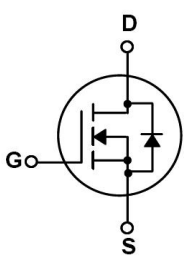
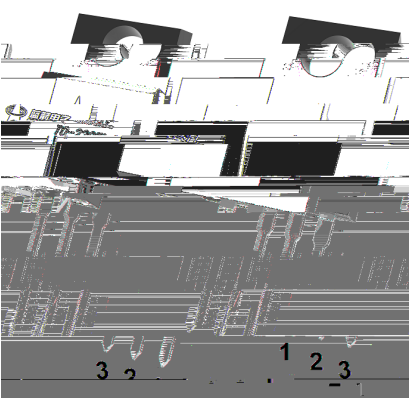


BRFL24N50, 24A, 500V, N-Channel MOSFET in a TO-220FL Plastic Package.

$V_{DS}=500V$ $I_D=24A$
 $R_{DS(ON)}@10V=0.25\Omega$ (Typ. 0.17Ω)
 $R_{DS(ON)}@6V=0.3\Omega$ (Typ. $0.18m\Omega$)

Designed for high voltage, high speed power switching applications such as high efficiency switched mode power supplies, active power factor correction.



PIN 1 y G PIN 2 y D PIN 3 y S

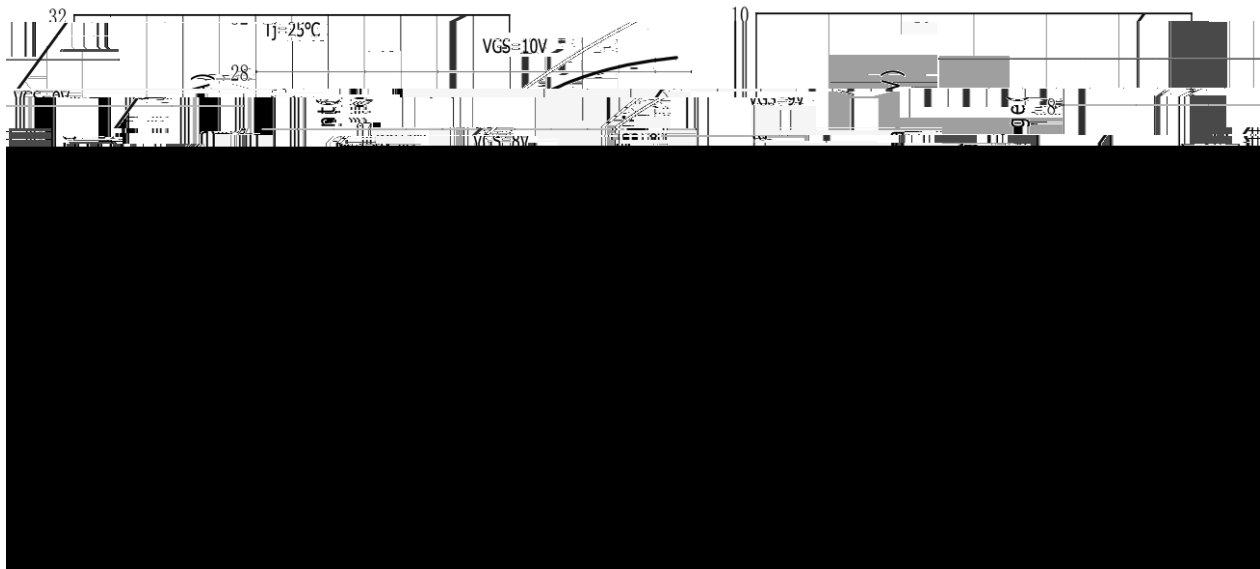
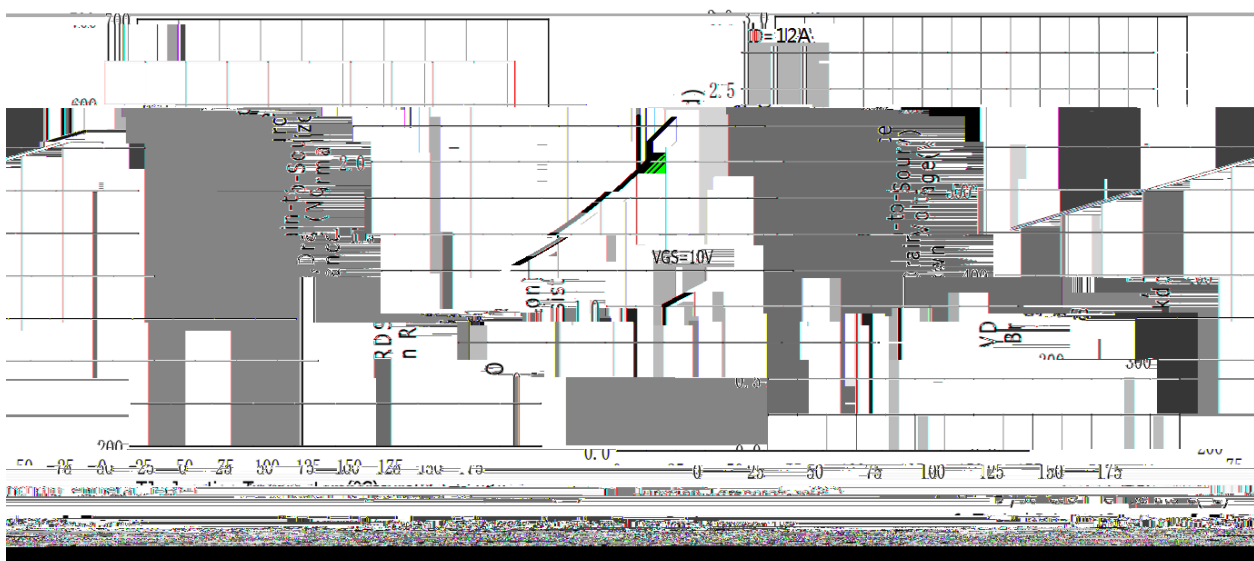
Marking



