BRFL15N50

Rev.A Sep.-2017

蓝箭电子 BLUE ROCKET ELECTRONICS

DATA SHEET

/ Descriptions

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

/ Features

$R_{DS(on)}$ C_{rss}

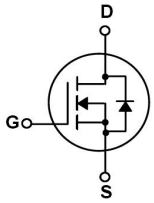
Low $R_{DS(on)}$,low gate charge, low C_{rss}, fast switching.

/ Applications

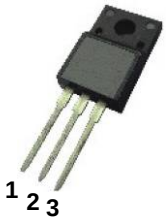
D

Automotive DC Motor Control and Class D Amplifier.

/ Equivalent Circuit



/ Pinning



PIN1 G PIN 2 D PIN 3 S

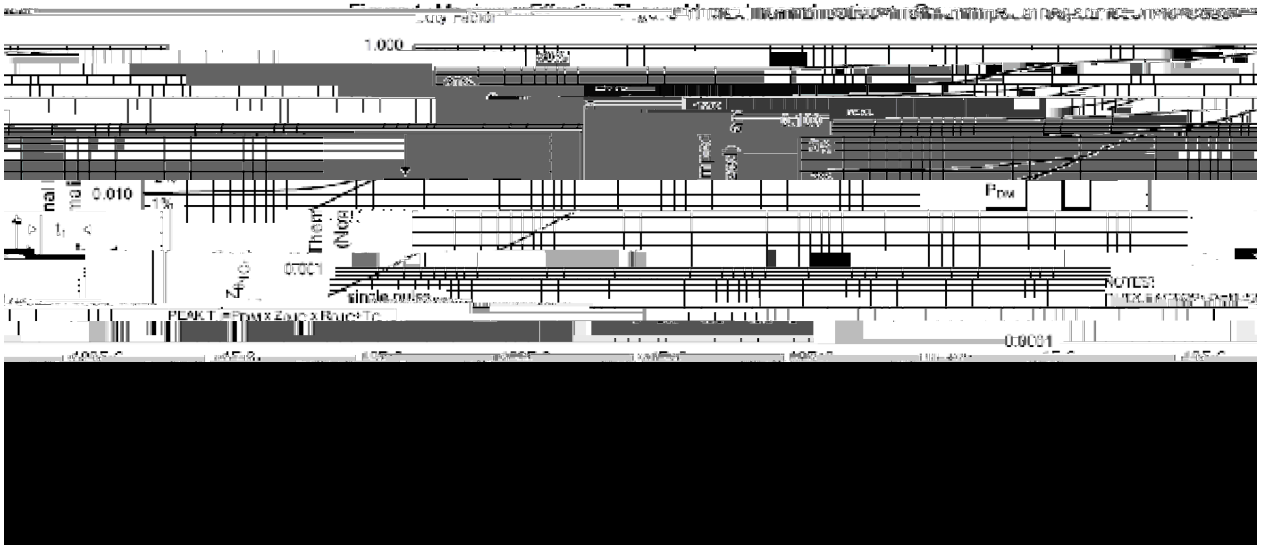
/ Classifications & Marking

See Marking Instructions.

.9(A)95.8(T)51.1(9.96.5(S)-6(Tc13.01452-6(H))224.45450.5533(S)-6(H)25(e)22(/)-6(H))2(T)51.1-50.52 - 52533()-6-(H)56(e)22(11-6

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 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 V_{DD} =250V V_{GS}=10V R_G=6.1Ω		15		ns
Rise Time	t_r			30		
Turn-Off Delay Time	$t_{d(OFF)}$			50		
Fall Time	t					

