

/ Descriptions

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

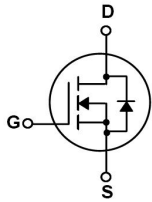
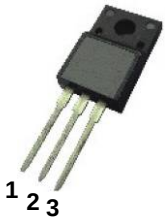
/ Features

$R_{DS(on)}$ C_{rss}
 Low $R_{DS(on)}$, low gate charge, low C_{rss} , fast switching.

/ Applications

D

Automotive DC Motor Control and Class D Amplifier.

/ Equivalent Circuit**/ Pinning**

PIN1 G PIN 2 D PIN 3 S

/ Classifications & Marking

See Marking Instructions.

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit	
Dynamic Characteristics							
Forward Transconductance	g_{fs}	$V_{DS}=15V, I_D=7.5A$		18		S	
Input Capacitance	C_{iss}	$V_{GS}=0V \quad V_{DS}=25V$ $f=1.0MHz$		2400		pF	
Output Capacitance	C_{oss}			235			
Reverse Transfer Capacitance	C_{rss}			25.5			
Resistive Switching Characteristics							
Turn-on Delay Time	$t_{d(ON)}$	$I_D=15A \quad V_{DD}=250V$ $V_{GS}=10V \quad R_G=6.1\Omega$			15		ns
Rise Time	t_r				30		
Turn-Off Delay Time	$t_{d(OFF)}$			50			
Fall Time	t						

/ Electrical Characteristic Curve

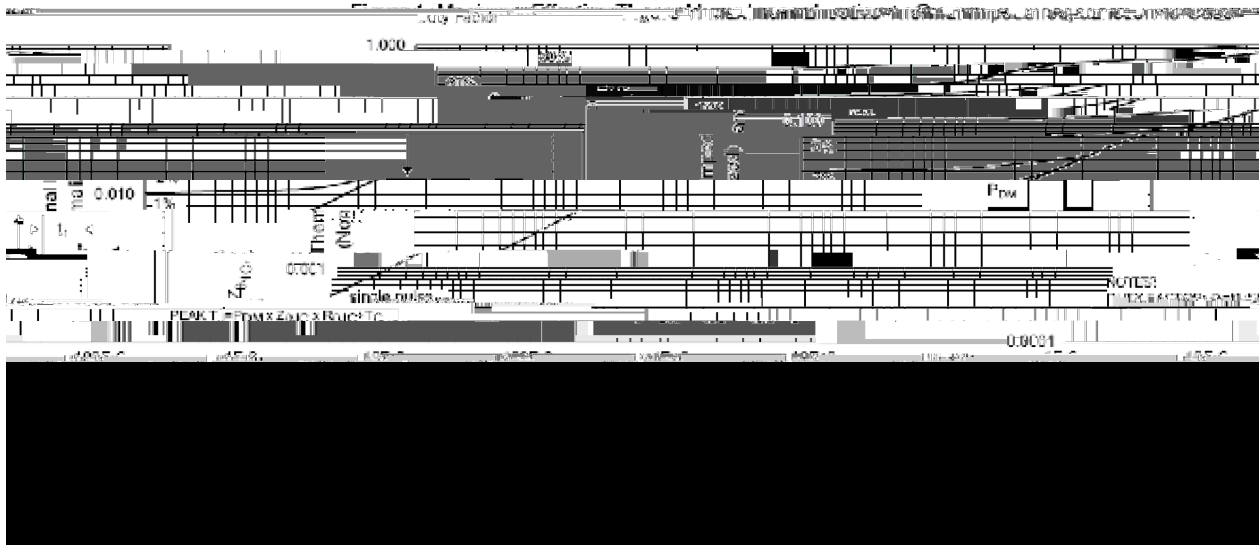
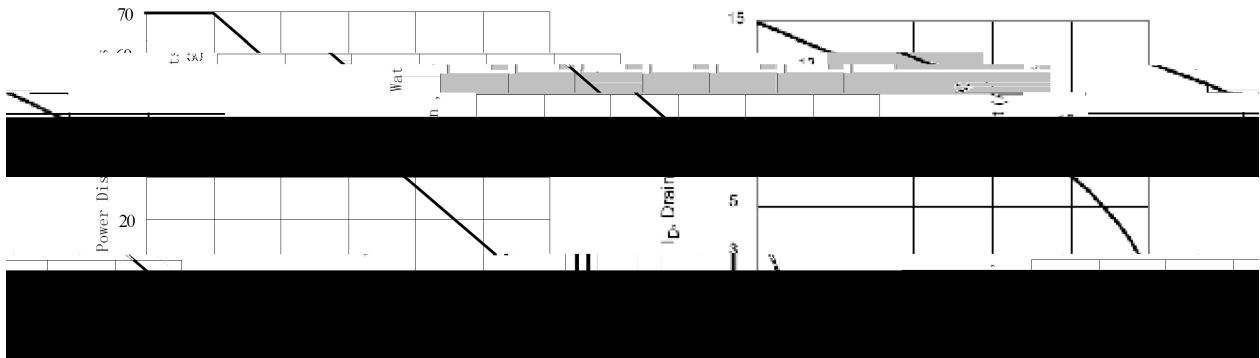
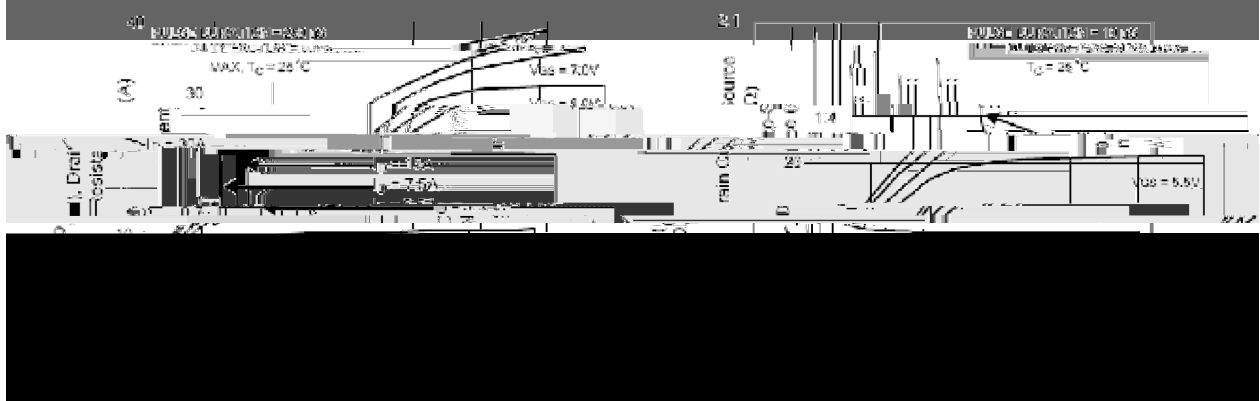


