

描述 / Descriptions

TO-220 N

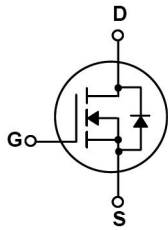
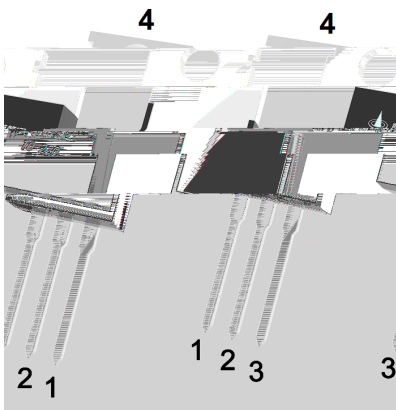
N-CHANNEL MOSFET in a TO-220 Plastic Package.

特征 / Features $V_{DS}=60V$ $I_D=225A$ $R_{DS(on)}@10V$ 2.2m (Type. 1.9m) $R_{DS(on)}@4.5V$ 3.5m (Type. 2.5m)

HF Product.

用途 / Applications

These devices are well suited for high efficient switched mode power supplies, Active power factor correction, electronic lamp ballast based on half bridge topology.

内部等效电路 / Equivalent Circuit**引脚排列 / Pinning**

PIN1 G PIN 2 4 D PIN 3 S

印章代码 / Marking

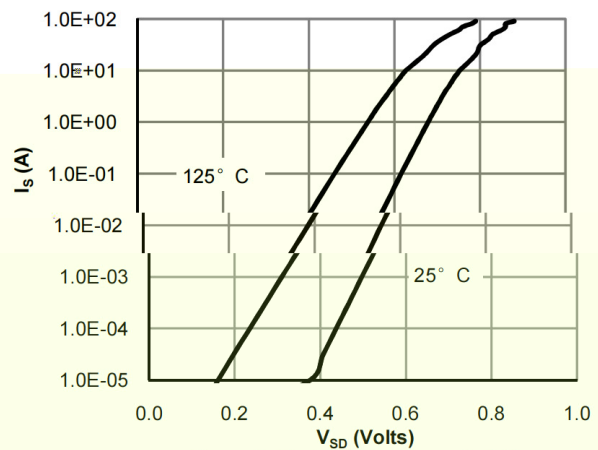
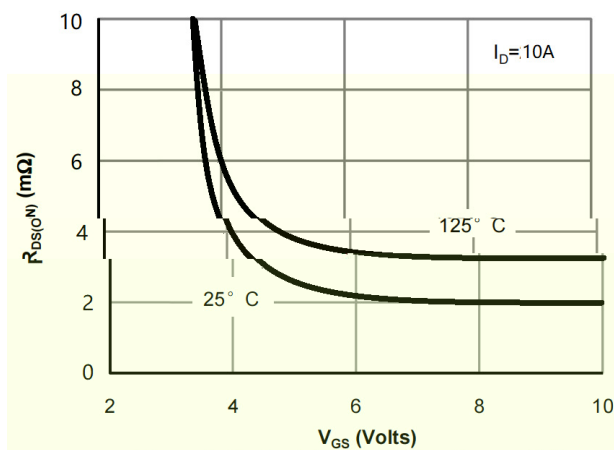
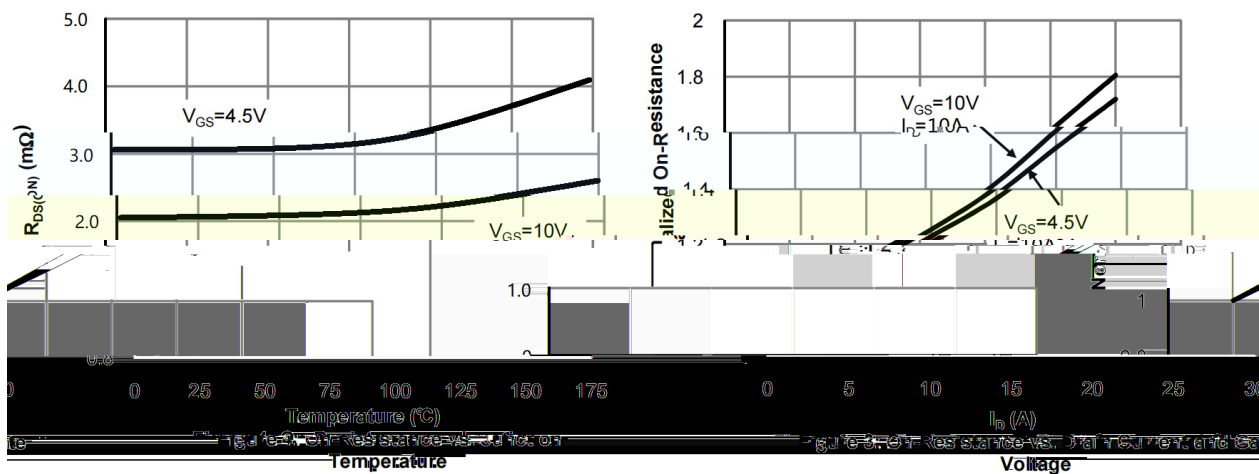
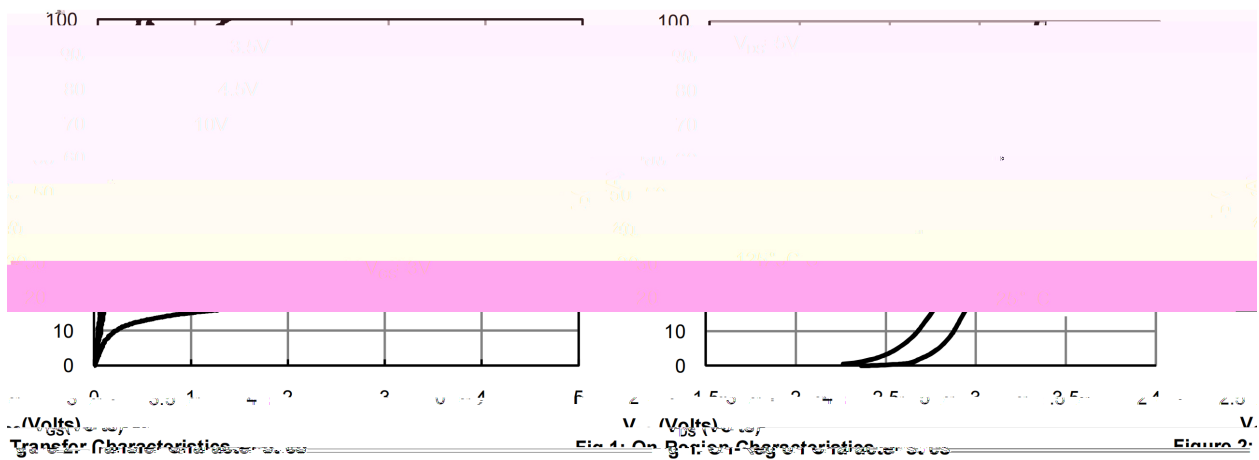
See Marking Instructions.

