

描述 / Descriptions

TO-92 塑封封装 N 沟道 MOS 场效应管。N-CHANNEL MOSFET in a TO-92 Plastic Package.

特征 / Features

低栅电荷,低反馈电容,开关速度快.

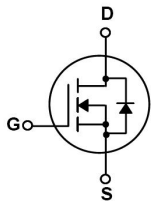
Low gate charge, low crss, fast switching.

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 : S

PIN 2 : D

PIN 3 : G

放大及印章代码 / hFE Classifications & Marking

见印章说明。See Marking Instructions.

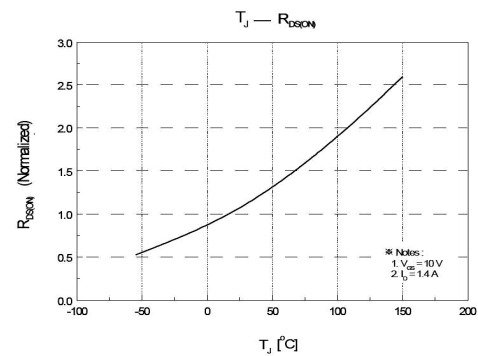
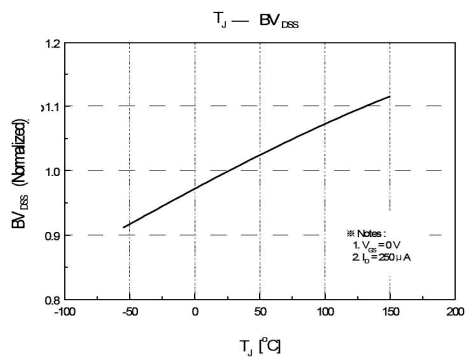
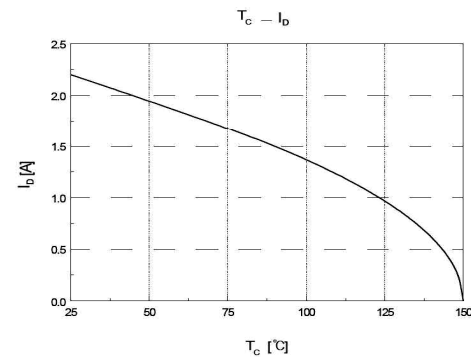
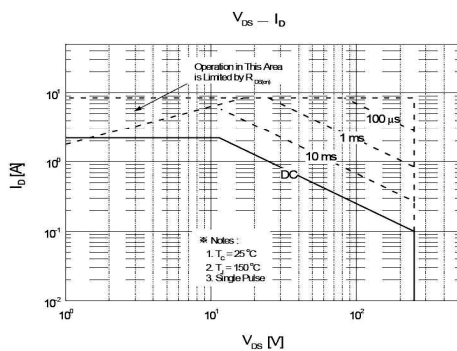
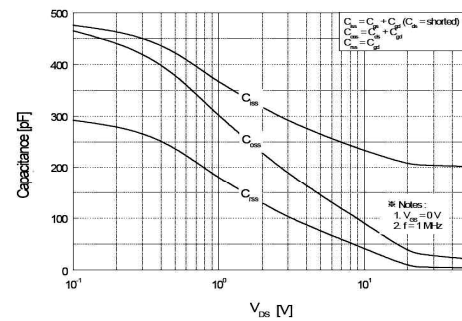
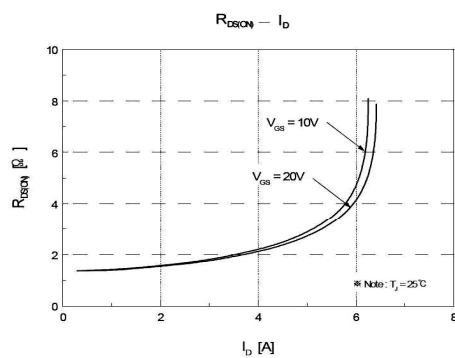
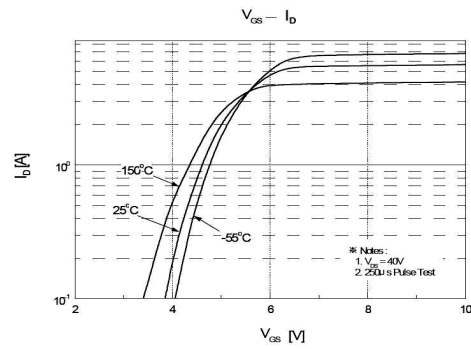
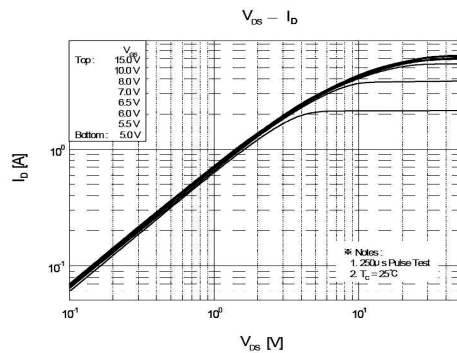
极限参数 / Absolute Maximum Ratings(Ta=25°C)

