

## / Descriptions

TO-263 MOS 5 N-CHANNEL MOSFET in a TO-263 Plastic Package.

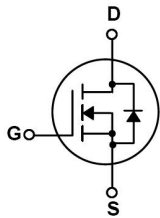
## / Features

Low gate charge, Low Crss , Fast switching.

## / Applications

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

## / Equivalent Circuit



## / Pinning



PIN1  $\chi$  G

PIN 2,4  $\chi$  D

PIN 3  $\chi$  S

## / $h_{FE}$ Classifications & Marking

See Marking Instructions.

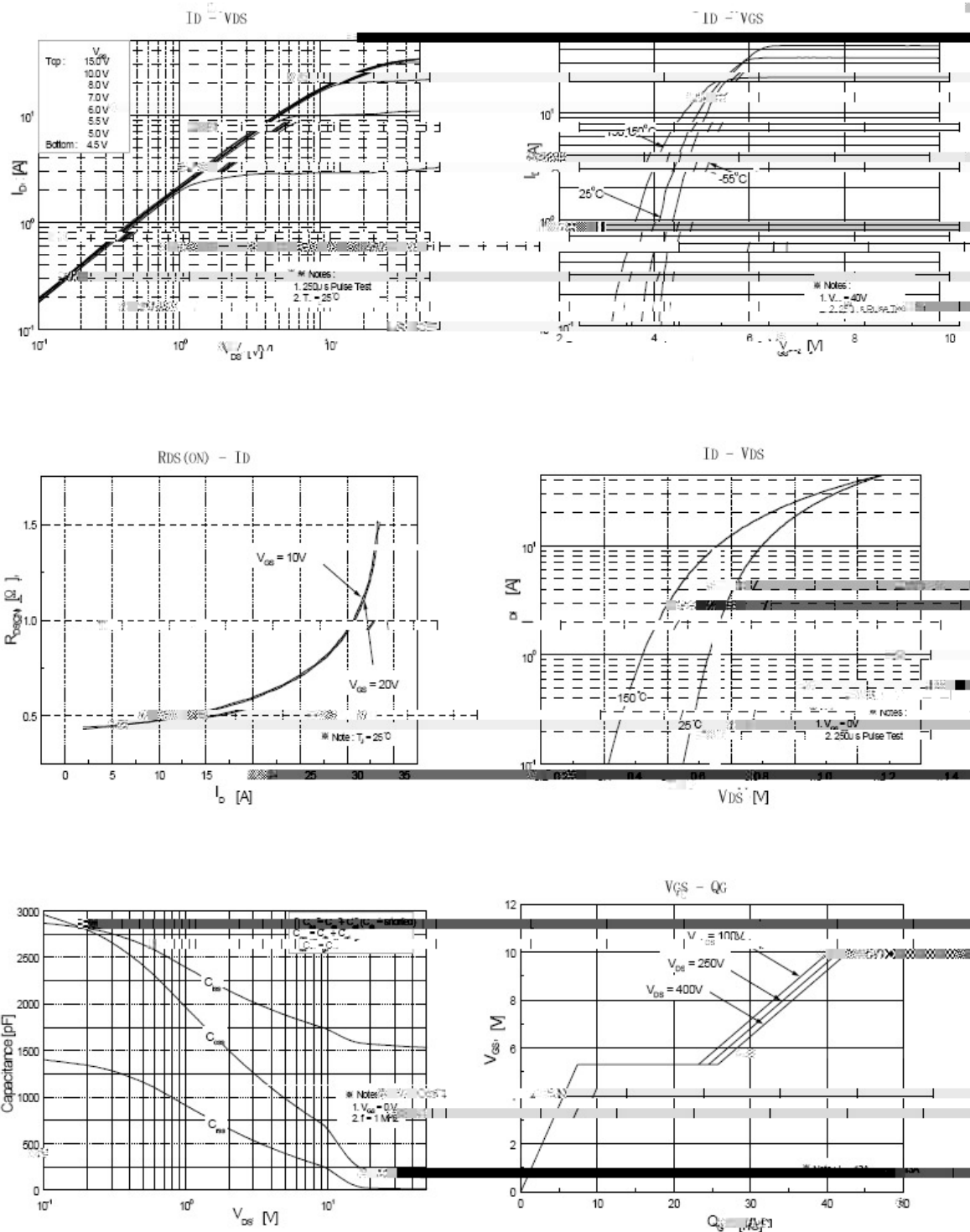


| Parameter                               | Symbol                       | Rating     | Unit |
|-----------------------------------------|------------------------------|------------|------|
| Drain-Source Voltage                    | $V_{DSS}$                    | 500        | V    |
| Drain Current                           | $I_D(T_c=25^\circ\text{C})$  | 13         | A    |
| Drain Current                           | $I_D(T_c=100^\circ\text{C})$ | 8          | A    |
| Drain Current - Pulsed                  | $I_{DM}$                     | 52         | A    |
| Gate-Source Voltage                     | $V_{GSS}$                    | $\pm 30$   | 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 |      |

