

1. Description

TO-220FL N

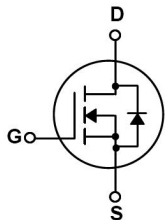
N-CHANNEL 650V Super-Junction Power MOSFET in a TO-220FL Plastic Package.

2. Features $R_{DS(on)} \times Q_g$ 100%

ROHS

Very low $R_{DS(on)} \times Q_g$, 100% avalanche tested, RoHS compliant, HF Product.**3. Applications**

For switch mode power supply, uninterruptible power supply, power factor correction.

4. Equivalent Circuit**5. Pinning**

PIN1 G

PIN 2 D

PIN 3 S

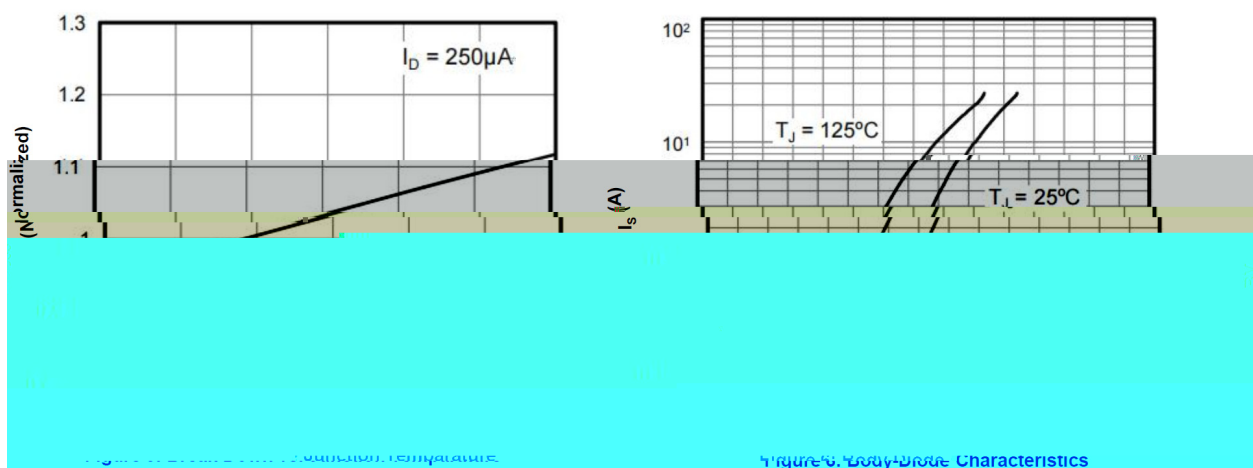
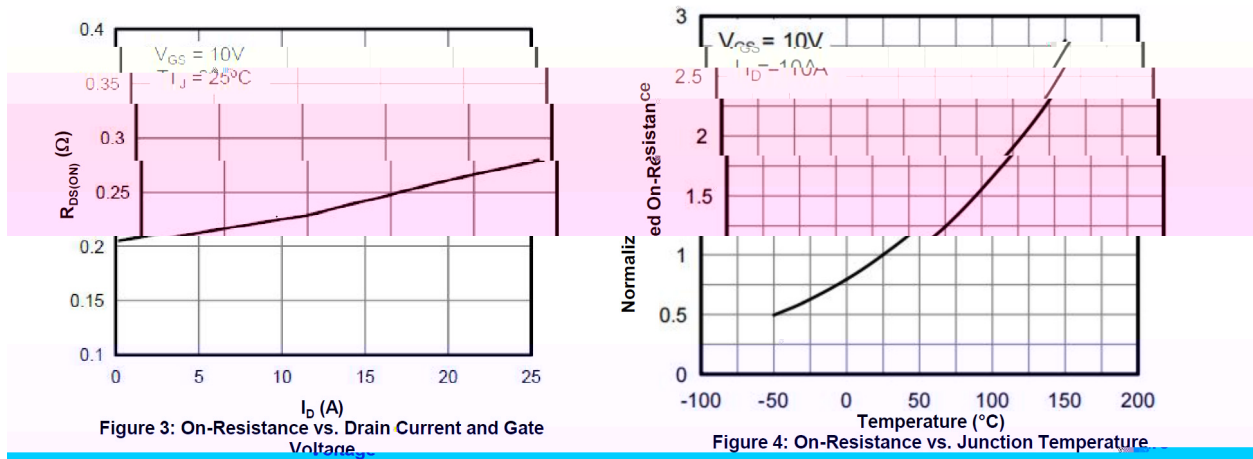
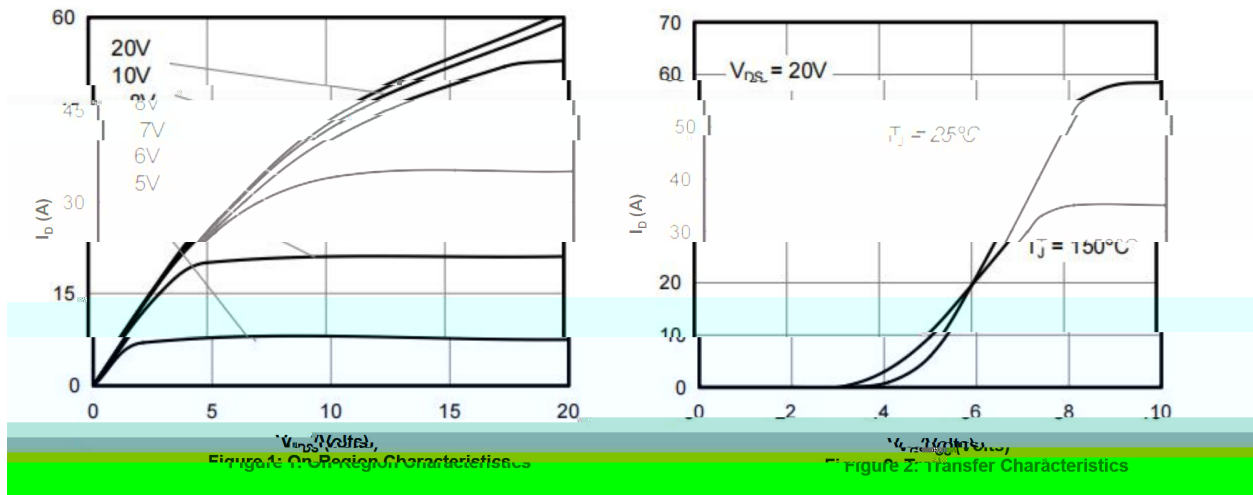
6. Marking

