描述 / Descriptions

TO-263 塑封封装 N 沟道 MOS 场效应管。N-CHANNEL MOSFET in a TO-263 Plastic Package.

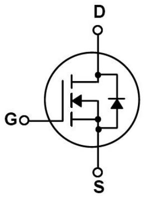
特征 / Features

低栅电荷,低反馈电容,开关速度快。
Low gate charge, low crss, fast switching.

用途 / Applications

用于高功率 DC/DC 转换和功率开关。
These devices are well suited for high efficiency switching DC/DC converters and switch mode power supplies.

内部等效电路 / Equivalent Circuit



引脚排列 / Pinning

PIN1：G PIN 2、4：D PIN 3：S

放大及印章代码 / h_{FE} Classifications & Marking

见印章说明。See Marking Instructions.

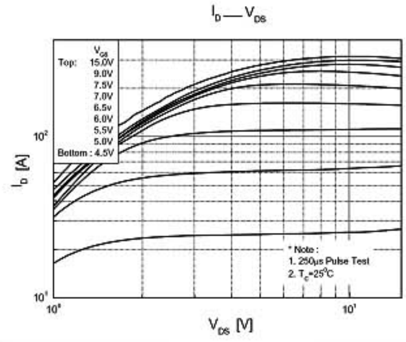
极限参数 / Absolute Maximum Ratings(Ta=25℃)

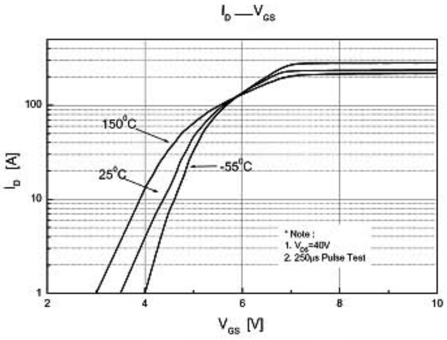
参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Drain-Source Voltage	V_{DSS}	80	V
Drain Current	I_D(Tc=25℃)	80	A
Drain Current	I_D(Tc=100℃)	72	A
Single Avalanche Current	I_{DM}	320	A
Gate-Source Voltage	V_{GSS}	±20	V
Single Pulsed Avalanche Energy	E_{AS}	1164	mJ
Repetitive Avalanche Energy	E_{AR}	13.1	mJ
Single Avalanche Current	I_{AR}	75	A
Power Dissipation	P_D(Tc=25℃)	165	W
Junction and Storage Temperature Range	T_J,T_{STG}	-55 to 150	℃

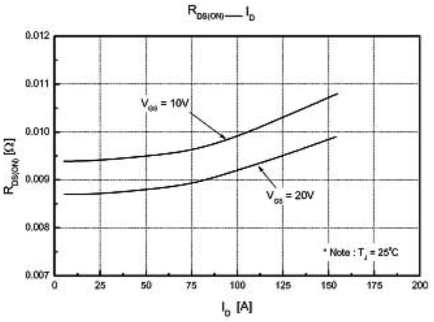
电性能参数 / Electrical Characteristics(Ta=25℃)

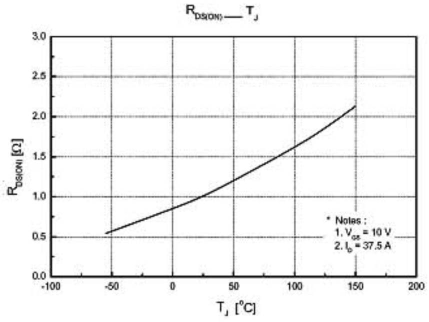
参数 Parameter	符号 Symbol	测试条件 Test Conditions	最小值 Min	典型值 Typ	最大值 Max	单位 Unit
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}=0V I_D=250μA	80			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=80V V_{GS}=0V			1	μA
		V_{DS}=80V V_{GS}=0V T_C=125℃			10	μA
Gate-Body Leakage Current Forward	I_{GSS}	V_{GS}=±20V V_{DS}=0V			±0.1	μA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS} I_D=250μA	2		4	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	V_{GS}=10V I_D=40A		8.5	11	mΩ
Forward Transconductance	g_{FS}	V_{DS}=5V I_D=30A		58		S
Drain-Source Diode Forward Voltage	V_{SD}	V_{GS}=0V I_S=40A			1.3	V
Input Capacitance	C_{iss}	V_{GS}=0V f=1MHz V_{DS}=25V		3200		pF
Output Capacitance	C_{oss}			330		
Reverse Transfer Capacitance	C_{rss}			260		
Turn-On Delay Time	$t_{d(on)}$	V_{DD}=30V I_D=2A R_L=25Ω R_G=25Ω V_{GS}=10V		20		ns
Turn-On Rise Time	t_r			17.8		
Turn-Off Delay Time	$t_{d(off)}$			76.8		
Turn-Off Fall Time	t_f			15.7		

