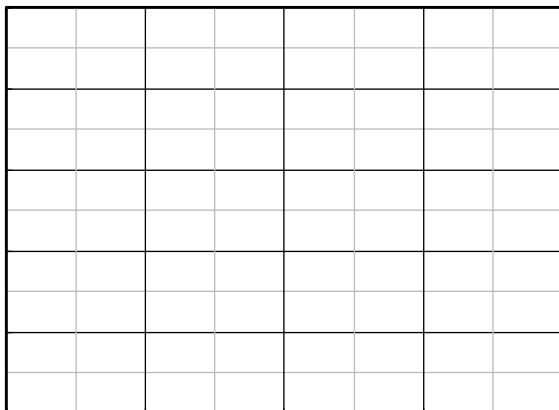


Figure 11. Current dissipation

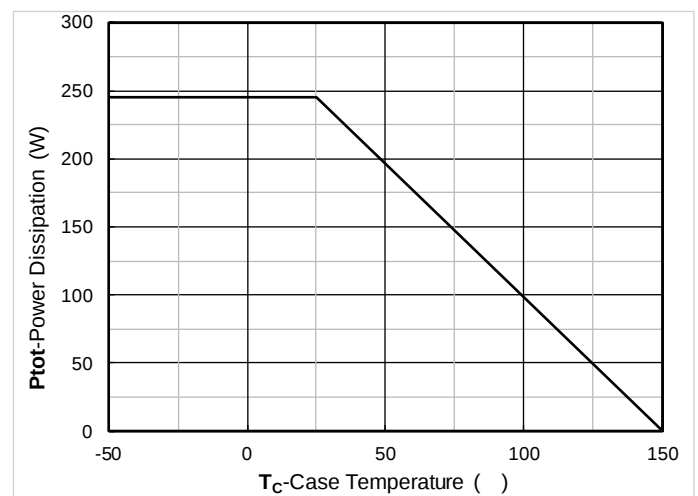


Figure 12. Power dissipation

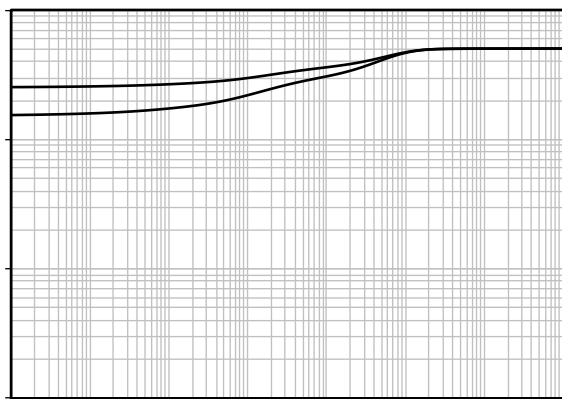


Figure 13. Maximum Transient Thermal Impedance

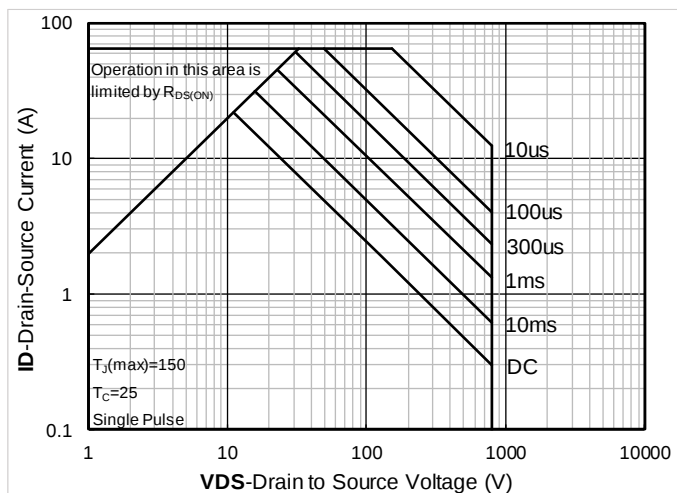


Figure 14. Safe Operation Area



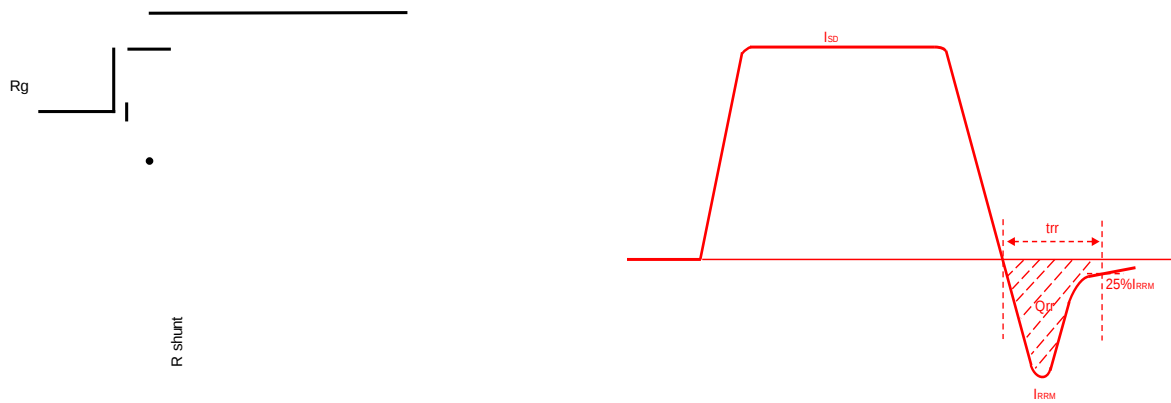


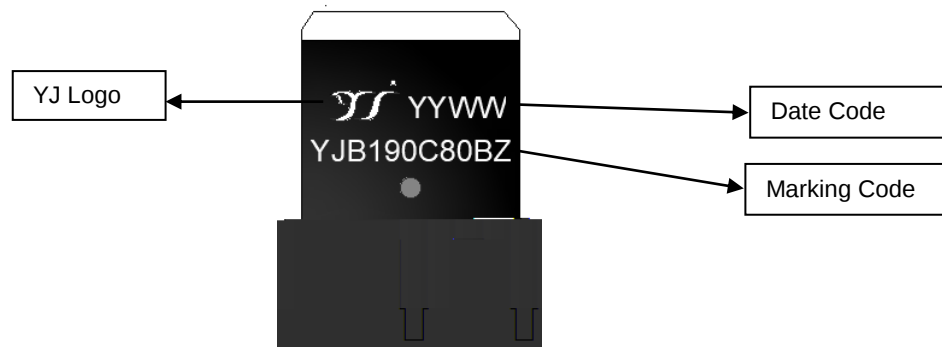
Figure D. Diode Recovery Test Circuit & Waveform





## YJB190C80BZJ

### ■ Marking Information



#### Note

1. All marking is at middle of the product body
2. All marking is in laser printing
3. YJB190C80BZ is marking code, YYWW is date code, "YY" is year, "WW" is week
4. Body color: Black



## Disclaimer

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