Figure 4. Typical Output Characteristics

Figure 5. Typical Drain-to-Source ON Resistance
vs Gate Voltage and Drain Current



/ Electrical Characteristic Curve

Figure 6. Maximum Peak Current Capability

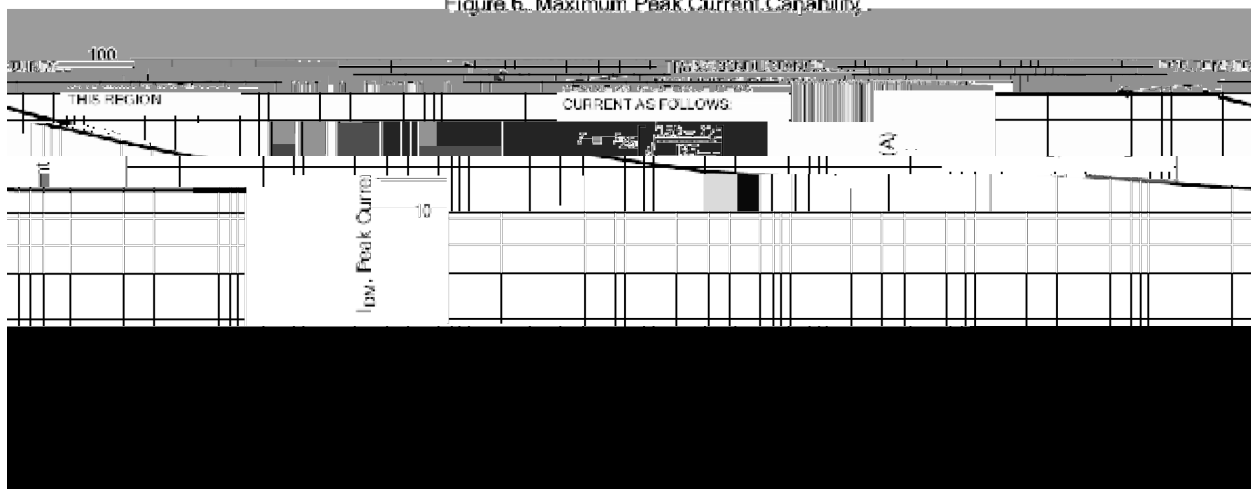
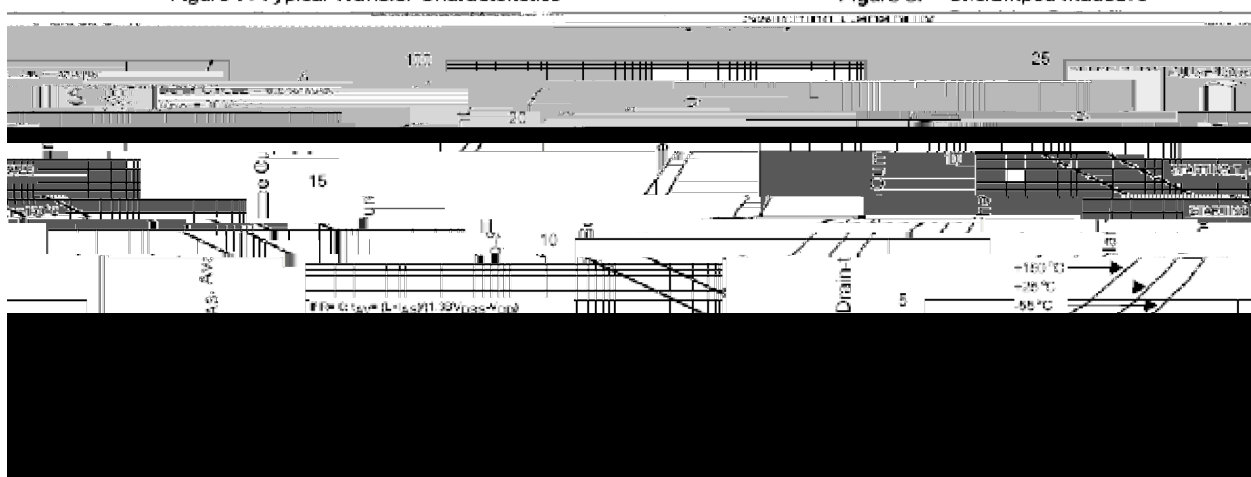