See Marking Instructions.

1 3 A / Electrical Characteristics(Ta=25 ℃)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Continuous Diode Forward Current	I _S			20		A
Total Gate Charge	Q _g	V _{DS} =480V I _D =10A V _{GS} =10V		38.2		nC
Gate-Source Charge	Q _{gs}			10		nC
Gate-Drain Charge	Q _{gd}			13		nC
Reverse recovery time	t _{rr}	V _R =400 V, I _F =10A, dI _F /dt=100 A/μs		340		ns
Reverse recovery charge	Q _{rr}			6.7		uC

Electrical Characteristic Curve



Electrical Characteristic Curve

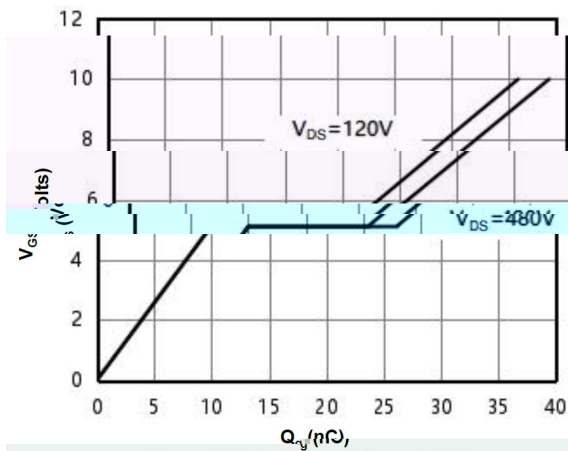


Figure 7: Gate-Charge Characteristics

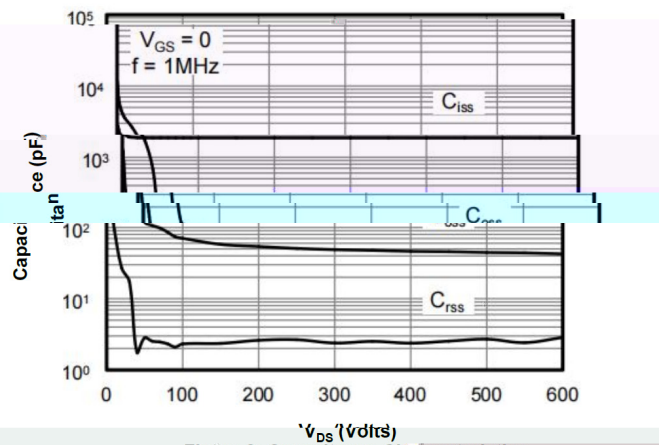


Figure 8: Capacitance Characteristics