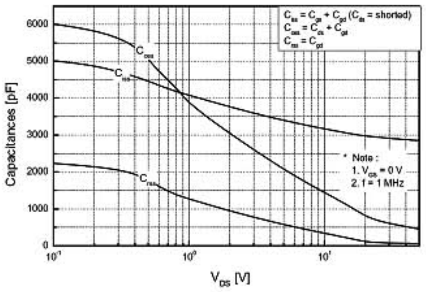
电参数曲线图 / Electrical Characteristic Curve

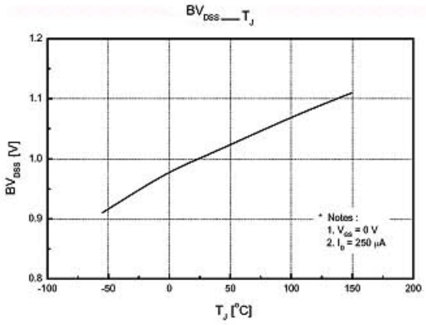


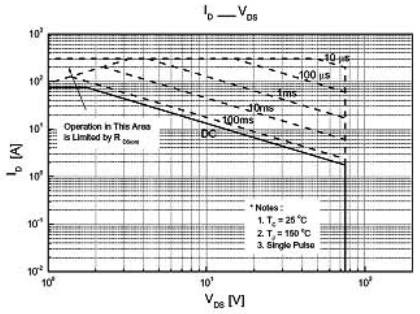


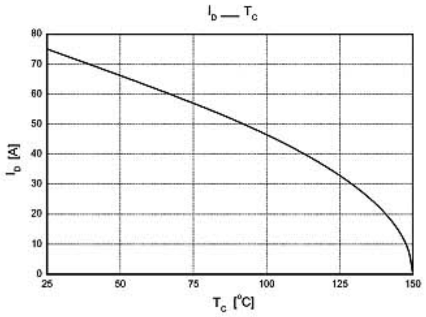




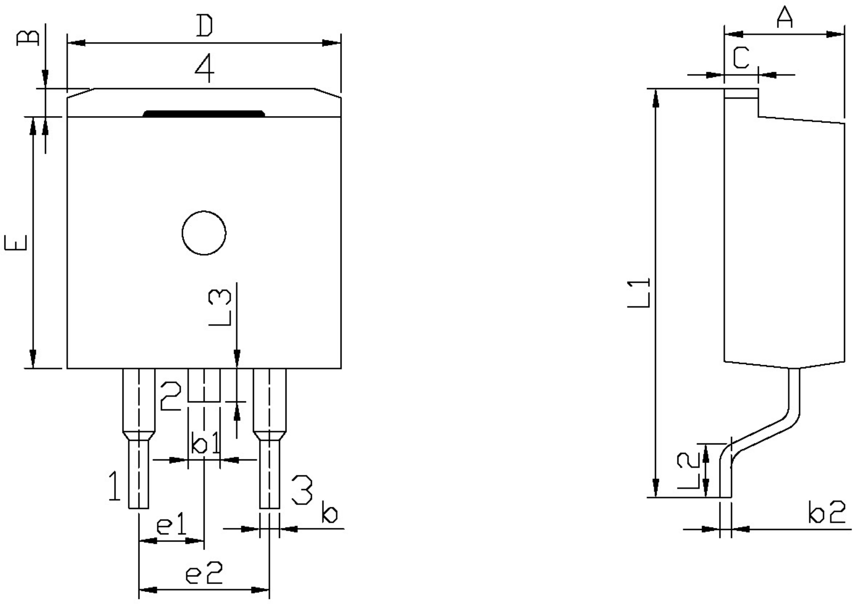








外形尺寸图 / Package Dimensions



单位：mm

Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
A	4.30	4.70	E	9.00	9.40
B	1.00	1.40	e1	2.34	2.74
b	0.70	0.90	e2	4.88	5.28
b1	1.15	1.35	L1	15.00	16.00
b2	0.40	0.60	L2	2.24	2.84
C	1.20	1.40	L3	1.20	1.60
D	9.80	10.20			