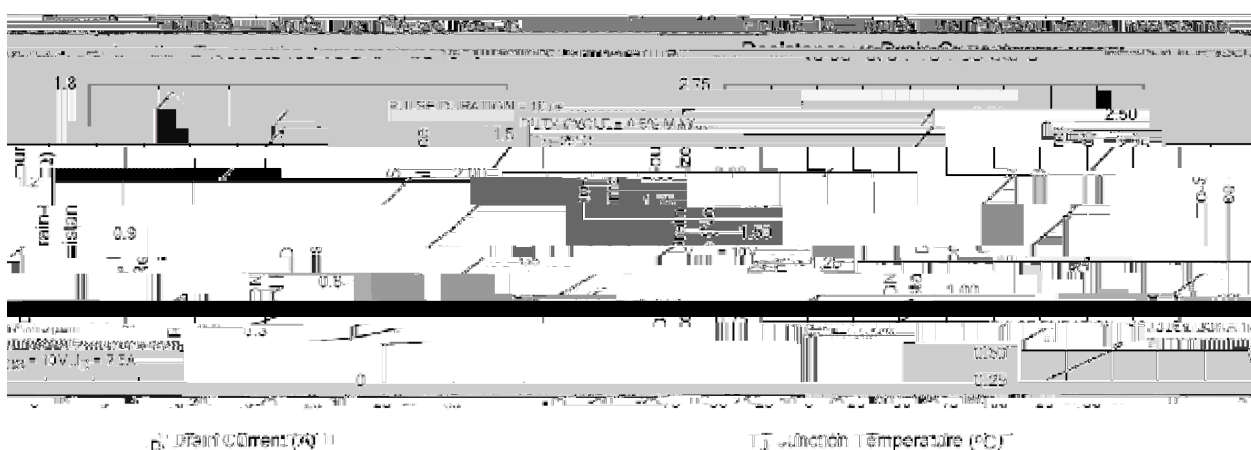
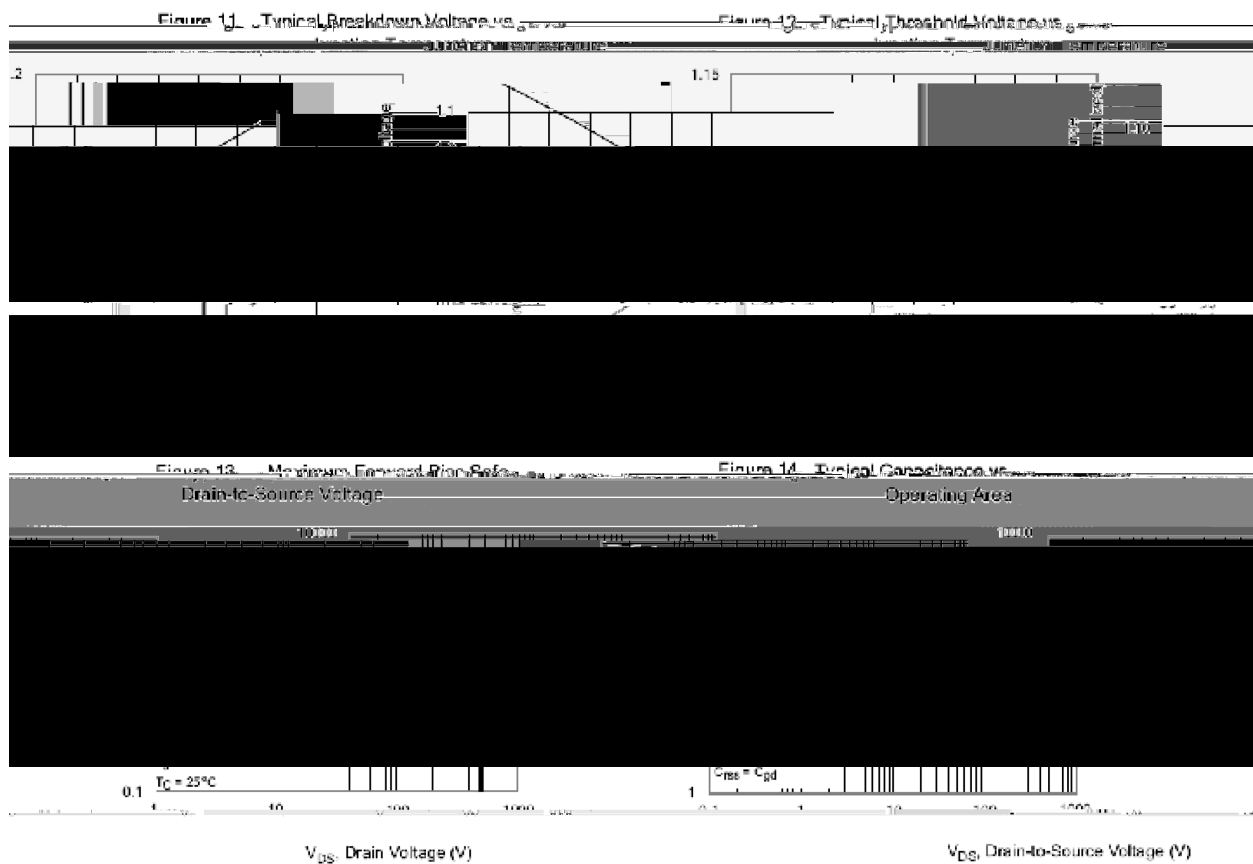
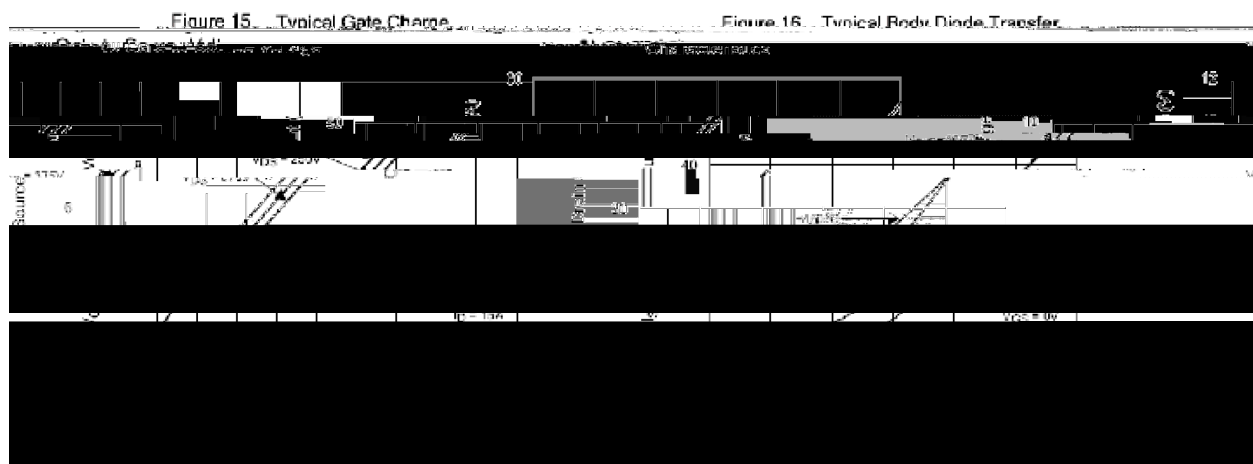


