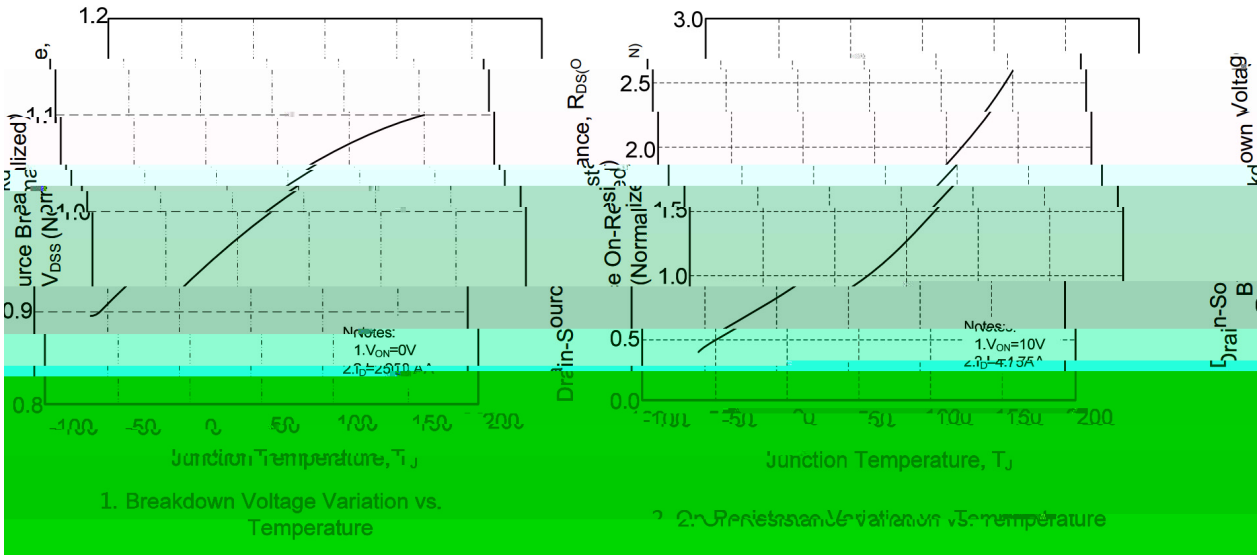
TO-220FL N MOS
N-CHANNEL MOSFET in a TO-220FL Plastic Package.

Low gate charge, low crss, fast switching,Have good Electromagnetic Interference performance.

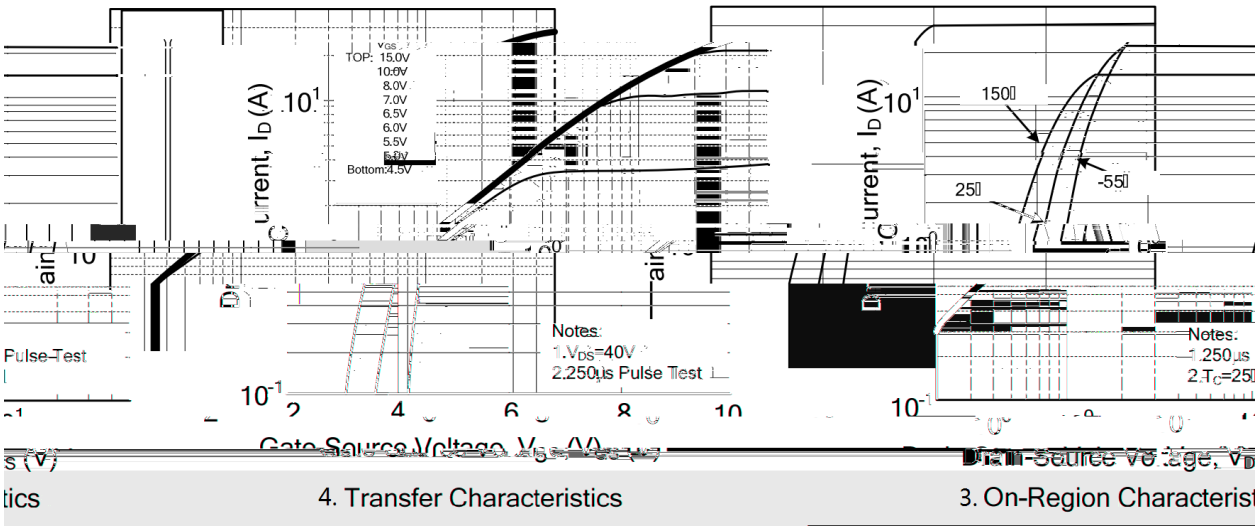
Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DSS}	650	V
Drain Current	I_D(Tc=25℃)	10	A
Drain Current - Pulsed	I_{DM}	40	A
Gate-Source Voltage	V_{GSS}	±30	V
Single Pulsed Avalanche Energy	E_{AS}	280	mJ
Avalanche Current	I_{AR}	8	A
Power Dissipation	P_D(Tc=25℃)	40	W
Operating and Storage Temperature Range	T_J,T_{STG}	-55 to 150	
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	62.5	/W
Thermal Resistance, Junction to Case	$R_{\theta JC}$	3.1	/W

