

# BRB13N50

Rev.A Nov.-2016

## / Descriptions

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

## / Features

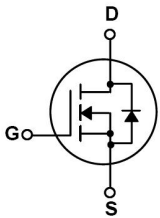
Low gate charge, Low Crss , Fast switching.

## / 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<sub>FE</sub> Classifications & Marking

See Marking Instructions.

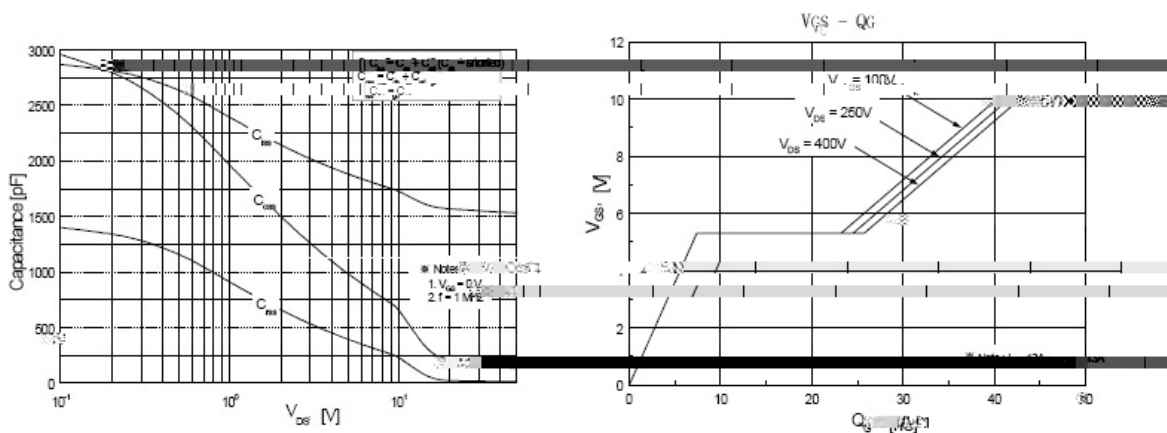
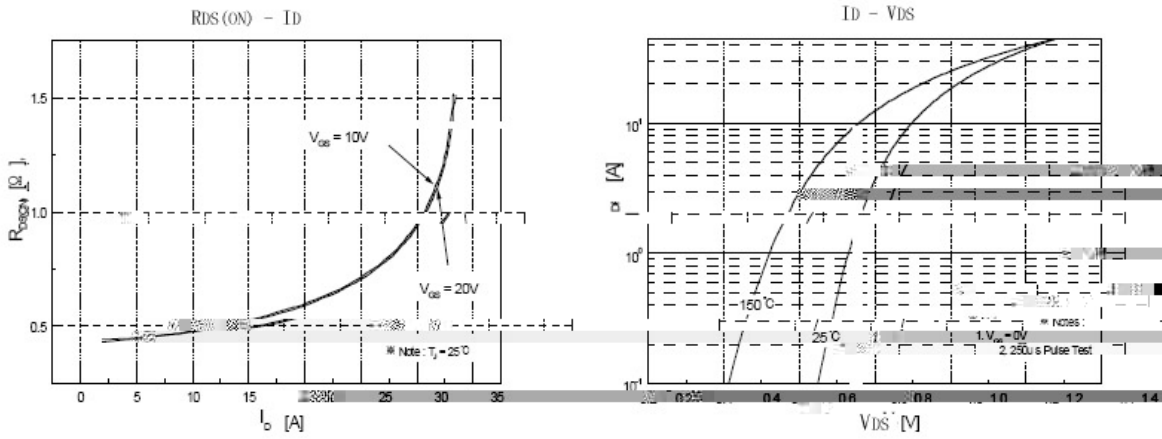
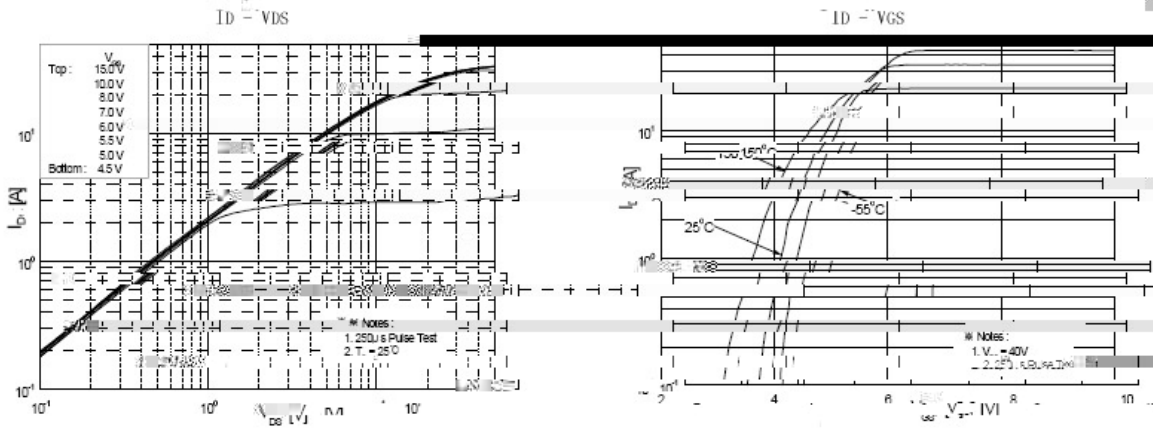
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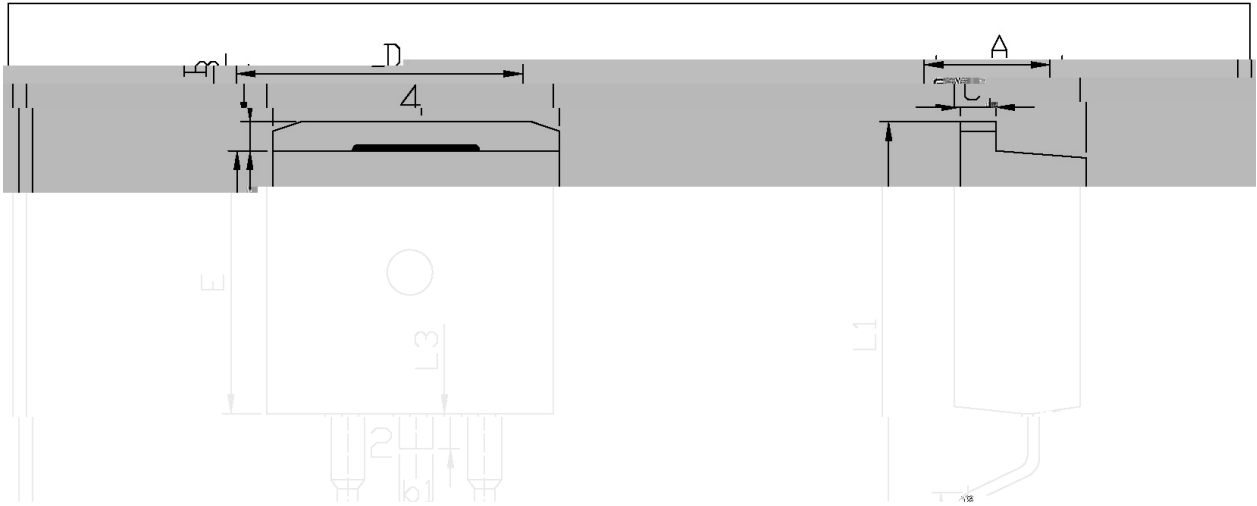
Parameter	Symbol	Rating	Unit
Drain-Source Voltage	$V_{DSS}$	500	V
Drain Current	$I_D(T_C=25^\circ\text{C})$	13	A
Drain Current	$I_D(T_C=100^\circ\text{C})$	8	A
Drain Current - Pulsed	$I_{DM}$	52	A
Gate-Source Voltage	$V_{GSS}$	$\pm 30$	V
Single Pulsed Avalanche Energy	$E_{AS}$	860	mJ
Repetitive Avalanche 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