Figure 7. Typical Transfer Characteristics

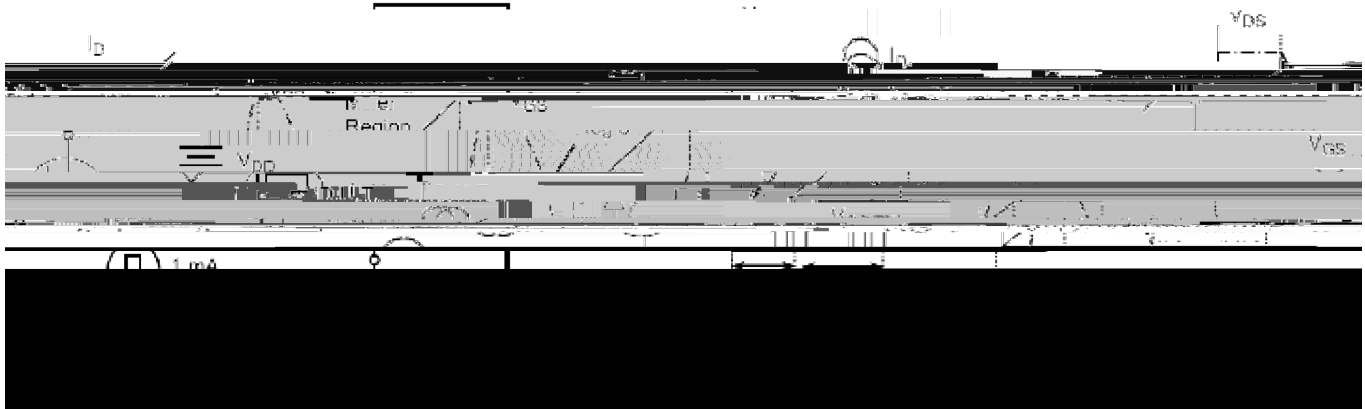
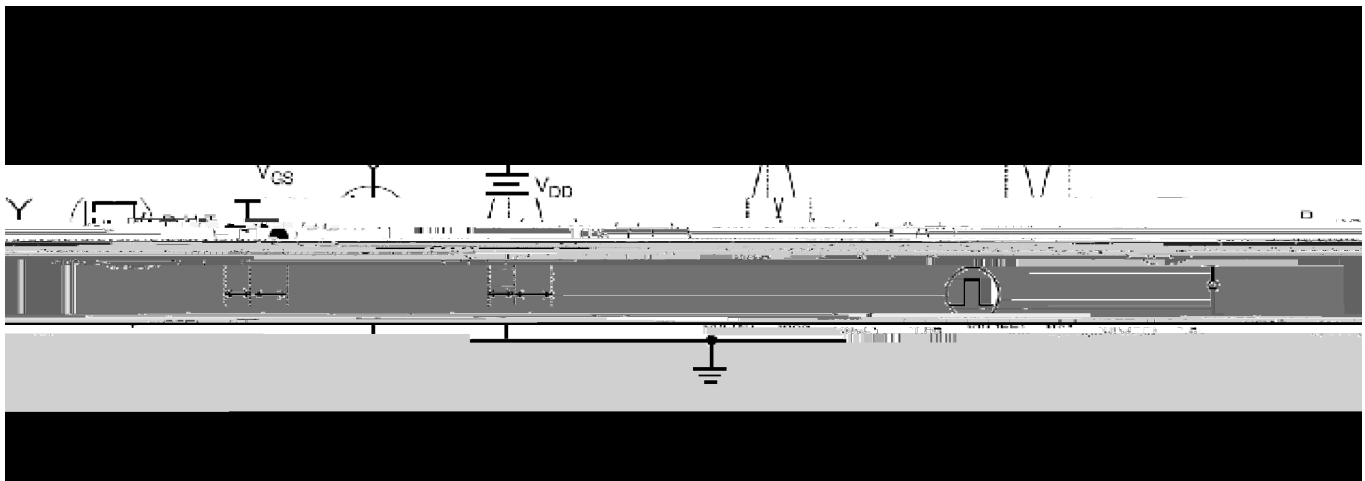
Figure 8. Unclamped Inductive