/ Electrical Characteristic Curve



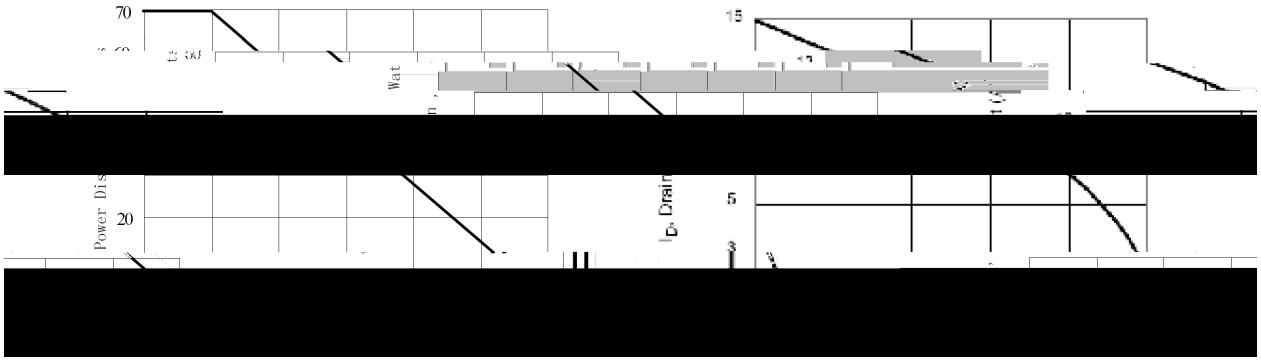


Figure4. Typical Output Characteristics

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

