

BRB13N50

Rev.A Nov.-2016

/ Descriptions

TO-263 N MOS N-CHANNEL MOSFET in a TO-263Plastic Package.

/ Features

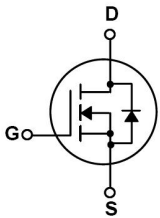
Low gate charge, Low Crss , Fast switching.

/ Applications

8: & :

It is very suitable for various AC/DC power conversion in switching mode operation for system miniaturization and higher efficiency.

/ Equivalent Circuit



/ Pinning



PIN1 G PIN 2,4 D PIN 3 S

/ h_{FE} Classifications & Marking

See Marking Instructions.

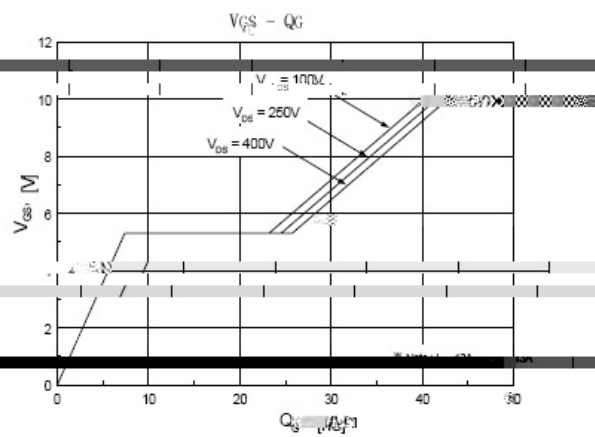
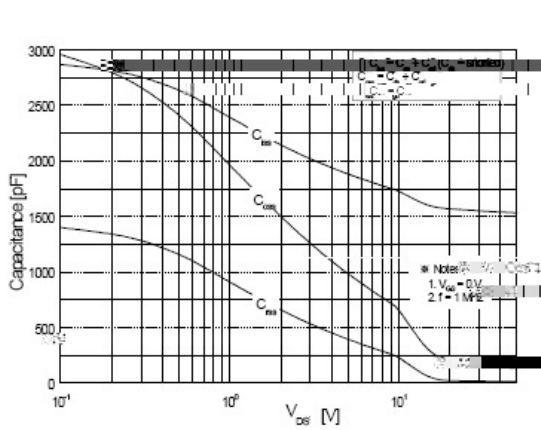
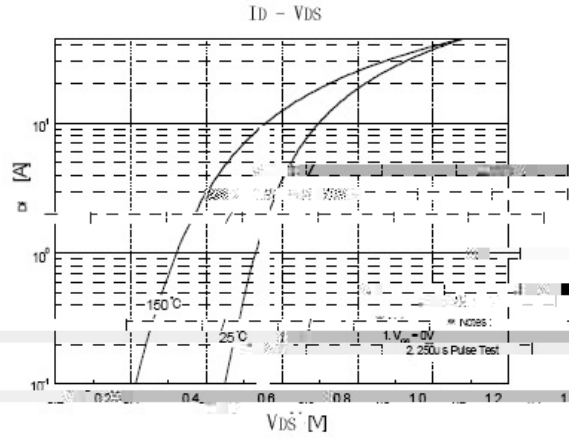
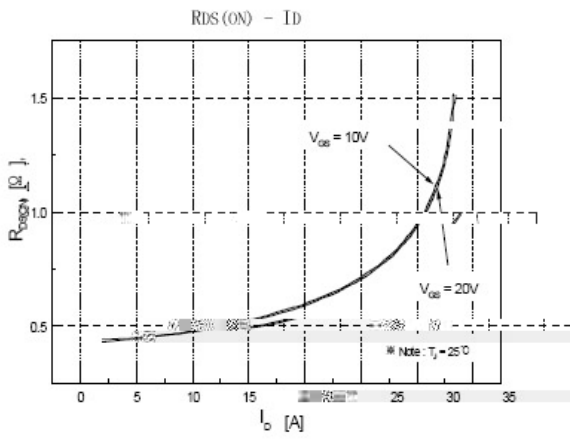
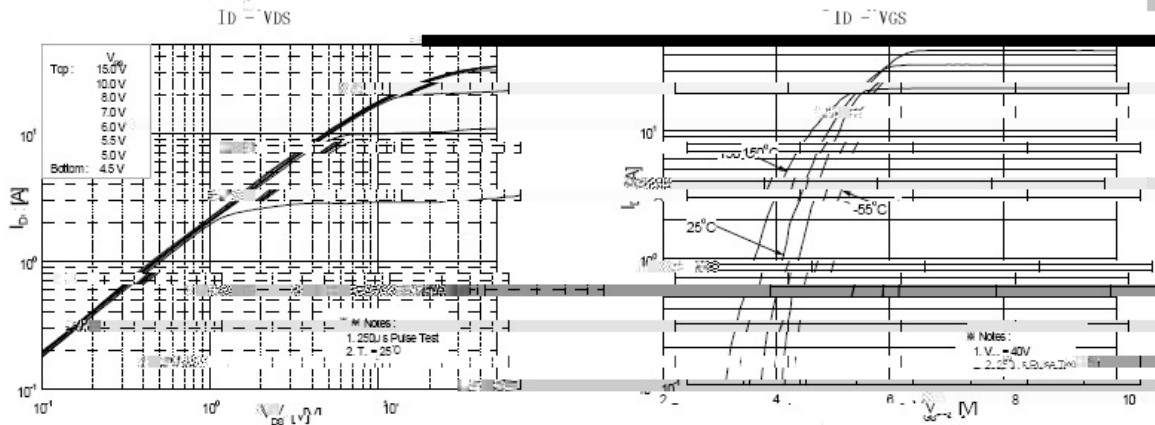