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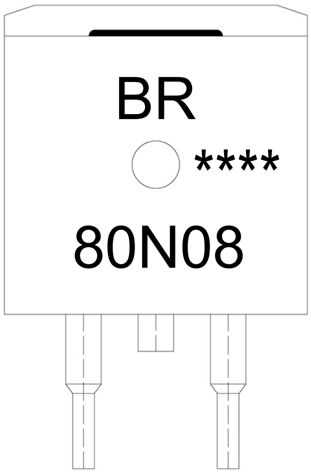
印章说明 / Marking Instructions



说明：

BR： 为公司代码

80N08： 为产品型号

****： 为生产批号代码，随生产批号变化。

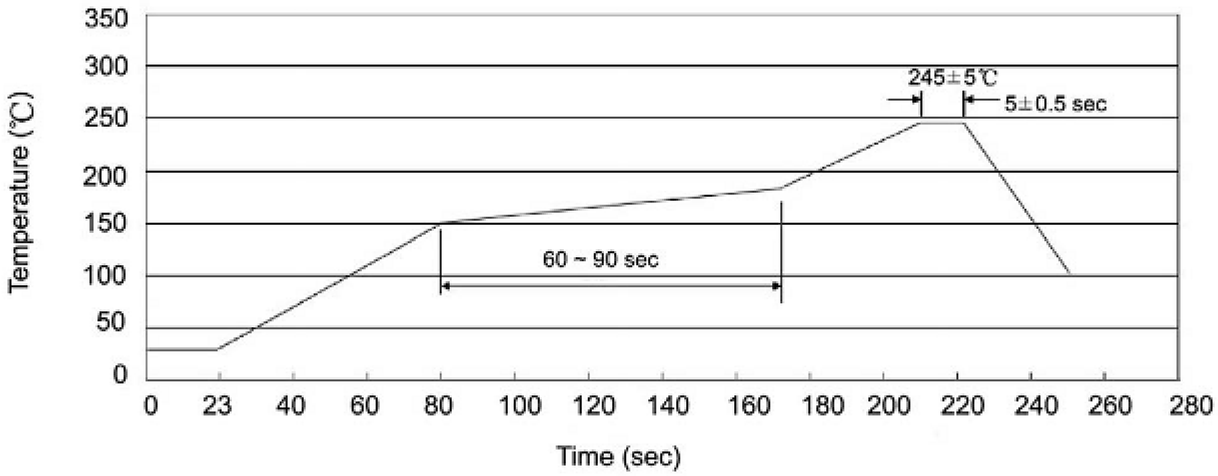
Note:

BR: Company Code

80N08: Product Type.

****: Lot No. Code, code change with Lot No.

回流焊温度曲线图(无铅) / Temperature Profile for IR Reflow Soldering(Pb-Free)



说明：	Note:
1、预热温度 25～150℃，时间 60～90sec;	1.Preheating:25~150℃, Time:60~90sec.
2、峰值温度 245±5℃，时间持续为 5±0.5sec;	2.Peak Temp.:245±5℃, Duration:5±0.5sec.
3、焊接制程冷却速度为 2～10℃/sec.	3. Cooling Speed: 2~10℃/sec.

耐焊接热试验条件 / Resistance to Soldering Heat Test Conditions

温度：260±5℃　　时间：10±1 sec.　　Temp.:260±5℃　　Time:10±1 sec

包装规格 / Packaging SPEC.

卷盘包装 / REEL

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm^3)		
	Units/Reel 只/卷盘	Reels/Inner Box 卷盘/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Reel	Inner Box 盒	Outer Box 箱
TO-263	800	1	800	5	4,000	13″ ×24	360×360×50	385×257×392

套管包装 / TUBE

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm^3)		
	Units/Tube 只/套管	Tubes/Inner Box 套管/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Tube 套管	Inner Box 盒	Outer Box 箱
TO-263	50	20	1,000	5	5,000	532×33×7.0	555×164×50	575×290×180

使用说明 / Notices