/ Electrical Characteristic Curve

Figure 6. Maximum Peak Current Capability

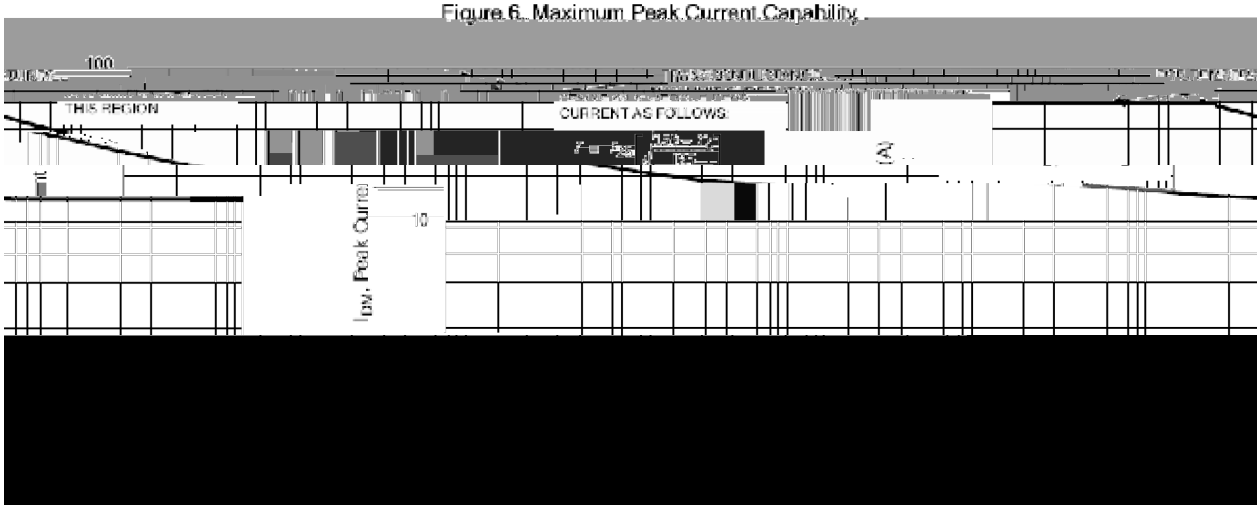
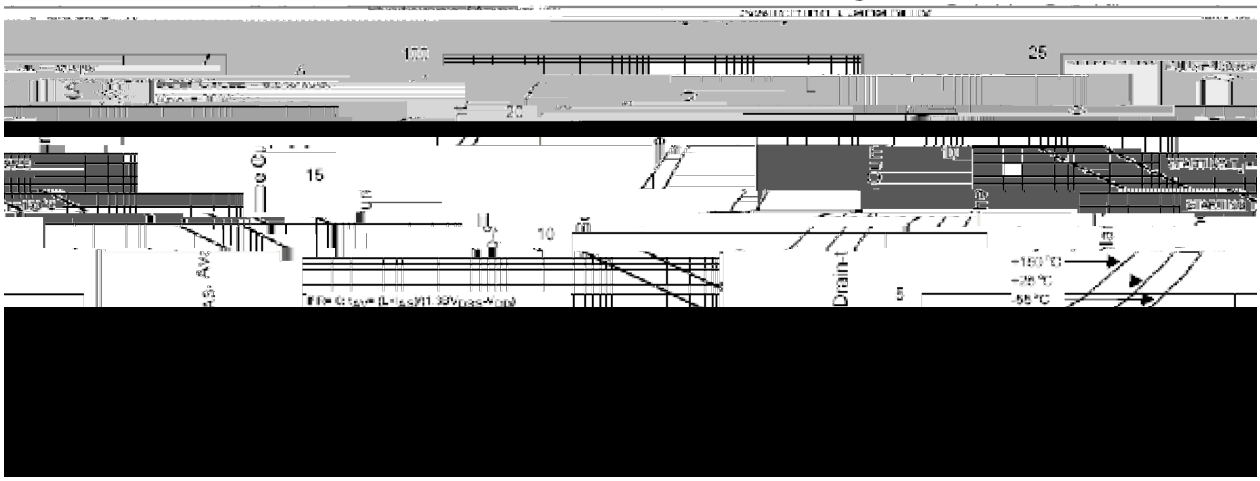
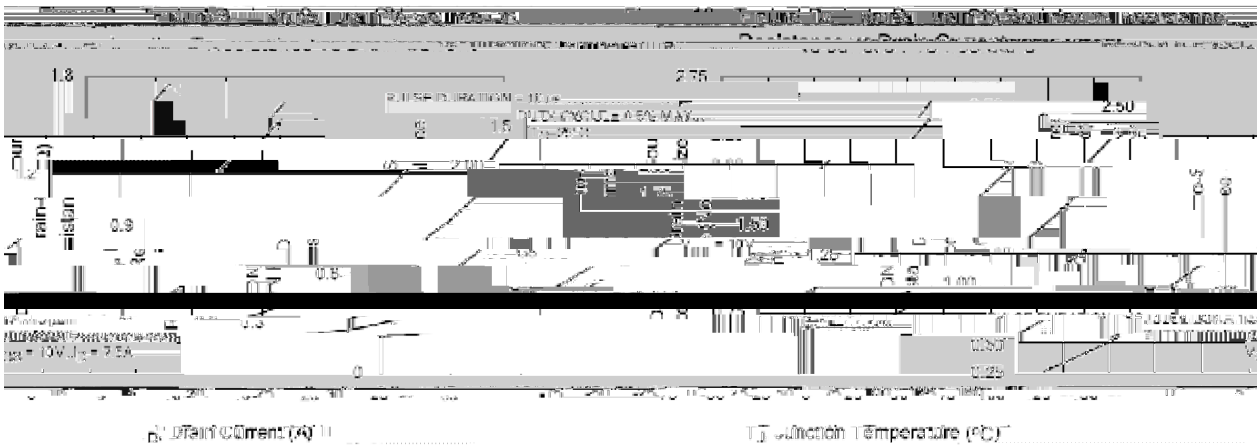