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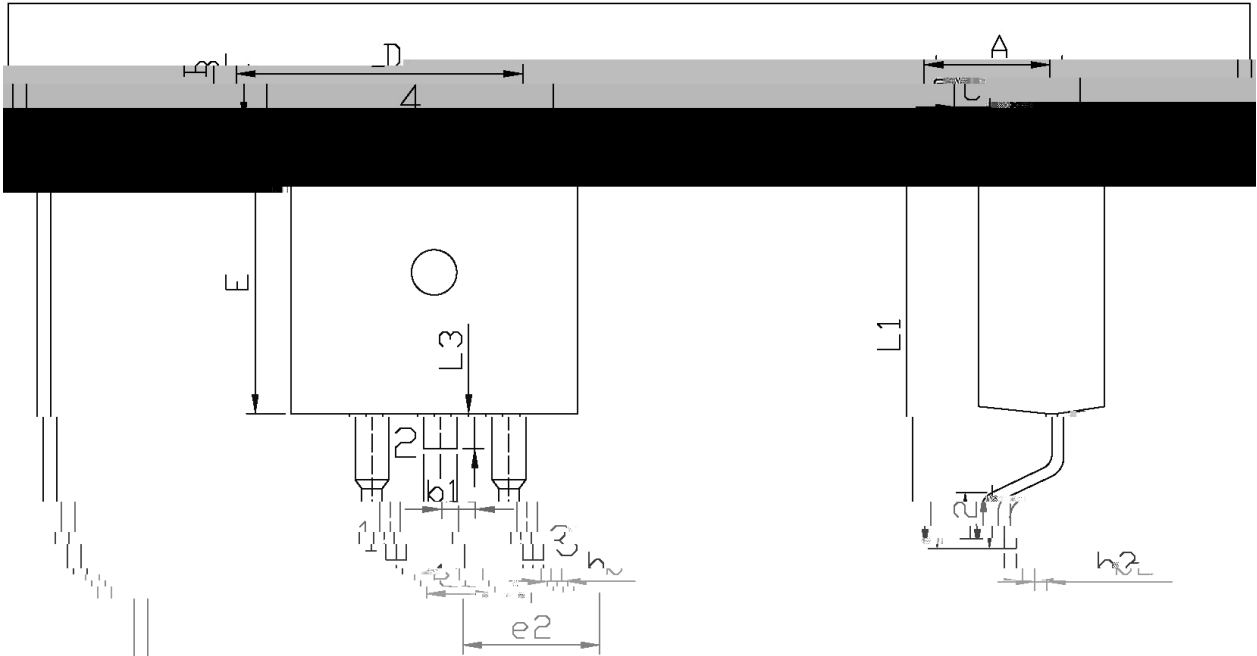
| Parameter | Symbol | Rating | Unit |
|---|------------------------------|------------|------|
| Drain-Source Voltage | V_{DSS} | 500 | V |
| Drain Current | $I_D(T_C=25^\circ\text{C})$ | 13 | A |
| Drain Current | $I_D(T_C=100^\circ\text{C})$ | 8 | A |
| Drain Current - Pulsed | I_{DM} | 52 | A |
| Gate-Source Voltage | V_{GSS} | ± 30 | V |
| Single Pulsed Avalanche Energy | E_{AS} | 860 | mJ |
| Repetitive Avalanche Energy | E_{AR} | 19.5 | mJ |
| Avalanche Current | I_{AR} | 13 | A |
| Power Dissipation | $P_D(T_C=25^\circ\text{C})$ | 195 | W |
| Operating and Storage Temperature Range | T_J, T_{STG} | -55 to 150 | |