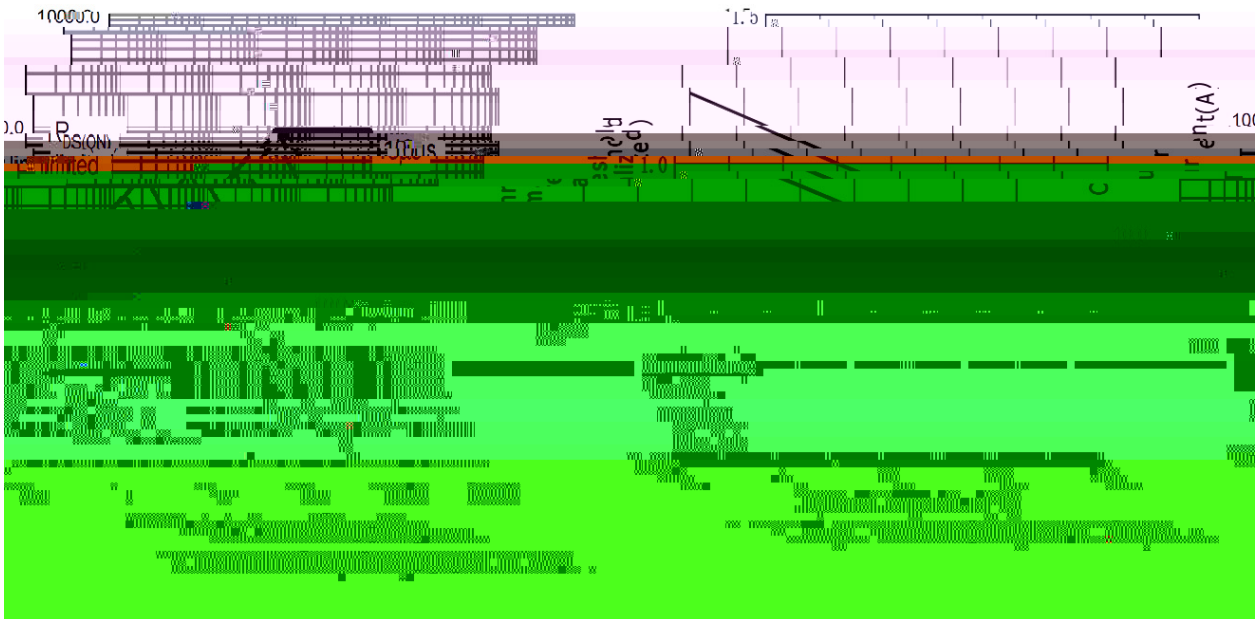
@ f Parameter	... Z Symbol	f > Rating	% y Unit
Drain-to-Source Breakdown Voltage	V_{DS}	500	V
Continuous Drain Current	$I_D(T_c=25^\circ\text{C})$	24	A
Drain Current Pulsed	I_{DM}	90	A
Gate-to-Source Voltage	V_{GS}	± 30	V
Avalanche Current	I_{AS}	21	A
Single Pulse Avalanche Energy	E_{AS}	1960	mJ
Power Dissipation	$P_D(T_c=25^\circ\text{C})$	50	W
Junction Temperature Range	T_j	150	
Storage Temperature Range	T_{stg}	-55 ~ 150	
Thermal Resistance Junction-Case	R_{JC}	2.5	/W