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}=0V I_D=250μA	650	680		V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=650V V_{GS}=0V			1.0	μA
Gate-Body Leakage Current Forward	I_{GSS}	V_{GS}=±30V V_{DS}=0V			±10	μA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS} I_D=250μA	2.0	3.2	4.0	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	V_{GS}=10V I_D=4.75A		0.73	0.85	Ω
Input Capacitance	C_{iss}	V_{DS}=25V V_{GS}=0V f=1.0MHz		1550		pF
Output Capacitance	C_{oss}			30		
Reverse Transfer Capacitance	C_{rss}			9		
Total Gate Charge	Q_G	V_{DS}= 520V, I_D= 10.0A, V_{GS}= 10V		45		nC
Gate-Source Charge	Q_{GS}			6.8		
Gate-Drain Charge	Q_{GD}			19		
Turn-On Delay Time	$t_{d(on)}$	V_{DD}=325V I_D=10A R_G=25Ω V_{GS}= 10V		25		ns
Turn-On Rise Time	t_r			72		
Turn-Off Delay Time	$t_{d(off)}$			150		
Turn-Off Fall Time	t_f			80		
Drain-Source Diode Forward Voltage	V_{SD}	V_{GS} = 0 V, I_S = 4.0A			1.4	V



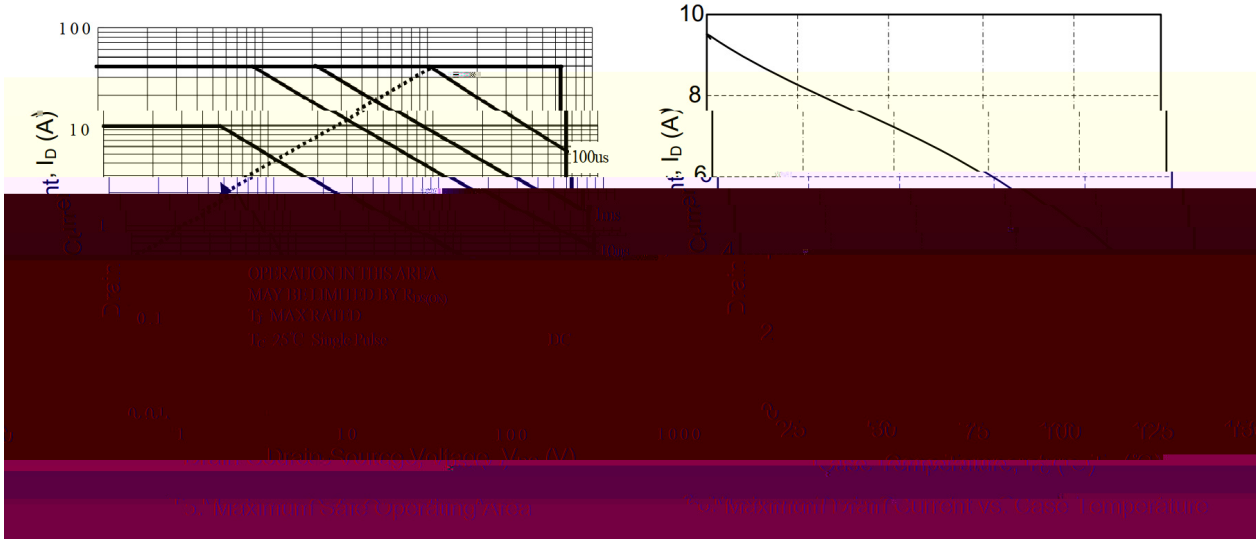
1. Breakdown Voltage Variation vs. Temperature

