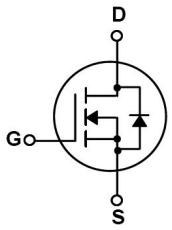
TO-220FL N MOS N-CHANNEL MOSFET in a TO-220FL Plastic Package.

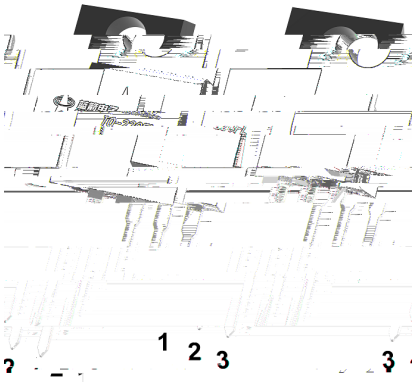
, , ,

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

, ,UPS

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





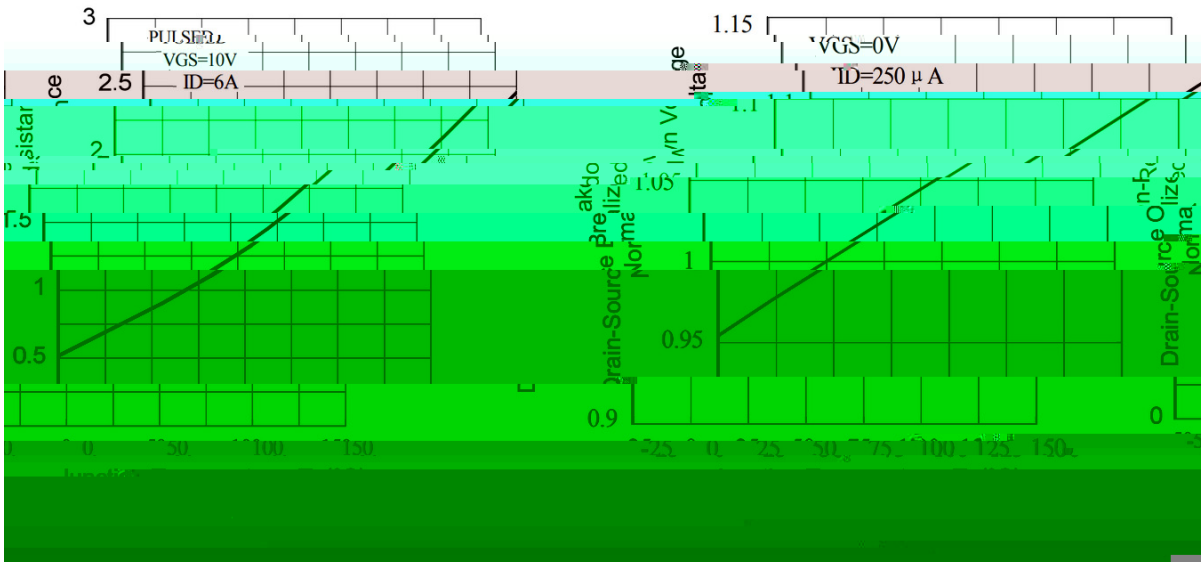
Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DSS}	700	V
Drain Current	I_D(Tc=25)	12	A
Drain Current	I_D(Tc=100)	10	A
Drain Current - Pulsed	I_{DM}	48	A
Gate-Source Voltage	V_{GSS}	±30	V
Single Pulsed Avalanche Energy	E_{AS}	405	mJ
Avalanche Current	I_{AS}	9	A
Thermal Resistance, Junction to Case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

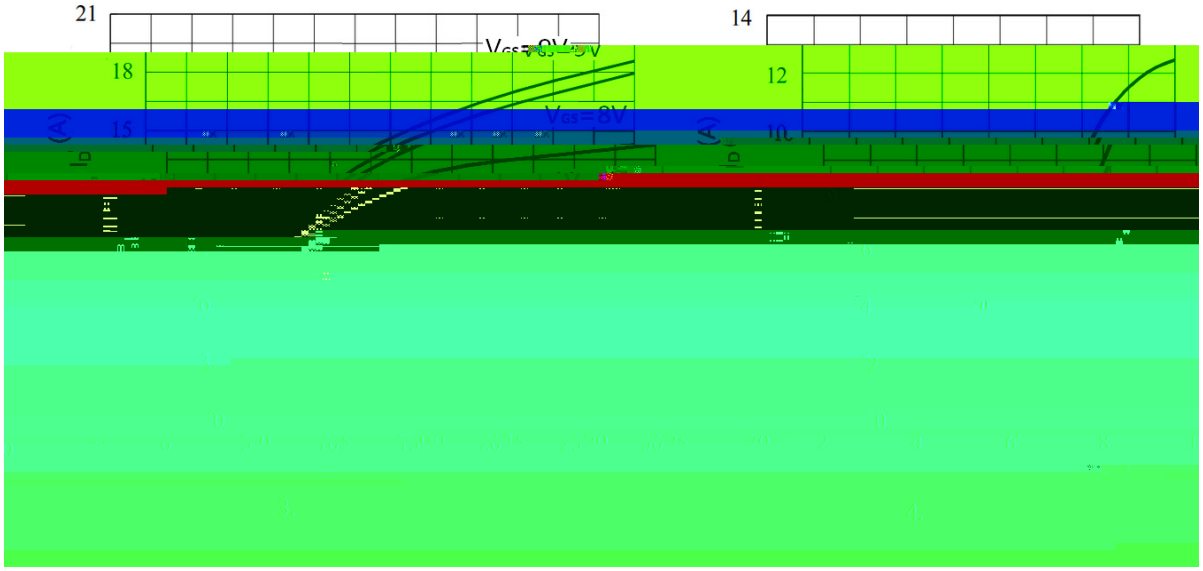
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}=0V I_D=250μA	700			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=700V V_{GS}=0V			1.0	μA
Gate-Body Leakage Current Forward	I_{GSS}	V_{GS}=±30V V_{DS}=0V			±100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS}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