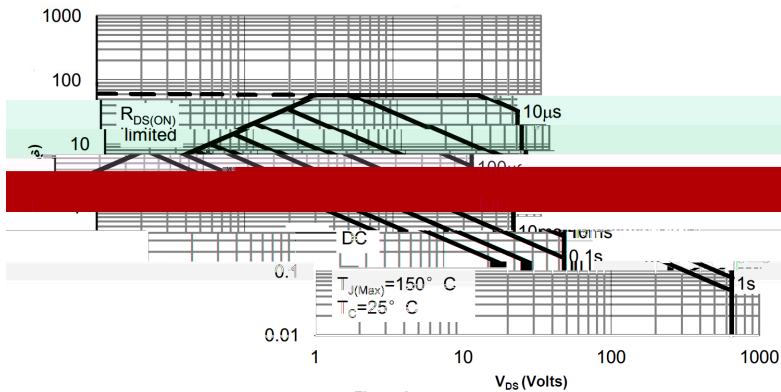


Figure 9: Maximum Forward Biased Safe Operating

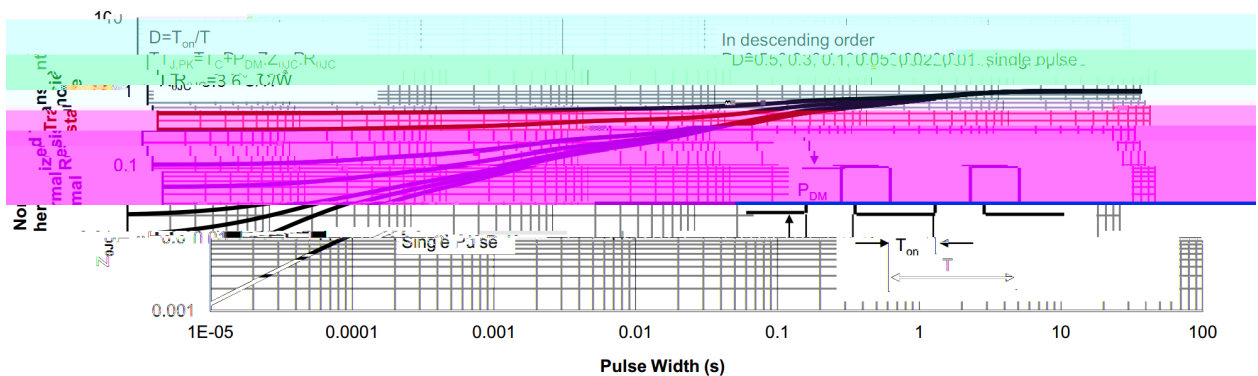
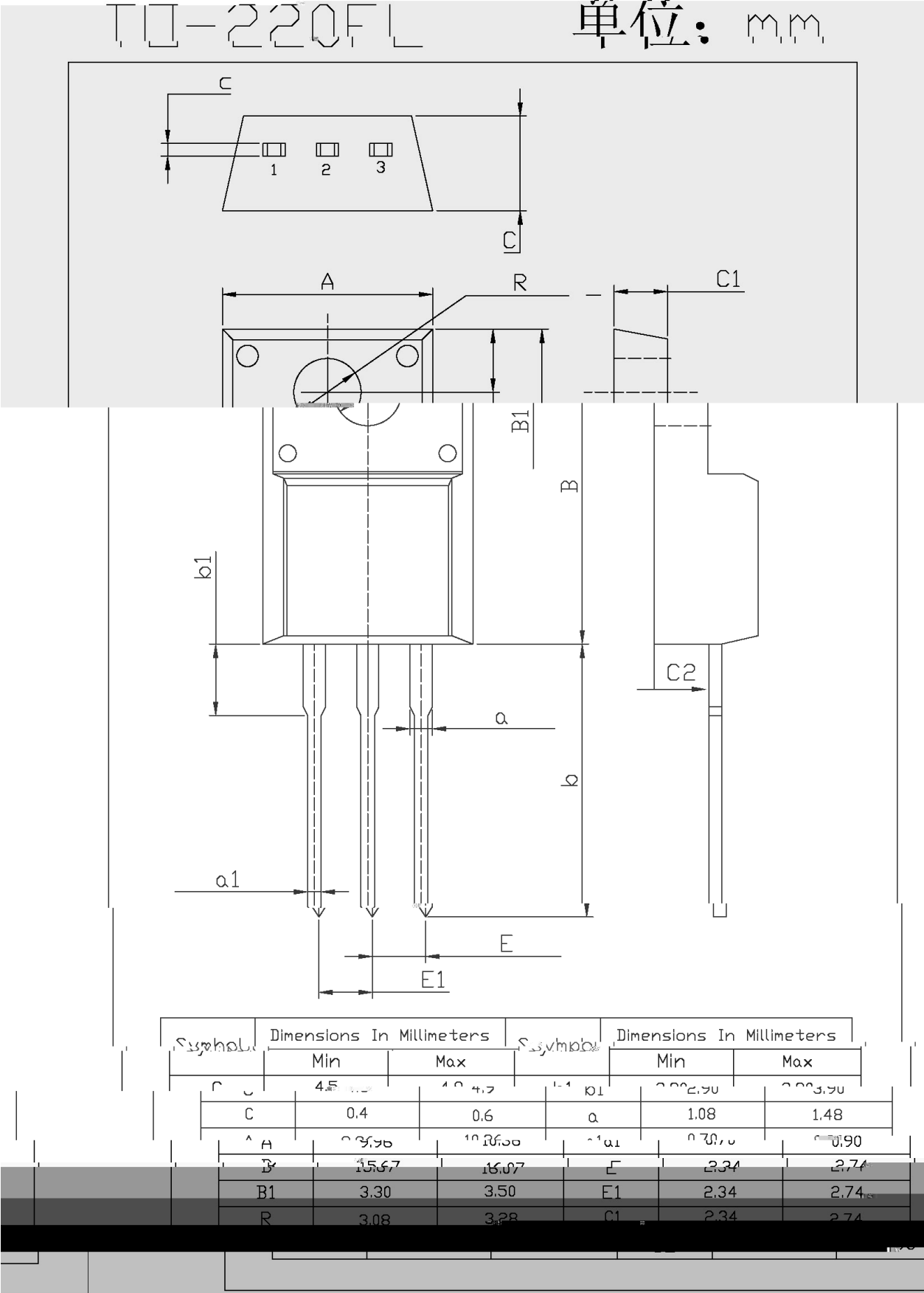


Figure 10: Normalized Maximum Transient Thermal Impedance

⌘ É Ò L f / Package Dimensions





1. 符号 / Marking Instructions



BR

65R190C

Note:

BR: Company Code

65R190C: Product Type Code

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

↓ $\dot{q}$ $\uparrow$ $\dot{m} \cdot h_{fg}$ / 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. |

4.5 Resistance to Soldering Heat Test Conditions

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

5 — / Packaging SPEC.

/ TUBE