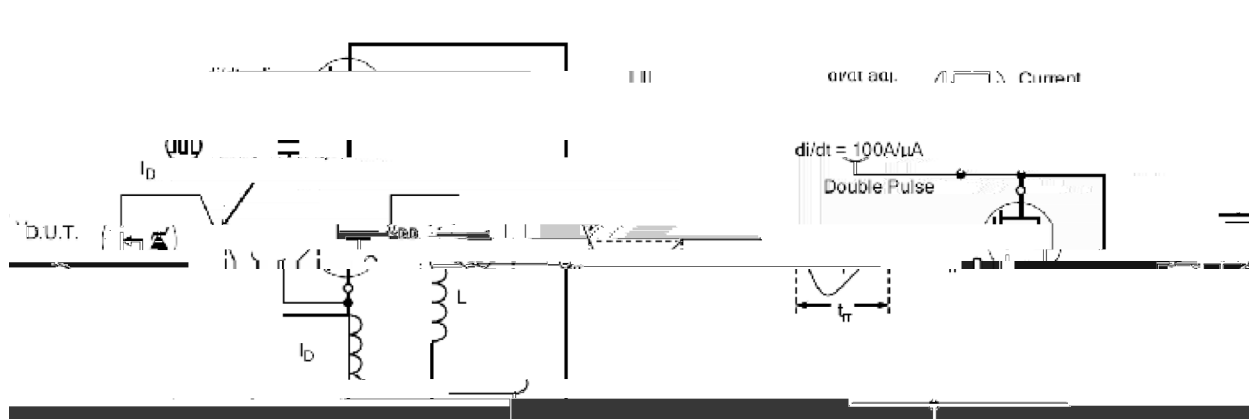
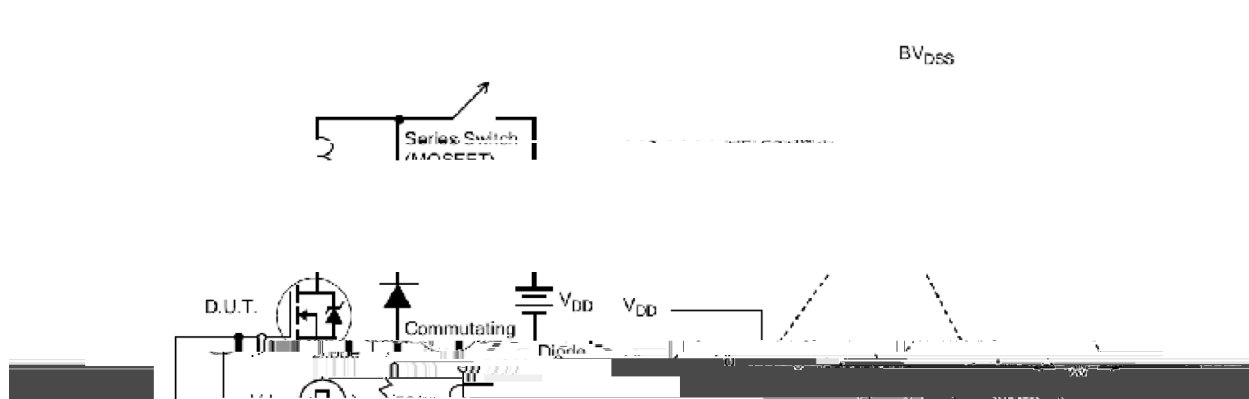
/ Electrical Characteristic Curve