**/ Electrical Characteristic Curve**



**/ Package Dimensions**

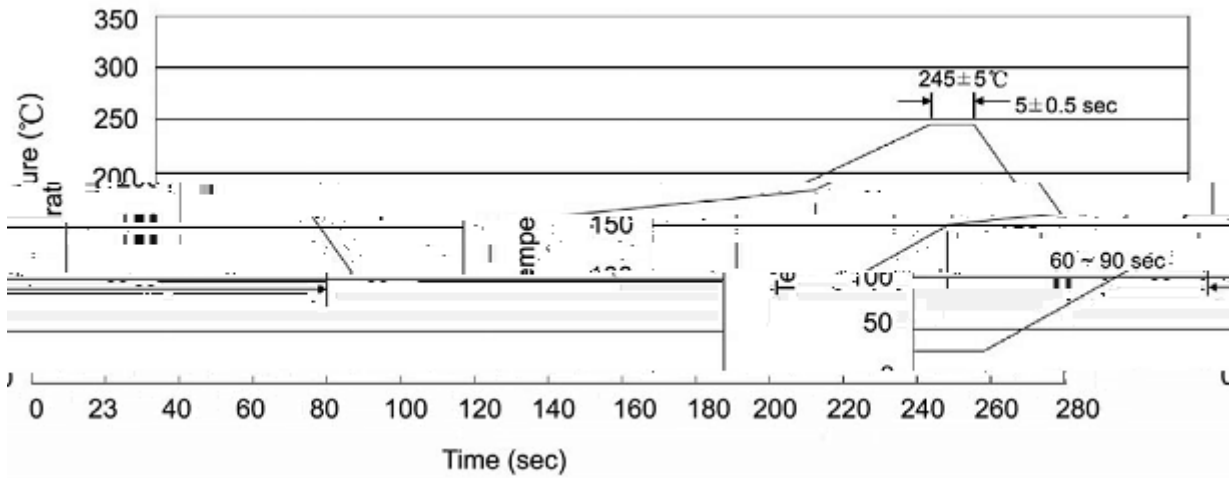


Max	Min	Max	Min
9.40	4.30	4.70	9.00
2.74	1.00	1.40	2.34
5.00	b1	1.15	1.35
2.21	b2	0.10	0.30
1.20	C	1.20	1.40
	D	9.80	10.20

TP-263



( ) / 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±0.5 | sec;     | 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 <sup>3</sup> )
	Units/Reel	Reels/Inner Box		