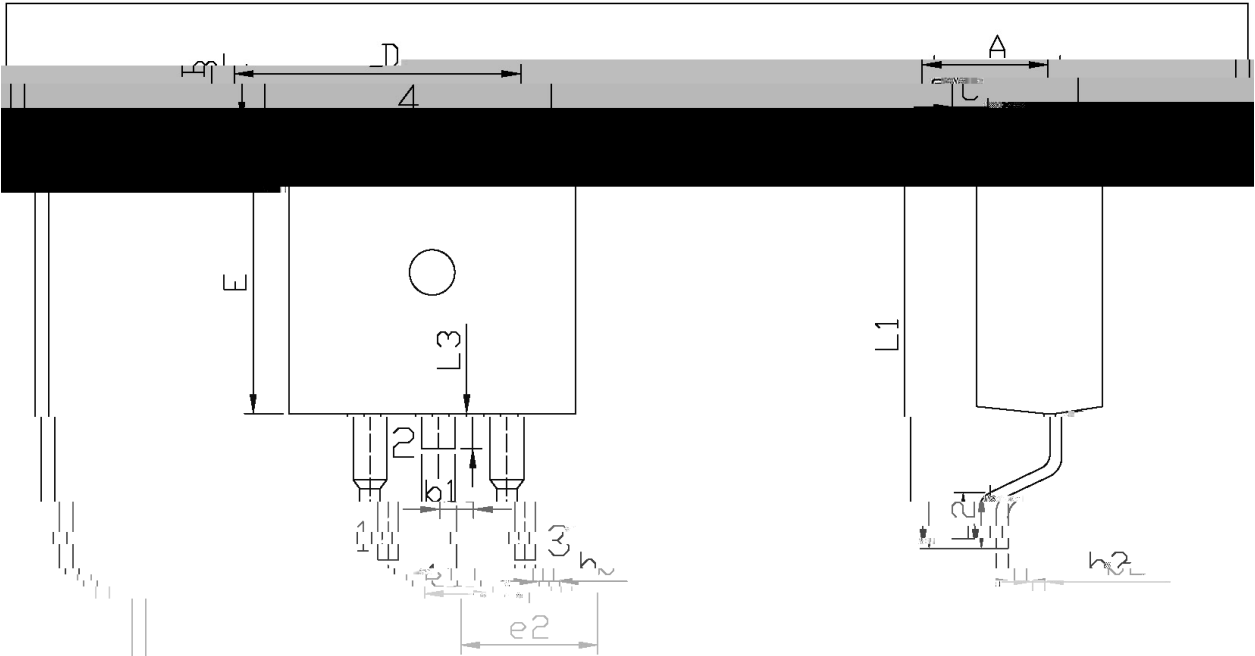
| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|-----------|--------|-----------------|-----|-----|-----|------|
|-----------|--------|-----------------|-----|-----|-----|------|

|                                |            |             |                |     |  |   |         |
|--------------------------------|------------|-------------|----------------|-----|--|---|---------|
| Drain-Source Breakdown Voltage | $BV_{DSS}$ | $V_{GS}=0V$ | $I_D=250\mu A$ | 500 |  | V | Uni7.02 |
|--------------------------------|------------|-------------|----------------|-----|--|---|---------|