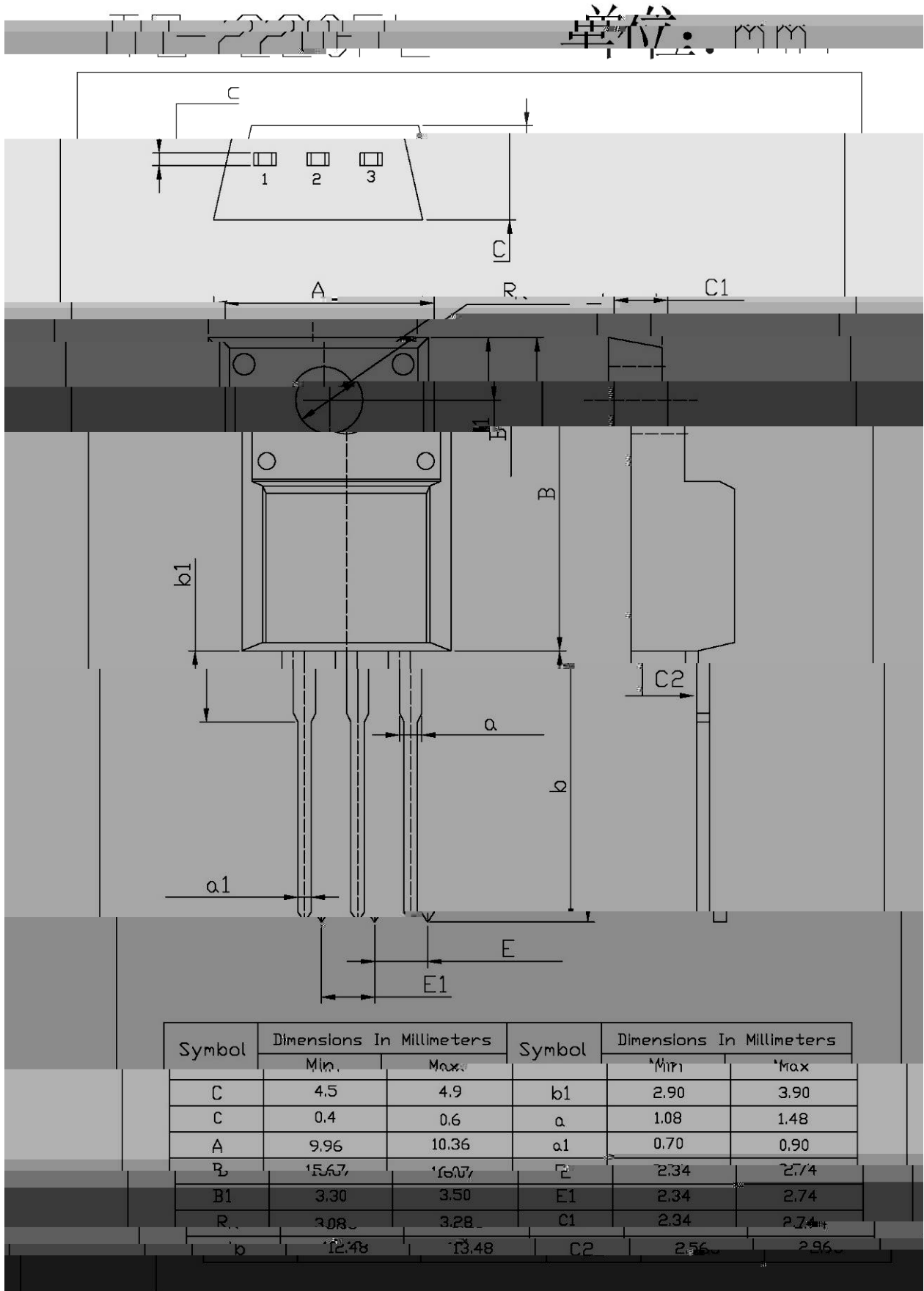
/ Test Circuit and Waveform



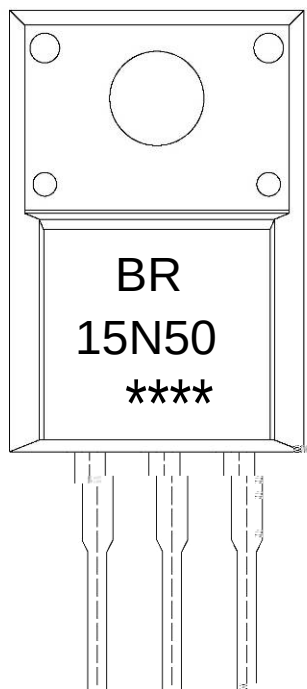
/ Test Circuit and Waveform



/ Package Dimensions



/ Marking Instructions



BR

15N50

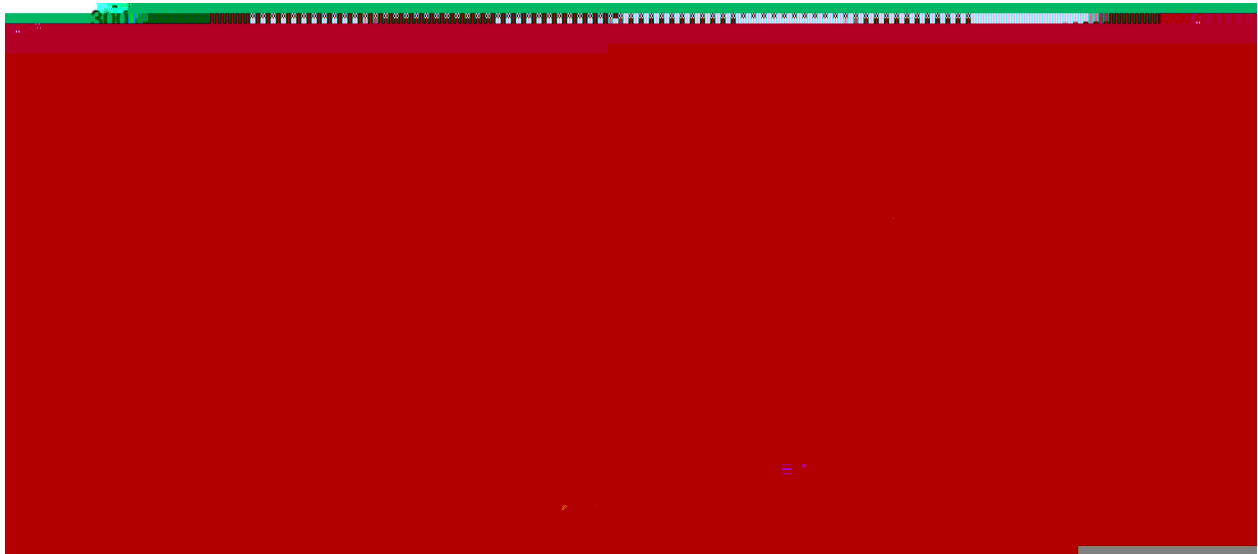
Note:

BR: Company Code

15N50: Product Type.

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

() / 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. | |

/ Resistance to Soldering Heat Test Conditions

270±5	10±1 sec.	Temp.:270±5	Time:10±1 sec
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/ Packaging SPEC.

/ TUBE