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	60	V
Drain Current	$I_D(T_c=25^{\circ}\text{C})$	225	A
Pulsed Drain Current	I_{DM}	646	A
Gate-Source Voltage	V_{GS}	± 20	V
Single Pulsed Avalanche Energy $L=0.5\text{mH}$	E_{AS}	380	mJ
Avalanche Current	I_{AS}	30.8	A
Total Power Dissipation	$P_D(T_c=25^{\circ}\text{C})$	125	W

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Total Gate Charge	$Q_g(10V)$	$V_{GS}=10V$ $V_{DS}=30V$ $I_D=20A$		60		nC
Total Gate Charge	$Q_g(4.5V)$			23		
Gate Source Charge	Q_{gs}			16		
Gate Drain Charge	Q_{gd}			3		
Turn-On Delay Time	$t_{d(on)}$	$V_{GS}=10V$ $V_{DS}=20V$ $R_L=1$ $R_{GEN}=3$		13		ns
Turn-On Rise Time	t_r			4		
Turn-Off Delay Time	$t_{d(off)}$			47		
Turn-Off Fall Time	t_f			6.5		

电参数曲线图 / Electrical Characteristic Curve



电参数曲线图 / Electrical Characteristic Curve

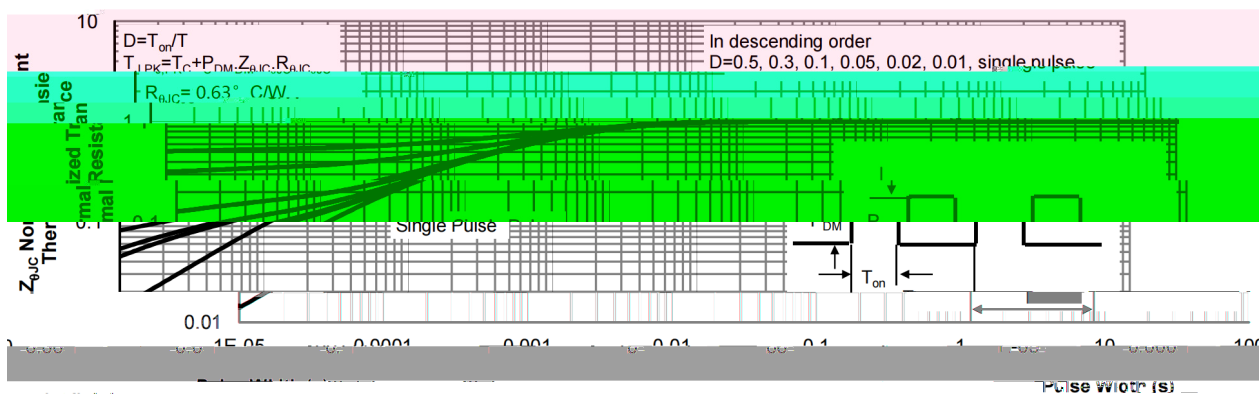
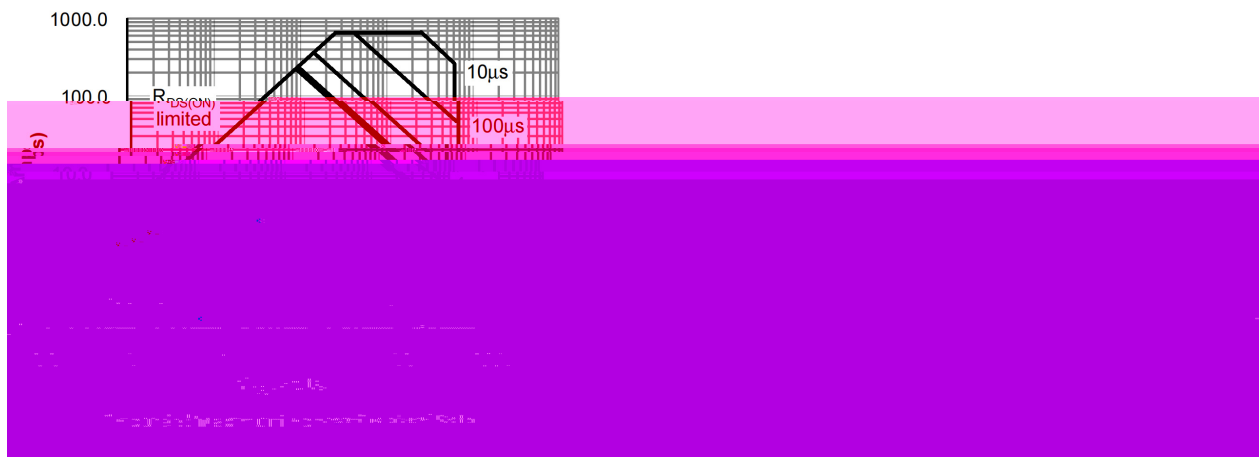
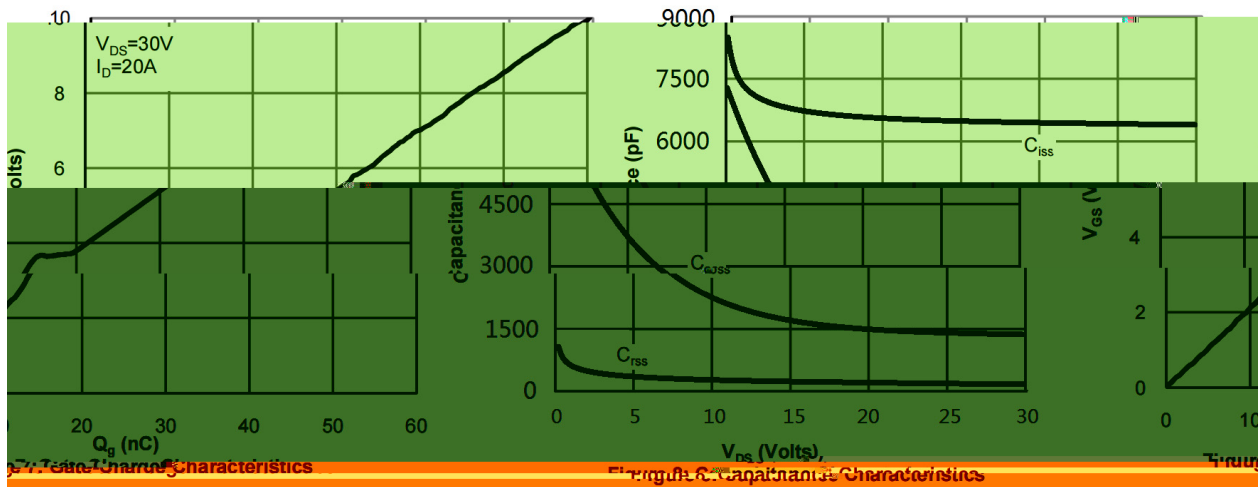