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Drain-Source Voltage	V_{DS}	250	V
Drain Current – Continuous	$I_D(T_c=25^{\circ}C)$	3.0	A
Drain Current – Continuous	$I_D(T_c=100^{\circ}C)$	1.9	A
Drain Current - Pulsed	I_{DM}	8.5	A
Gate-Source Voltage	V_{GS}	± 30	V
Single Pulsed Avalanche Energy	E_{AS}	45	mJ
Repetitive Avalanche Energy	E_{AR}	2.5	mJ
Avalanche Current	I_{AR}	2.2	A
Power Dissipation	P_D	1.0	W
Junction Storage Temperature Range	T_J, T_{STG}	-55 to 150	$^{\circ}C$

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

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}	$V_{GS}=0V$ $I_D=250\mu A$	250			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=250V$ $V_{GS}=0V$			10	μA
		$V_{DS}=200V$ $T_C=125^{\circ}C$			100	μA
Gate-Body Leakage Current Forward	I_{GSS}	$V_{GS}=\pm 30V$ $V_{DS}=0V$			± 0.1	μA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=250\mu A$	2.0		4.0	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V$ $I_D=1.1A$		1.49	2.0	Ω
Forward Transconductance	g_{FS}	$V_{DS}=40V$ $I_D=1.1A$		2.4		S
Drain-Source Diode Forward Voltage	V_{SD}	$V_{GS}=0V$ $I_S=2.2A$			1.5	V
Input Capacitance	C_{iss}	$V_{DS}=25V$ $V_{GS}=0V$ $f=1.0MHz$		210	275	pF
Output Capacitance	C_{oss}			35	45	pF
Reverse Transfer Capacitance	C_{rss}			7.5	10	pF
Turn-On Delay Time	$t_{d(on)}$	$V_{DD}=125V$ $I_D=2.8A$ $R_G=25\Omega$		6.0	22	ns
Turn-On Rise Time	t_r			30	70	ns
Turn-Off Delay Time	$t_{d(off)}$			25	60	ns
Turn-Off Fall Time	t_f			30	70	ns