@ f Parameter	... Z Symbol	y i Ú ^ Test Conditions	Â 4 > Min	Á ° > Typ	Â Ý > Max	% y Unit
Drain-to-Source Breakdown Voltage	V_{DS}	$V_{GS}=0V$ $I_D=250\text{ }\mu\text{A}$	500	550		V
Drain-to-Source Leakage Current	I_{DSS}	$V_{DS}=500V$ $V_{GS}=0V$			1.0	A
Gate-to-Source Forward Leakage	I_{GSS}	$V_{GS}=\pm 30V$ $V_{DS}=0V$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=250\text{ }\mu\text{A}$	2.0		4.0	V
Static Drain-to-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V$ $I_D=12A$		0.17	0.25	
Static Drain-to-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=6V$ $I_D=6A$		0.18	0.3	
Diode Forward Voltage	V_{SD}	V				

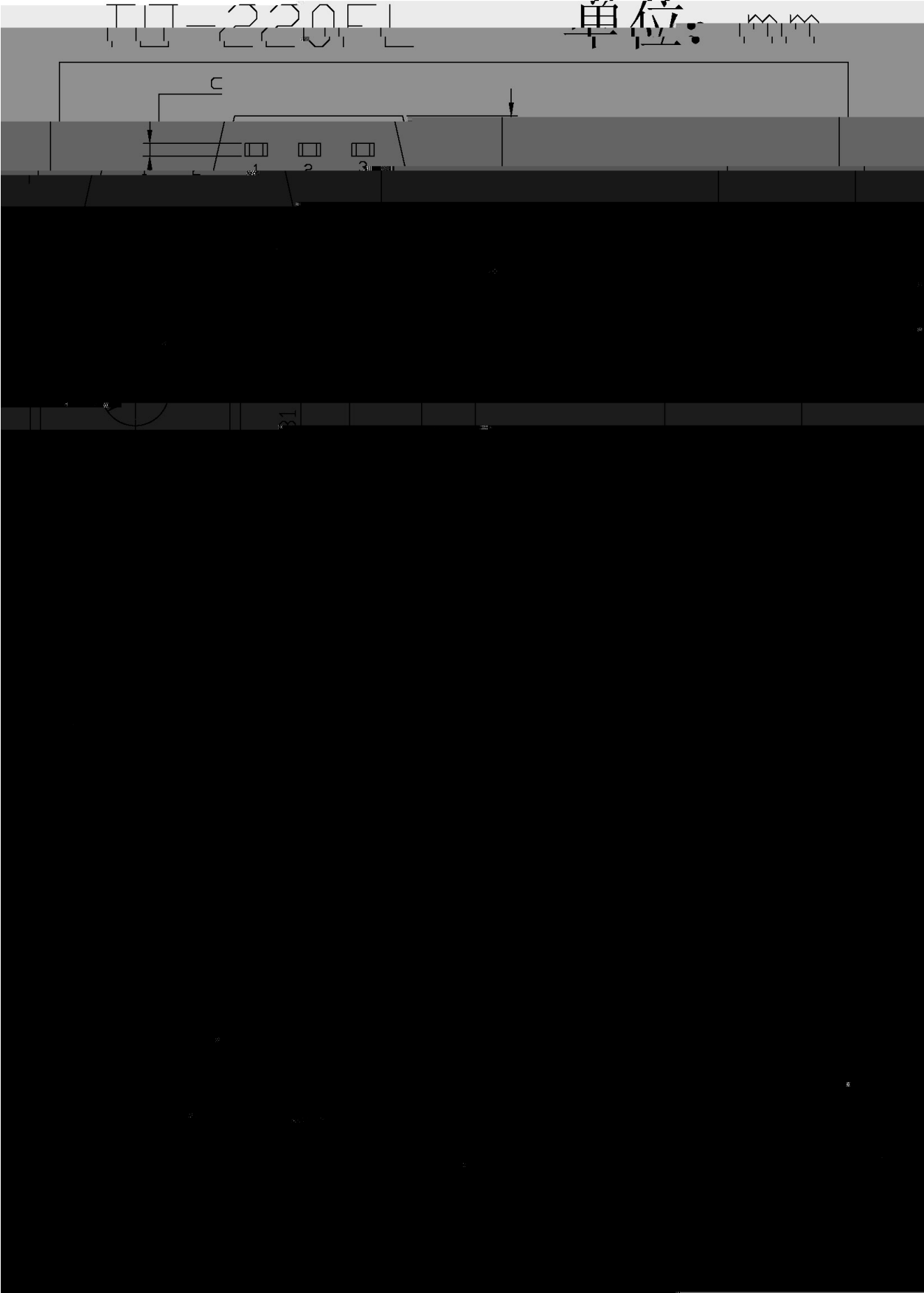
Electrical Characteristic Curve

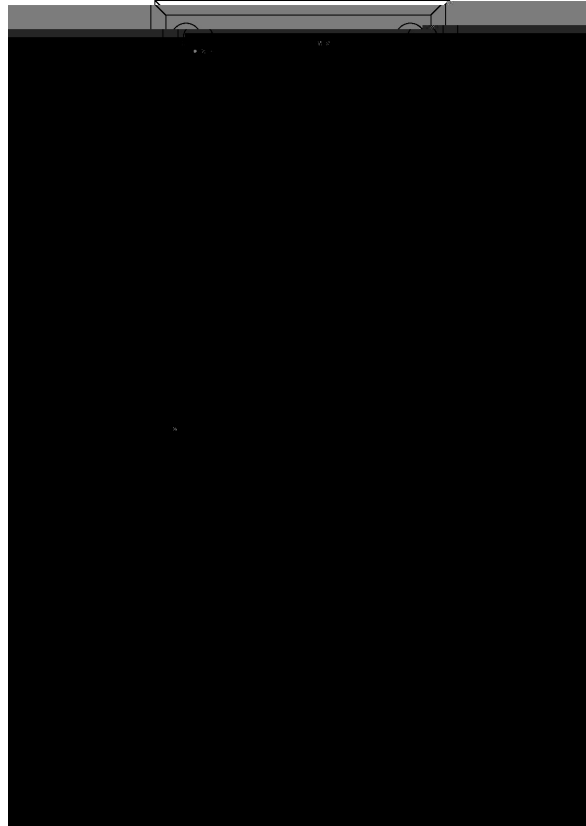


Electrical Characteristic Curve

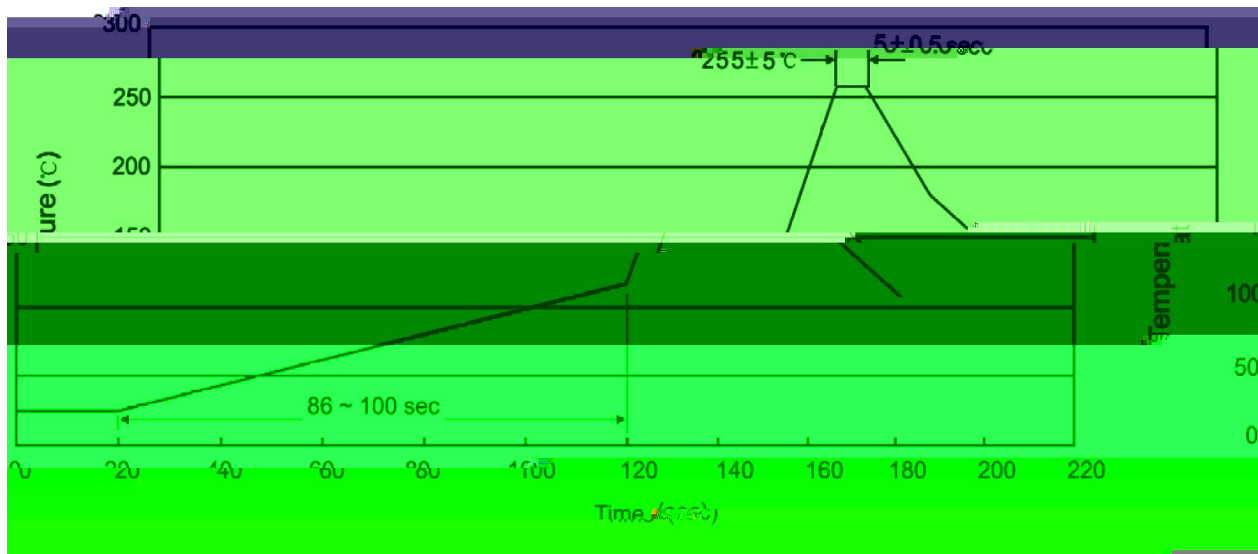


Ø □ =) Φ / Package Dimensions





G PD t ... • Ž Ć (x /) / Temperature Profile for Dip Soldering(Pb-Free)



a Ć y

1o• Ä ½ “ † 25 ½150 - k ž • 60 ½90sec;

2o• Q > “ † 255 r 5 - k ž • 4 Ò 5 r 0.5sec;

3o• D N ò i Ò 0 , † 2 ½10 - /sec.

Note:

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

2.Peak Temp.:255 r 5 - , Duration:5 r 0.5sec.

3. Cooling Speed: 2~10 - /sec.

ÂD /Că p ~ »] / Resistance to Soldering Heat Test Conditions

“ † y 270 r 5 -

ž • y 10 r 1 sec.

Temp.:270±5

Time:10±1 sec

G P á / Packaging SPEC.

ì ' x / TUBE

Package Type 7>û ~ E	Units ;>û ĤH					Dimension ;>û p . (unit /Ĥnm³)		
	Units/Tube /•1×	Tubes/Inner Box •1× /-	Units/Inner Box /-	Inner Boxes/Outer Box - /1Ć	Units/Outer Box /1Ć	Tube•1×	Inner Box	Outer Box
TO-220FL	50	20	1,000	5	5,000	532×33×7.0	555×164×50	575×290×180

„ Đ y f / Notices