**/ Electrical Characteristic Curve**



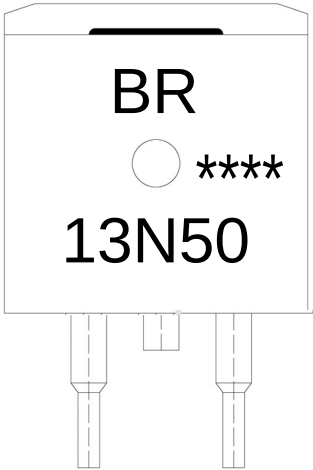
/ Package Dimensions



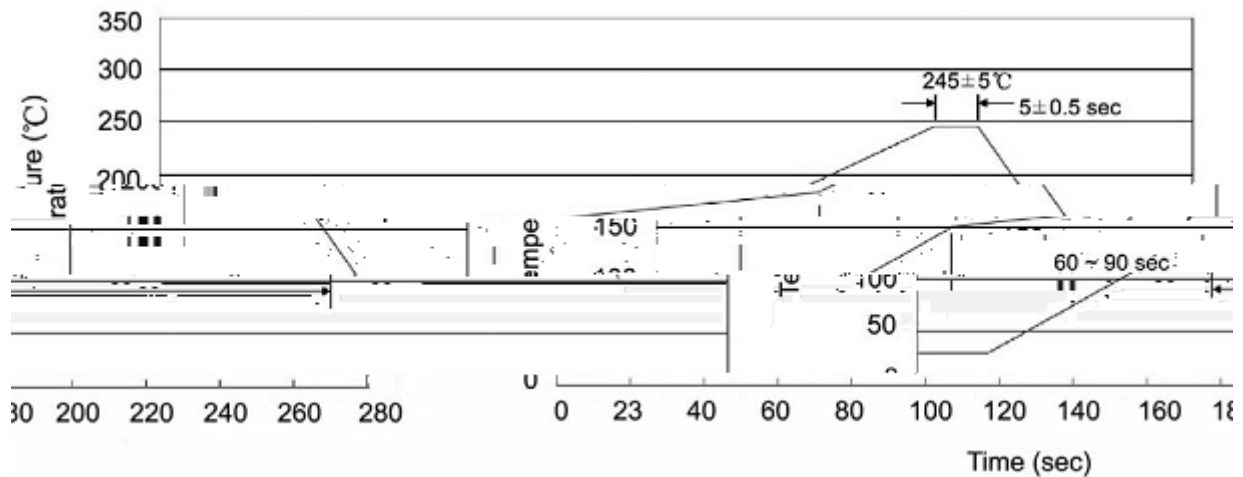
单位: mm

| Max  | Min | Max  | Min  |
|------|-----|------|------|
| 9.40 | A   | 4.30 | 4.70 |
| 2.74 | B   | 1.00 | 1.40 |
| 0.88 | C   | 0.80 | 0.80 |
| 0.88 | D   | 0.80 | 0.80 |
| 0.88 | E   | 0.80 | 0.80 |
| 0.88 | F   | 0.80 | 0.80 |
| 0.88 | G   | 0.80 | 0.80 |
| 0.88 | H   | 0.80 | 0.80 |
| 0.88 | I   | 0.80 | 0.80 |
| 0.88 | J   | 0.80 | 0.80 |
| 0.88 | K   | 0.80 | 0.80 |
| 0.88 | L   | 0.80 | 0.80 |
| 0.88 | M   | 0.80 | 0.80 |
| 0.88 | N   | 0.80 | 0.80 |
| 0.88 | O   | 0.80 | 0.80 |
| 0.88 | P   | 0.80 | 0.80 |
| 0.88 | Q   | 0.80 | 0.80 |
| 0.88 | R   | 0.80 | 0.80 |
| 0.88 | S   | 0.80 | 0.80 |
| 0.88 | T   | 0.80 | 0.80 |
| 0.88 | U   | 0.80 | 0.80 |
| 0.88 | V   | 0.80 | 0.80 |
| 0.88 | W   | 0.80 | 0.80 |
| 0.88 | X   | 0.80 | 0.80 |
| 0.88 | Y   | 0.80 | 0.80 |
| 0.88 | Z   | 0.80 | 0.80 |

/ Marking Instructions



|        |                                        |                           |
|--------|----------------------------------------|---------------------------|
| 公司代码   | BR                                     | 公司代码                      |
| 46Q83  | 46Q83                                  | 公司代码                      |
| ----   | ----                                   | 公司代码 1 2 3 4 5 6 7 8 9 10 |
| Note:  |                                        |                           |
| BR:    | Company Code                           |                           |
| 13N50: | Product Type.                          |                           |
| ****:  | Lot No. Code, code change with Lot No. |                           |


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


℃ / sec

1. 预加热: 25~150℃, 时间: 60~90sec;
2. 峰值温度: 245±5℃, 持续时间: 5±0.5sec;
3. 冷却速度: 2~10℃/sec.

Note:

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

**/ Resistance to Soldering Heat Test Conditions**

□ 预加热: 260±5℃, 时间: 10±1 sec. Temp.: 260±5 Time: 10±1 sec

**/ Packaging SPEC.**

□ 预加热: REEL

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