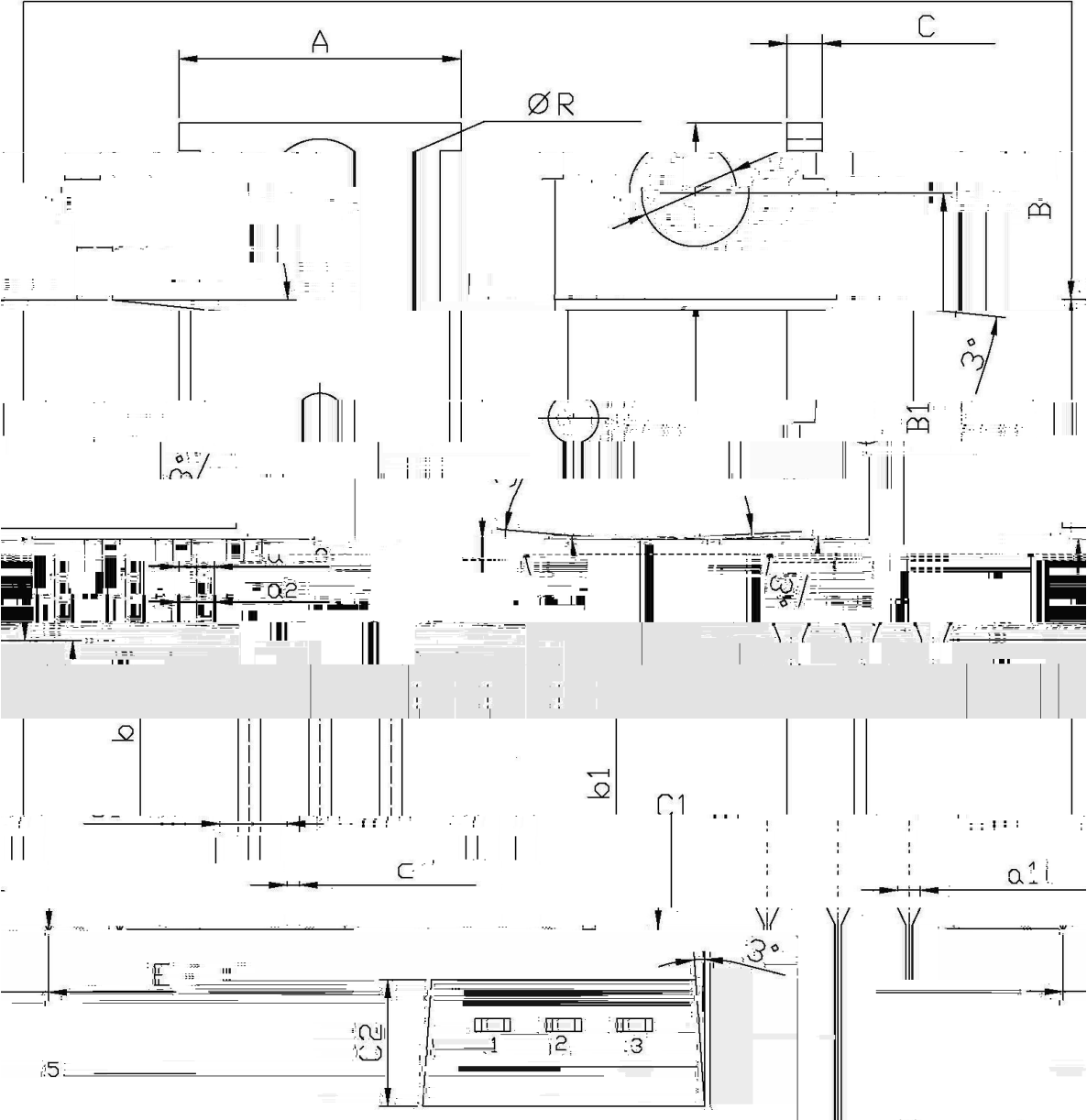
Figure 9: Pulsed Drain Current Characteristics

