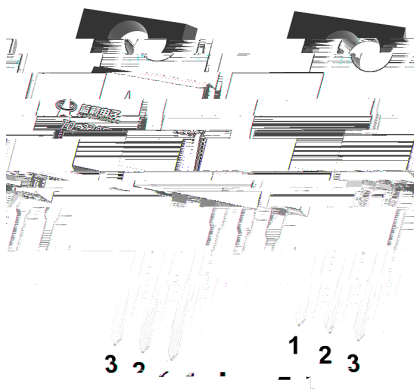
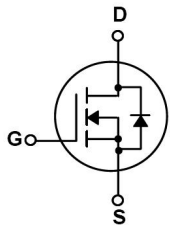


Rev.A Feb.-2024

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

Low gate charge, Low Crss , Fast switching, HF Product.

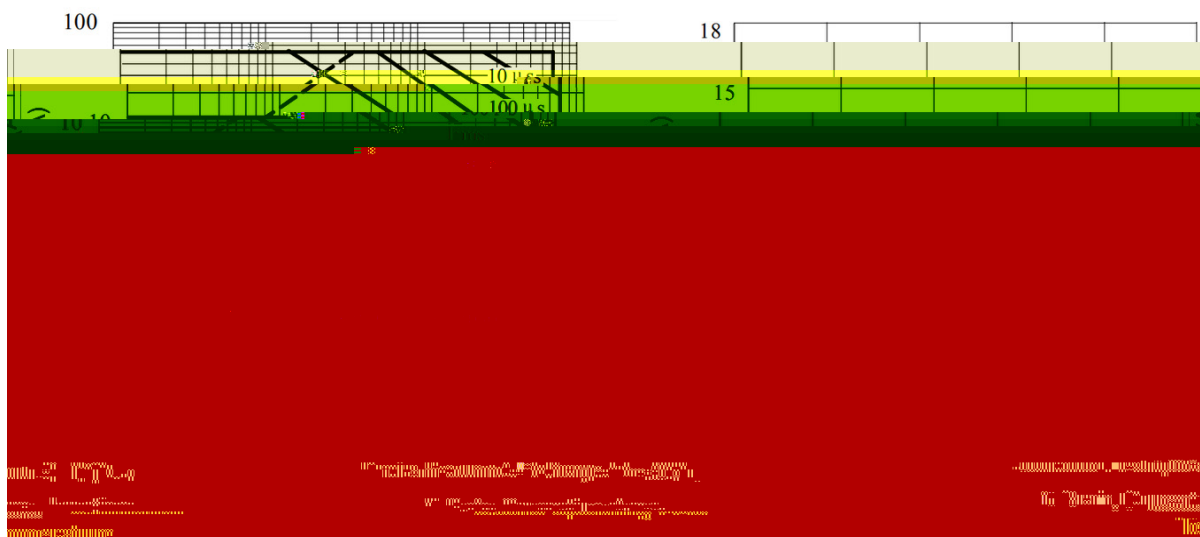
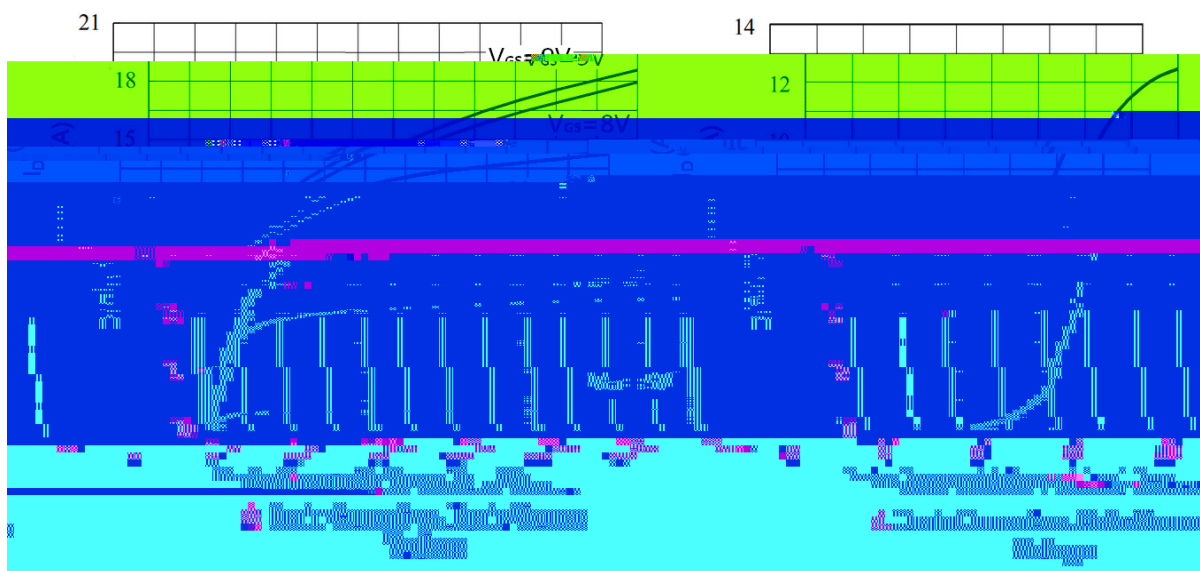
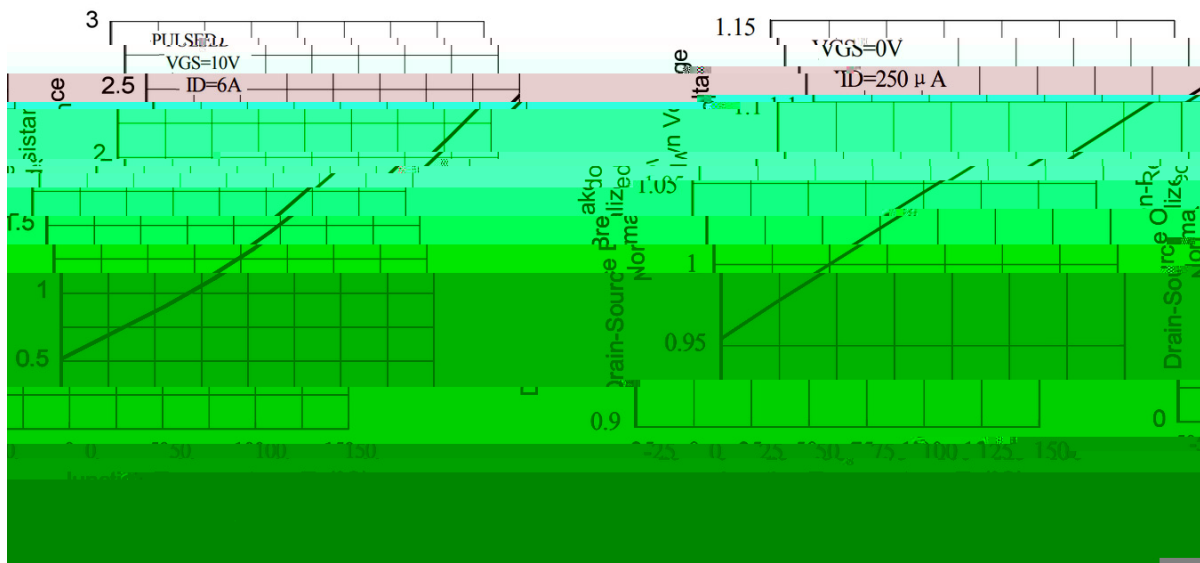
UPS
High efficiency switch mode power supplies, Electronic lamp ballasts based on half bridge, UPS.