Figure 7. Typical Transfer Characteristics

Figure 8. Unclamped Inductive



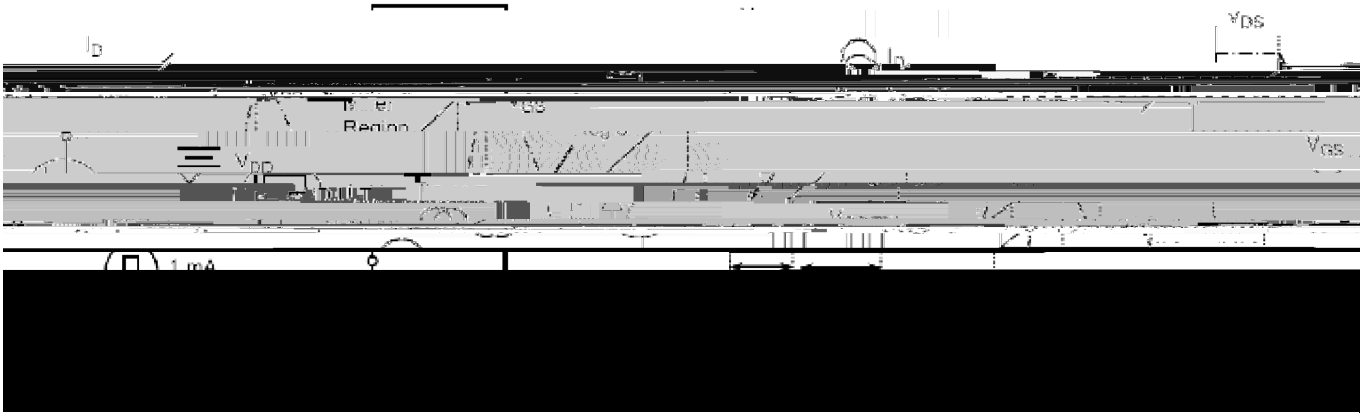


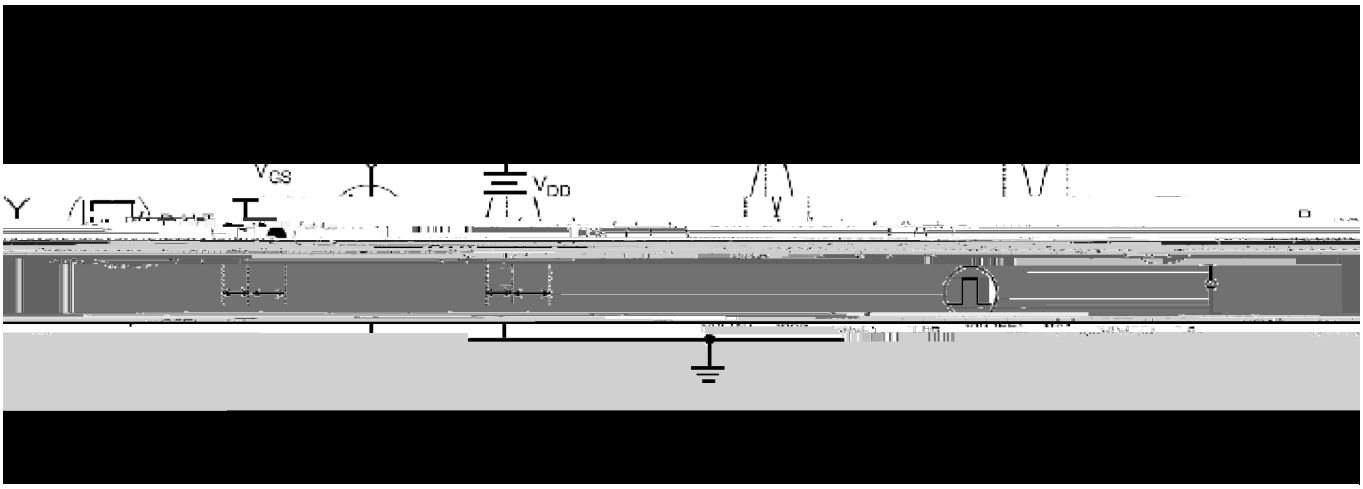
I_D, Drain Current (A)

T_J, Junction Temperature (°C)