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|--------------------------------|------------|-------------------------------|-----|-----|-----|------|
| Drain-Source Breakdown Voltage | BV_{DSS} | $V_{GS}=0V$ $I_D=250\mu A$ | 500 | | | V |

/ Electrical Characteristic Curve



/ Package Dimensions

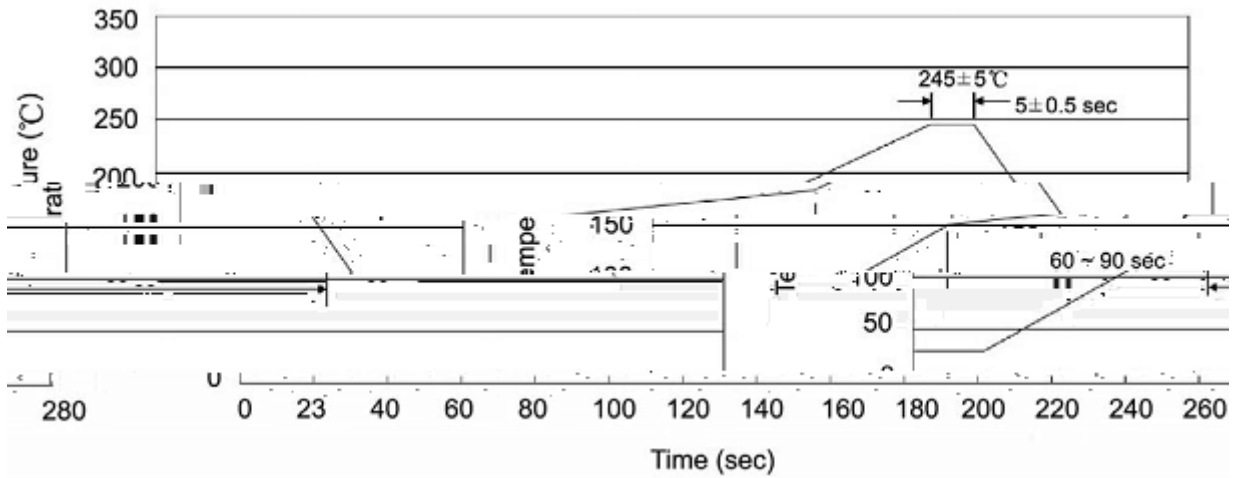


单位: mm

| Dimensions in Millimeters | | Dimensions in Millimeters | | Dimensions in Millimeters | |
|---------------------------|------|---------------------------|------|---------------------------|------|
| Max | Min | Max | Min | Max | Min |
| 9.40 | 4.30 | 4.70 | 4.30 | 9.00 | 4.30 |
| 2.74 | 1.00 | 1.40 | 1.00 | 2.34 | 1.00 |



() / Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

- | | | | | | |
|---|--------|-----|------------|----------|---|
| 1 | 25 | 150 | 60 | 90sec; | 1.Preheating:25~150 , Time:60~90sec. |
| 2 | 245..5 | | 5..0.5sec; | | 2.Peak Temp.:245..5 , Duration:5..0.5sec. |
| 3 | | | 2 | 10 /sec. | 3. Cooling Speed: 2~10 /sec. |

/ Resistance to Soldering Heat Test Conditions

260..5 10..1 sec. Temp.:260±5 Time:10±1 sec

/ Packaging SPEC.

/ REEL

| Package Type | Units | | Dimension | (unit mm ³) |
|--------------|------------|-----------------|-----------|-------------------------|
| | Units/Reel | Reels/Inner Box | | |
| | | Units/Inner Box | | |