2. On-Resistance Variation vs. Temperature

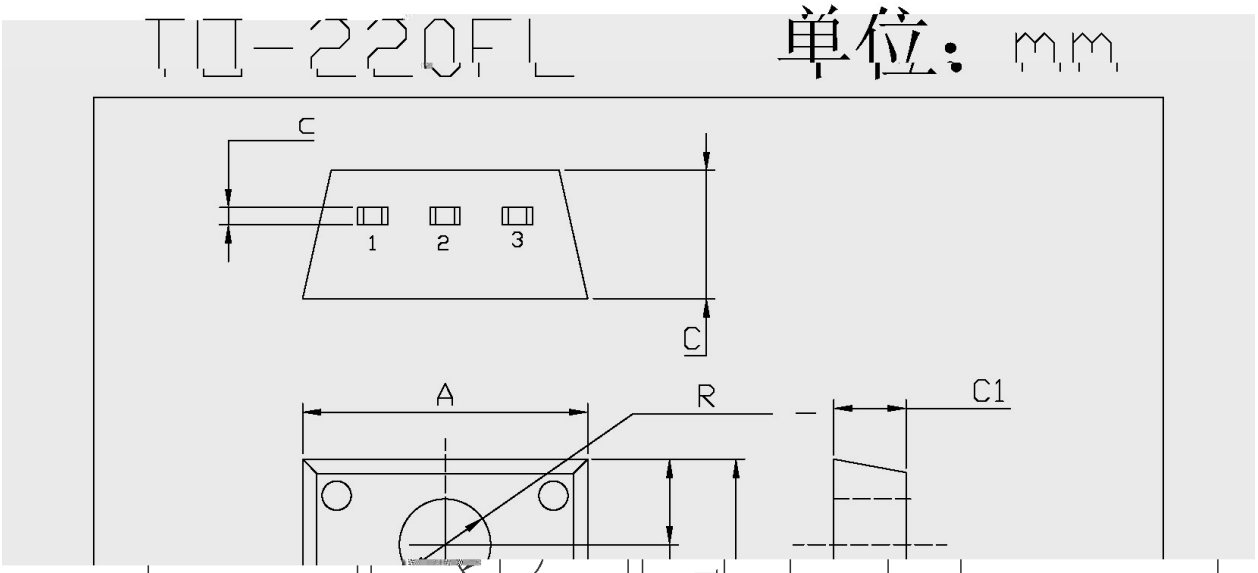


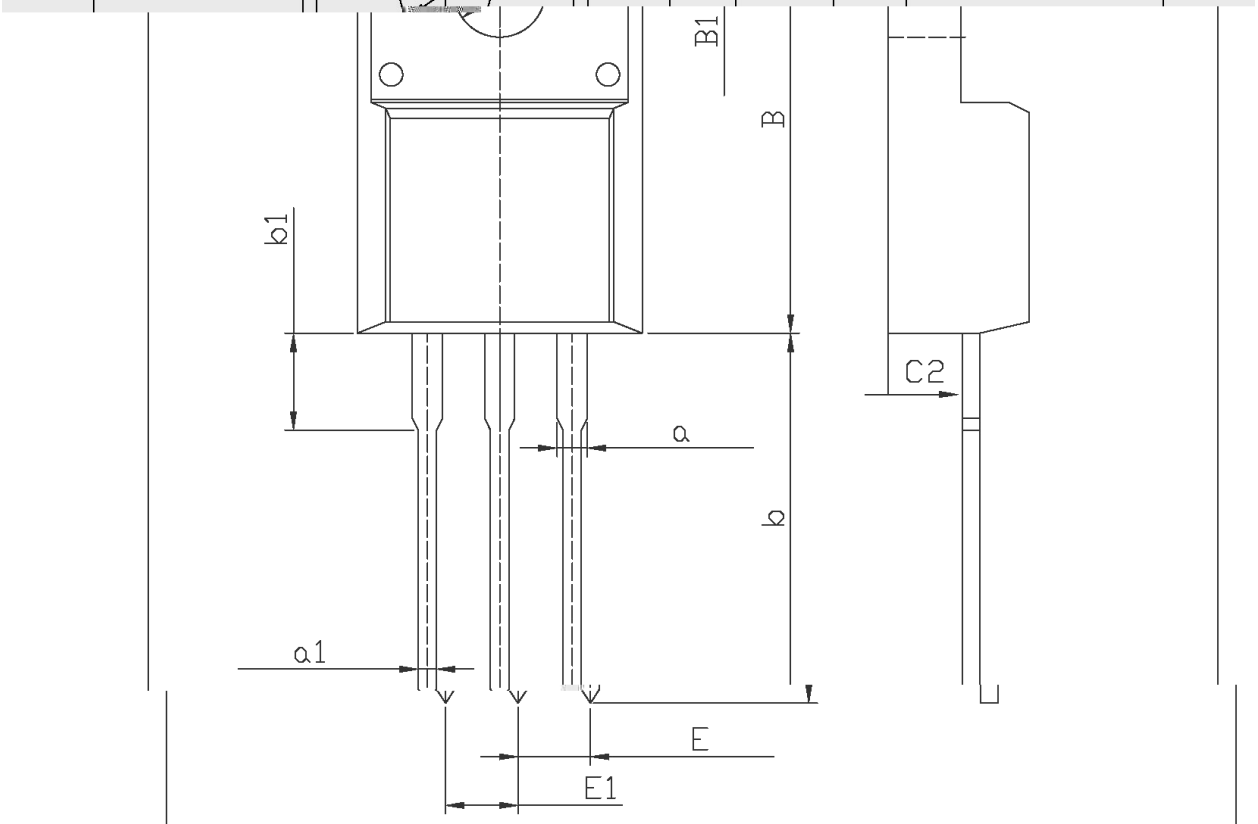
4. Transfer Characteristics

3. On-Region Characteristics

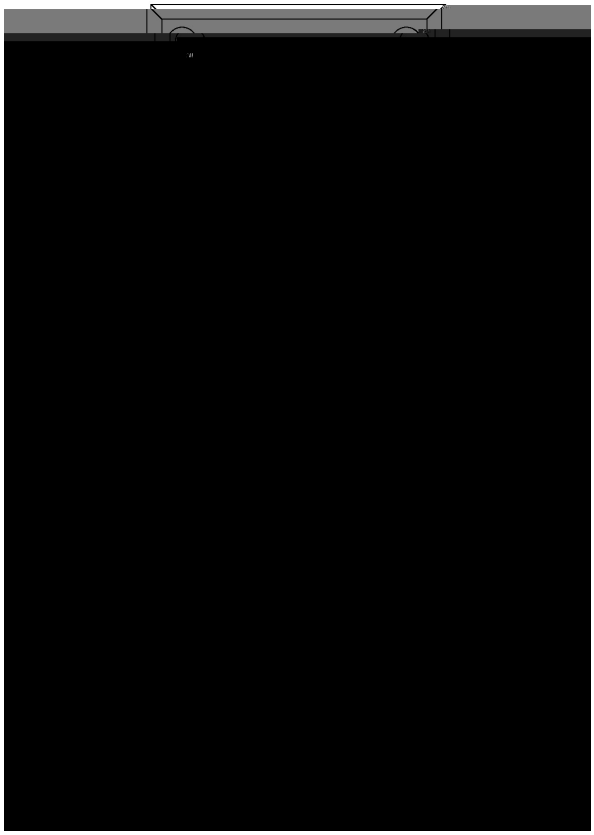


TO-220FL 单位：mm





Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
C	4.5	4.9	b1	2.90	3.30



BR

10N65S

Note:

BR:	Company Code
10N65S:	Product Type Code
****:	Lot No. Code, code change with Lot No

Note:

1 25 150 60 90sec;

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

2 255 5 5 143 TD0 5 0 85