/ Electrical Characteristic Curve

/ Test Circuit and Waveform





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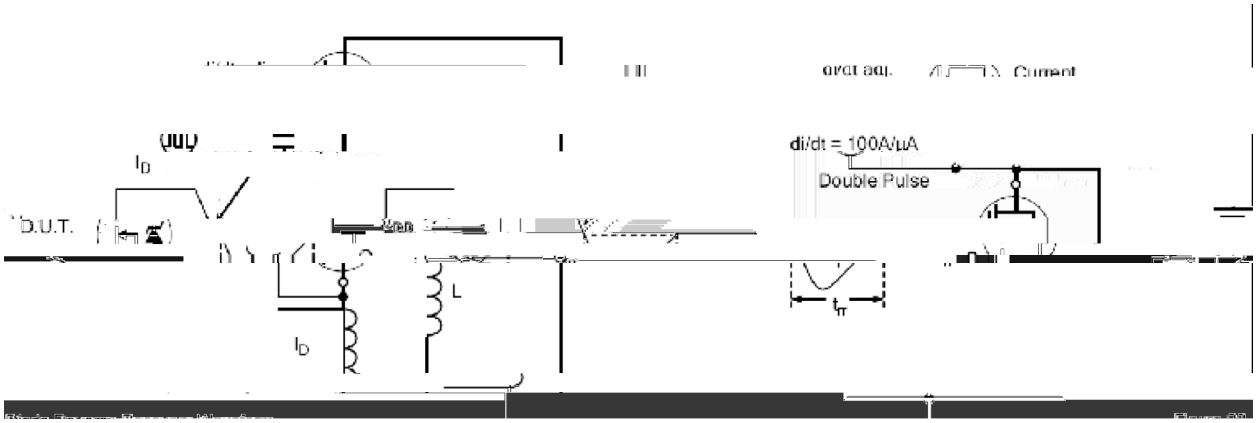
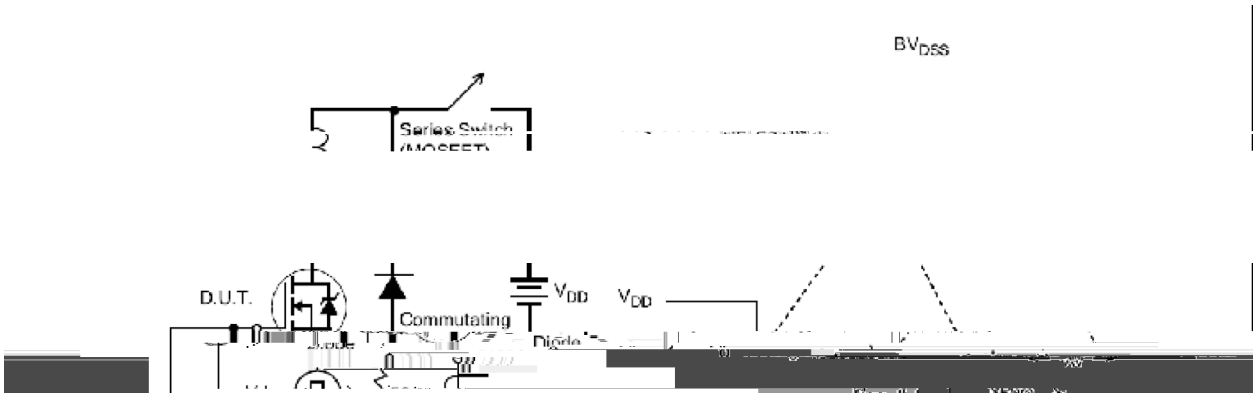
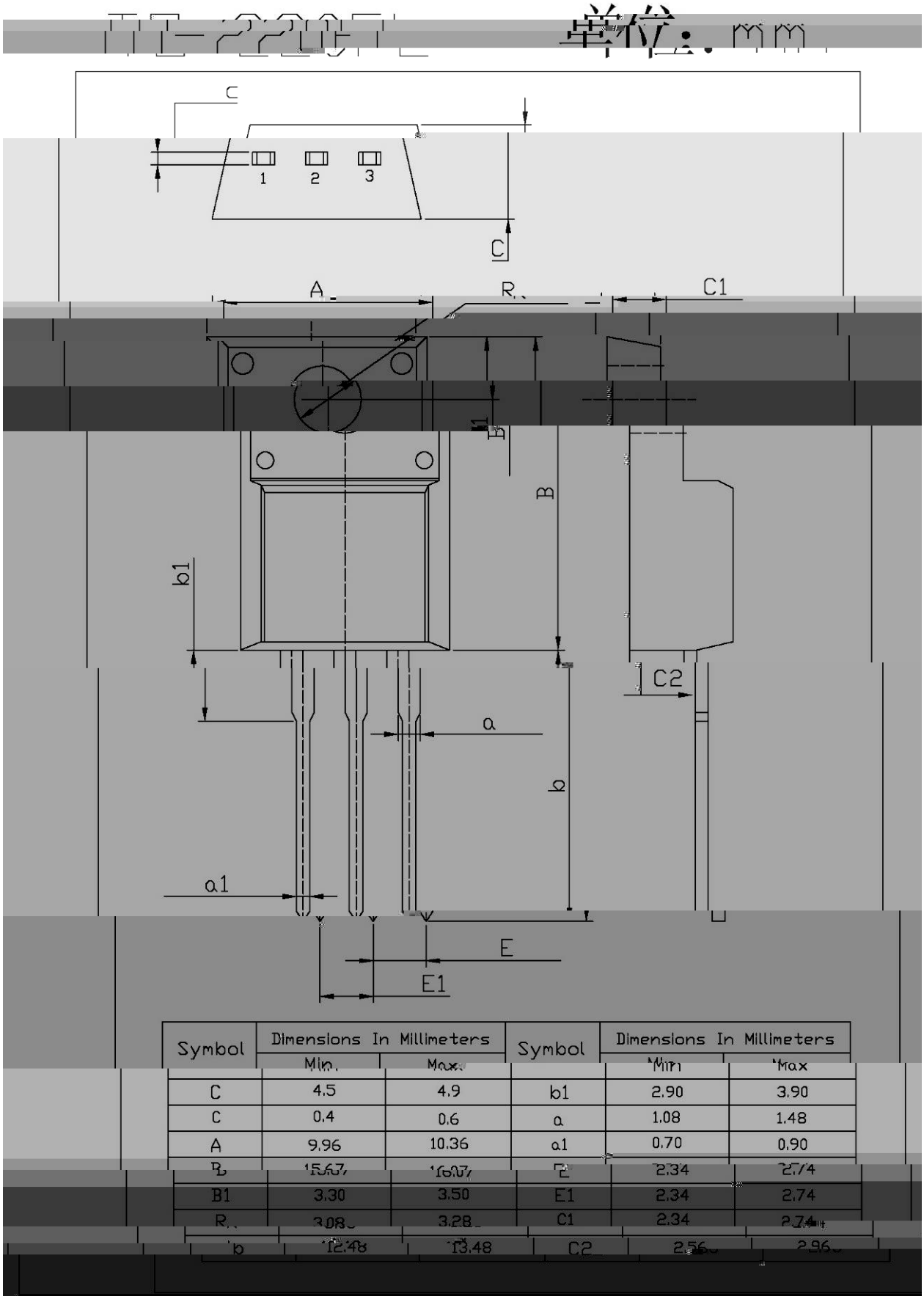