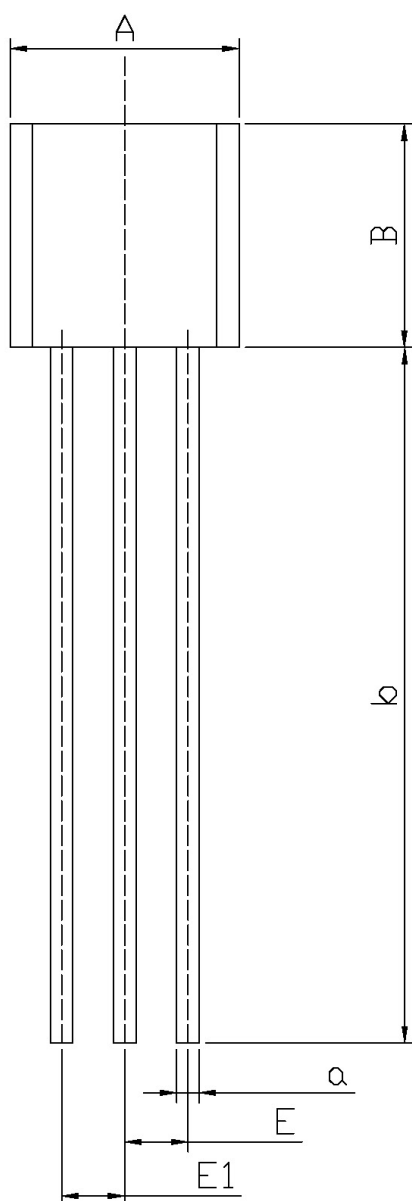
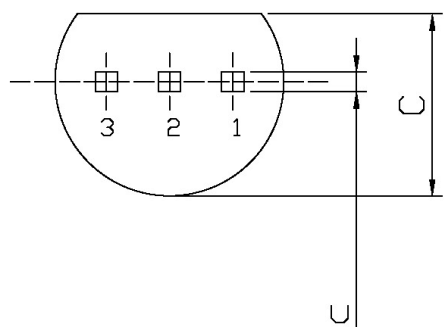
电参数曲线图 / Electrical Characteristic Curve



外形尺寸图 / Package Dimensions

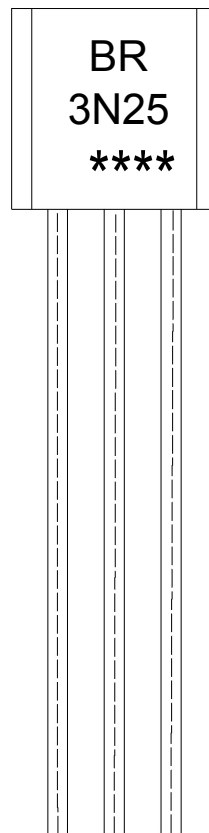
T0-92

Unit: mm



Symbol	Dimensions In Millimeters	
	Min	Max
A	4.4	4.8
B	4.3	4.7
b	13	15
a	0.40	0.60
E	1.22	1.32
E1	1.22	1.32
C	3.4	3.8
c	0.30	0.50

印章说明 / Marking Instructions



说明：

BR: 为公司代码

3N25： 为型号代码

****： 为生产批号代码，随生产批号变化。

Note:

BR: Company Code.

3N25: Product Type.

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

波峰焊温度曲线图(无铅) / Temperature Profile for Dip Soldering(Pb-Free)



说明：

- 1、预热温度 25 ~ 150°C，时间 60 ~ 90sec;
- 2、峰值温度 255±5°C，时间持续为 5±0.5sec;
- 3、焊接制程冷却速度为 2 ~ 10°C/sec.

Note:

- 1.Preheating:25~150°C, Time:60~90sec.
- 2.Peak Temp.:255±5°C, Duration:5±0.5sec.
3. Cooling Speed: 2~10°C/sec.

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

温度：270±5°C

时间：10±1 sec.

Temp:270±5°C

Time:10±1 sec

包装规格 / Packaging SPEC.

散件包装 / BULK

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm3)		
	Units/Bag 只/袋	Bags/Inner Box 袋/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Bag 袋	Inner Box 盒	Outer Box 箱
TO-92	1,000	10	10,000	5	50,000	135×190	237×172×102	560×245×195
	1,000	10	10,000	10	100,000	135×190	237×172×102	560×245×375

编带包装 / AMMO

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm3)	
	Units/tape 只/纸带	Tape/Inner Box 纸带/盒	Rows/Inner Box 纸带层/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Inner Box 盒	Outer Box 箱
TO-92	3,000	1	120	10	30,000	328×230×42	小箱 480×346×235, 大箱 547×407×268

使用说明 / Notices