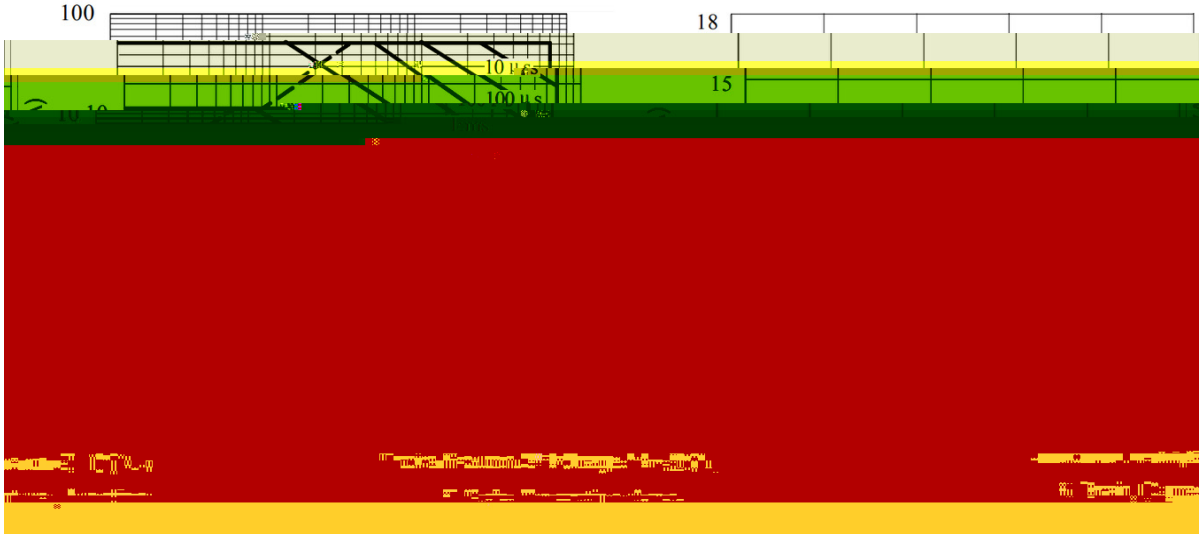
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	td(on)	V_{DD}=350V I_D=12A R_G=9.1Ω 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/μs		332		ns
Reverse Recovery Charge	Qrr			2803		nC