Figure 10: Normalized Maximum Transient Thermal Impedance

外形尺寸图 / Package Dimensions

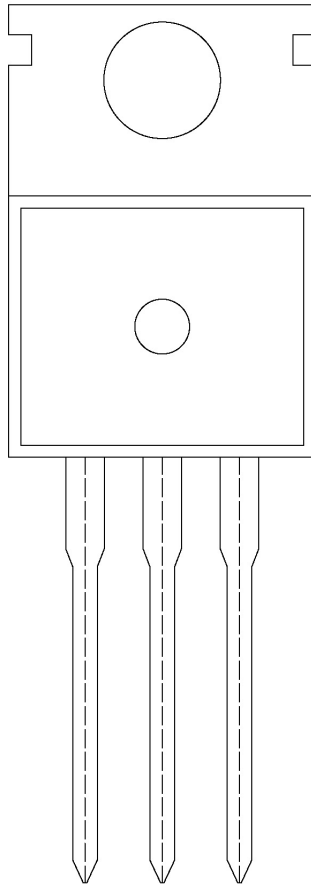
TO-220

单位: mm



Dimensions In Millimeters			Dimensions In Millimeters		
Symbol	Min	Max	Symbol	Min	Max
A	9.8	10.2	B	3.64	6
R	3.56	3.64	B1	15.7	16.1
C	9.4	10.2	C1	12.6	13.6
a1	12.6	13.6			
b1	12.6	13.6			

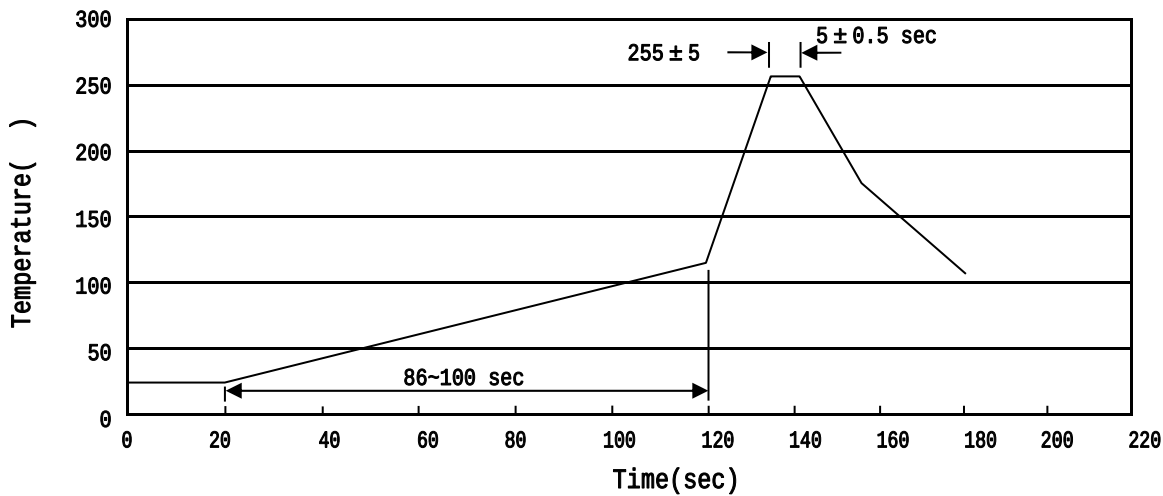
印章说明 / Marking Instructions



Note:

BR: Company Code

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



Note:

- 1

25 150

60 90sec;

1.Preheating:25~150 , Time:60~90sec.
- 2

255 5

5 0.5sec;

2.Peak Temp.:255 5 , Duration:5 0.5sec.
- 3

2 10

/sec.

3. Cooling Speed: 2~10 /sec.

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

270 5 10 1 sec. Temp.:270±5℃ Time:10±1 sec

包装规格 / Packaging SPEC.

/ BULK

Package Type	Units					Dimension (unit mm ³)		
	Units/Bag /	Bags/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Bag	Inner Box	Outer Box
TO-220/F	200	10	2,000	5	10,000	135×190	237×172×102	560×245×195

/ TUBE

Package Type	Units					Dimension (unit mm ³)		
	Units/Tube /	Tubes/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Tube	Inner Box	Outer Box
TO-220/F	50	20	1,000	5	5,000	532×31.4×5.5	555×164×50	575×290×180

使用说明 / Notices