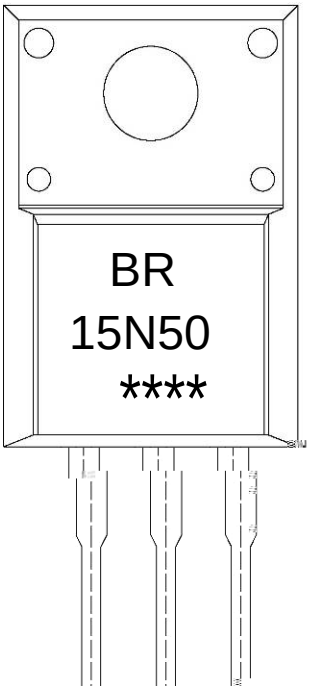


/ Package Dimensions



Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min.	Max.		Min.	Max.
C	4.5	4.9	b1	2.90	3.90
c	0.4	0.6	a	1.08	1.48
A	9.96	10.36	a1	0.70	0.90
R	15.67	16.07	E	2.34	2.74
B1	3.30	3.50	E1	2.34	2.74
R1	3.08	3.28	C1	2.34	2.74
b	12.48	13.48	C2	2.56	2.96

/ Marking Instructions



BR

15N50

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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

/ Packaging SPEC.

/ TUBE