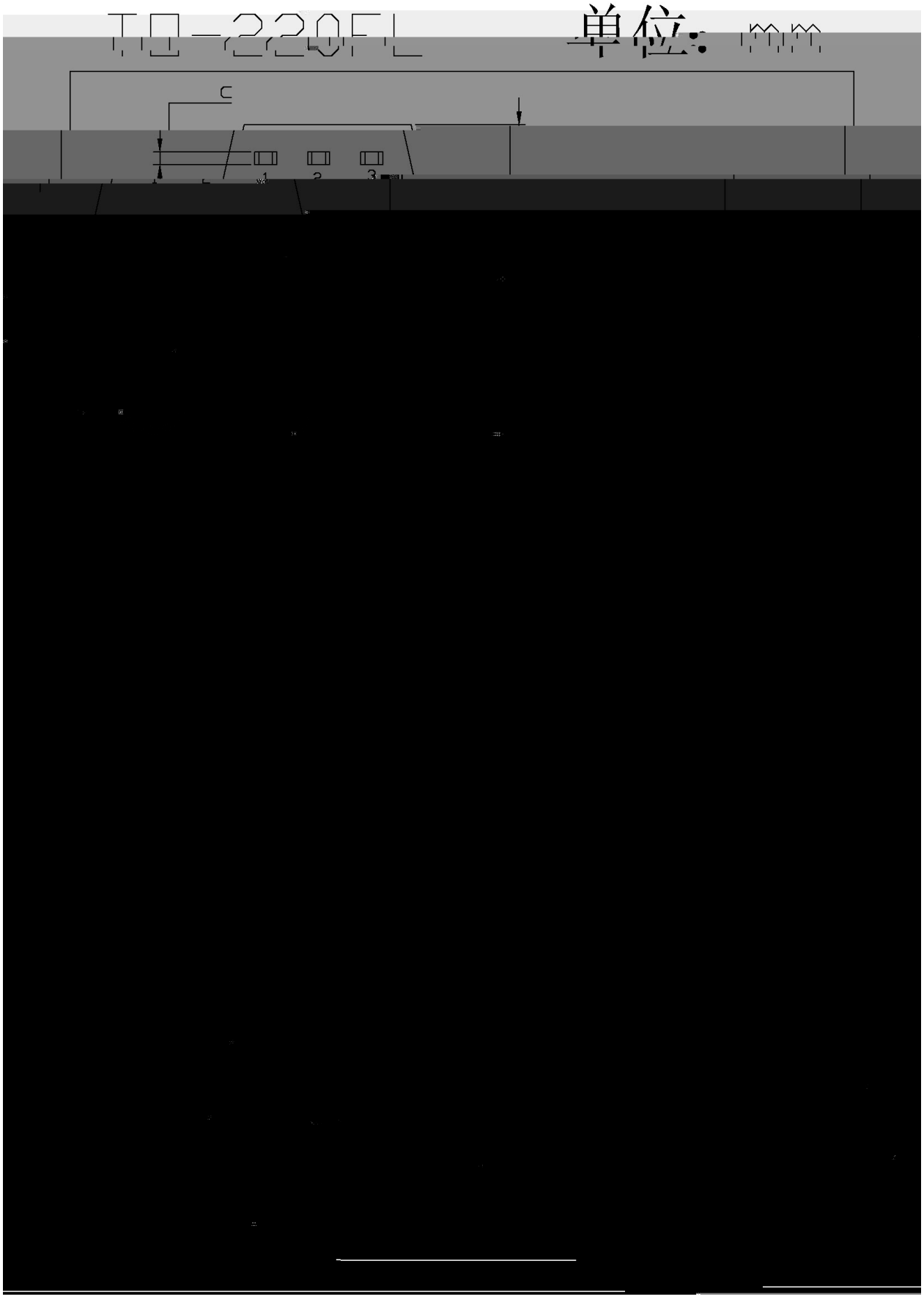
/ Electrical Characteristic Curve



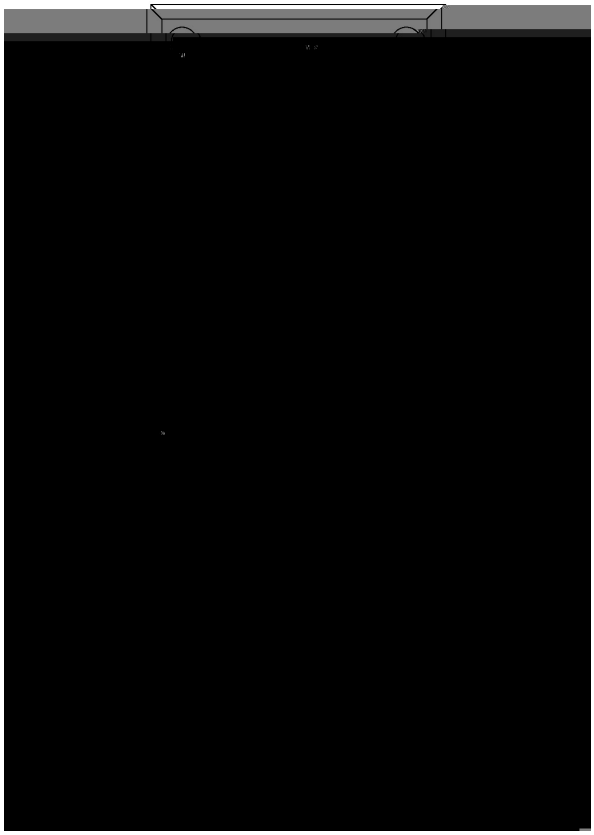




/ Package Dimensions



/ Marking Instructions



BR

12N70

****

Note:

BR:	Company Code
12N70:	Product Type Code
****:	Lot No. Code, code change with Lot No

( ) / Temperature Profile for Dip Soldering(Pb-Free)

Note:

1 25 150 60 90sec;

2 255±5 5±0.5sec;

3 2 10 /sec.

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

2.Peak Temp.:255±5 , Duration:5±0.5sec.

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

Package Type	Units	Dimension	(unit mm^3)