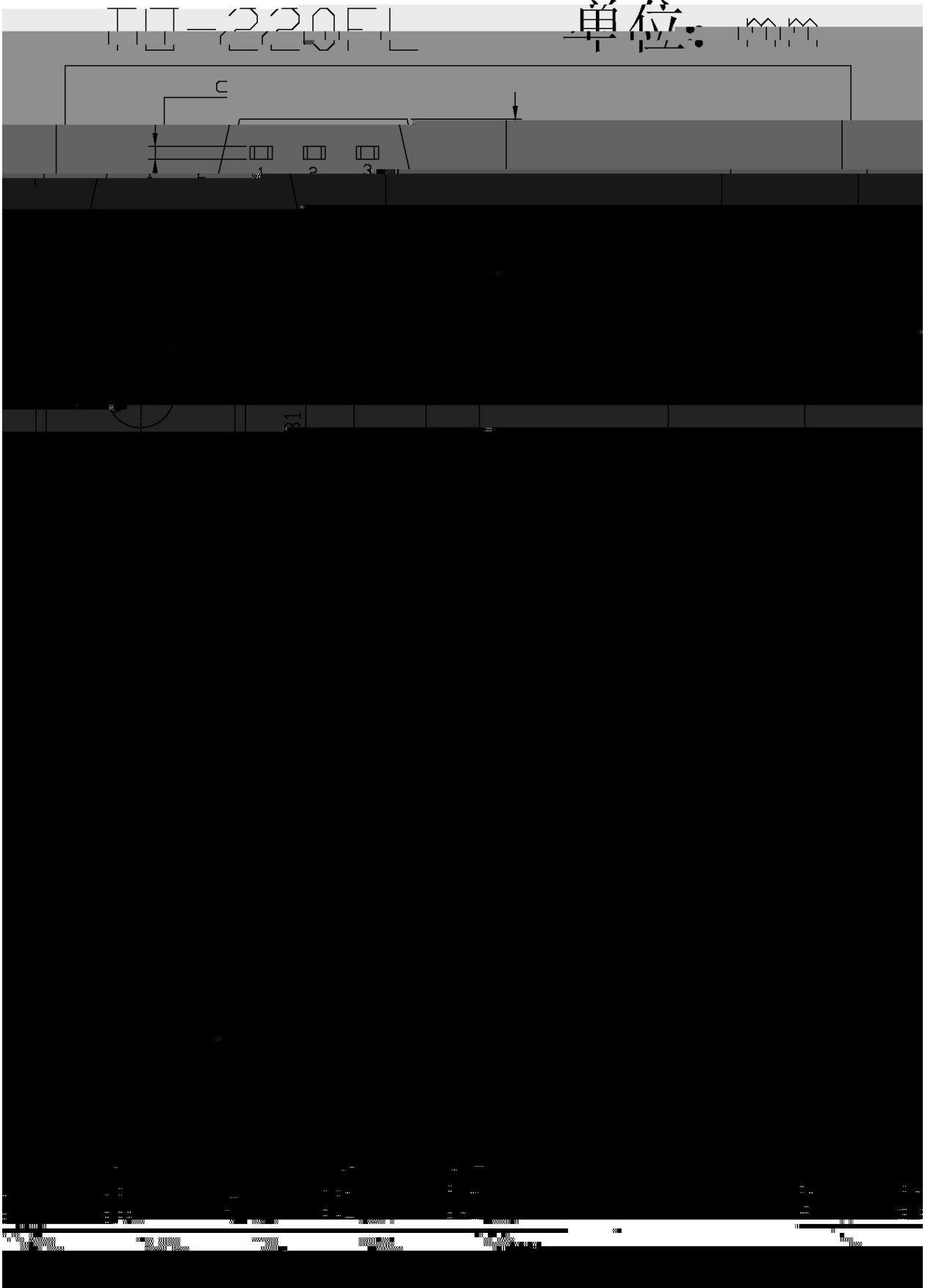


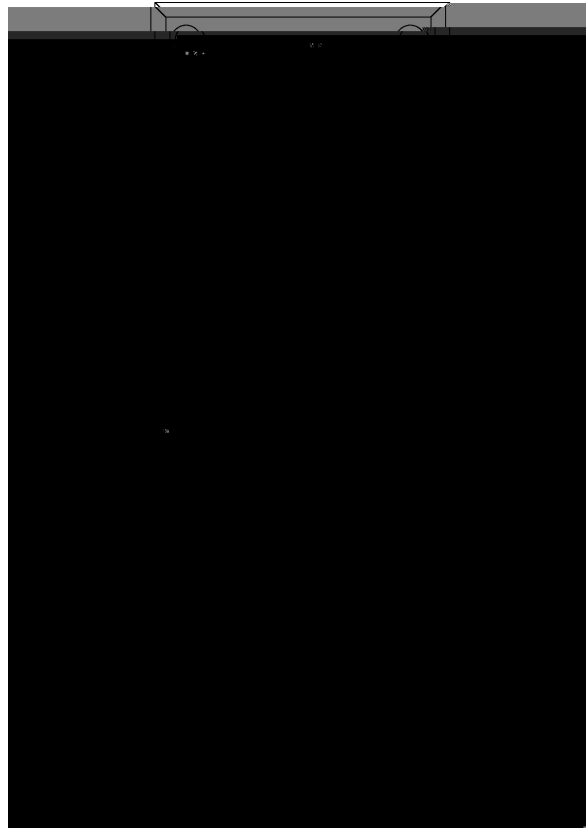
Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DSS}	700	V
Drain Current	$I_D(T_C=25^\circ C)$	12	A
Drain Current	$I_D(T_C=100^\circ C)$	10	A
Drain Current - Pulsed	I_{DM}	48	A
Gate-Source Voltage	V_{GSS}	± 30	V
Single Pulsed Avalanche Energy	E_{AS}	405	mJ
Avalanche Current	I_{AS}	9	A
Thermal Resistance, Junction to Case	R_{JC}	2.27	/W
Thermal Resistance, Junction to Ambient	R_{JA}	100	/W
Power Dissipation	P_D	55	W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to 150	

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V$ $I_D=250\mu A$	700			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=700V$ $V_{GS}=0V$			1.0	μA
Gate-Body Leakage Current Forward	I_{GSS}	$V_{GS}=\pm 30V$ $V_{DS}=0V$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=250\mu A$	2.0	3.4	4.0	V

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	td(on)	$V_{DD}=350V$ $I_D=12A$ $R_G=9.1$ $V_{GS}=10V$		18		ns
Turn-On Rise Time	tr			33		
Turn-Off Delay Time	td(off)			58		
Turn-Off Fall Time	tf			44		
Maximum Continuous Drain-Source Diode Forward Current	I _S				12	A
Maximum Pulsed Drain-Source Diode Forward Current	I _{SM}				48	A
Reverse Recovery Time	trr	$V_{GS} = 0V$ $I_S = 12A$ $dI_F/dt = 100 A/\mu s$		332		ns
Reverse Recovery Charge	Q _{rr}			2803		nC







BR

12N 70

Note:

BR: Company Code

12N70: 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±0.5sec; | 2.Peak Temp.:255±5 , Duration:5±0.5sec. |
| 3 | 2 10 | /sec. | 3. Cooling Speed: 2~10 /sec. |

270±5

10±1 sec.

Temp.:270±5

Time:10±1 sec

/ TUBE

Package Type

Units

Dimension

 (unit mm³)