TO-3P N MOS

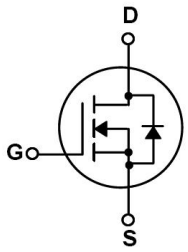
N-Channel MOSFET in a TO-3P Plastic Package.

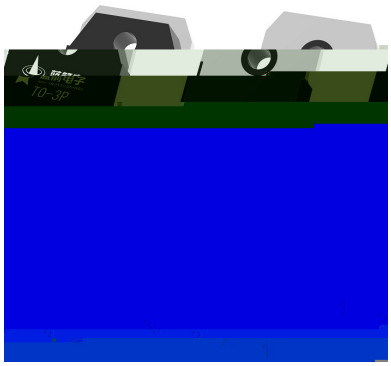
V_{DS}=500V I_D=24A

$R_{DS(ON)}$@10V≤0.25Ω(Typ. 0.17Ω)

$R_{DS(ON)}$@6V≤0.3Ω(Typ. 0.18mΩ)

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





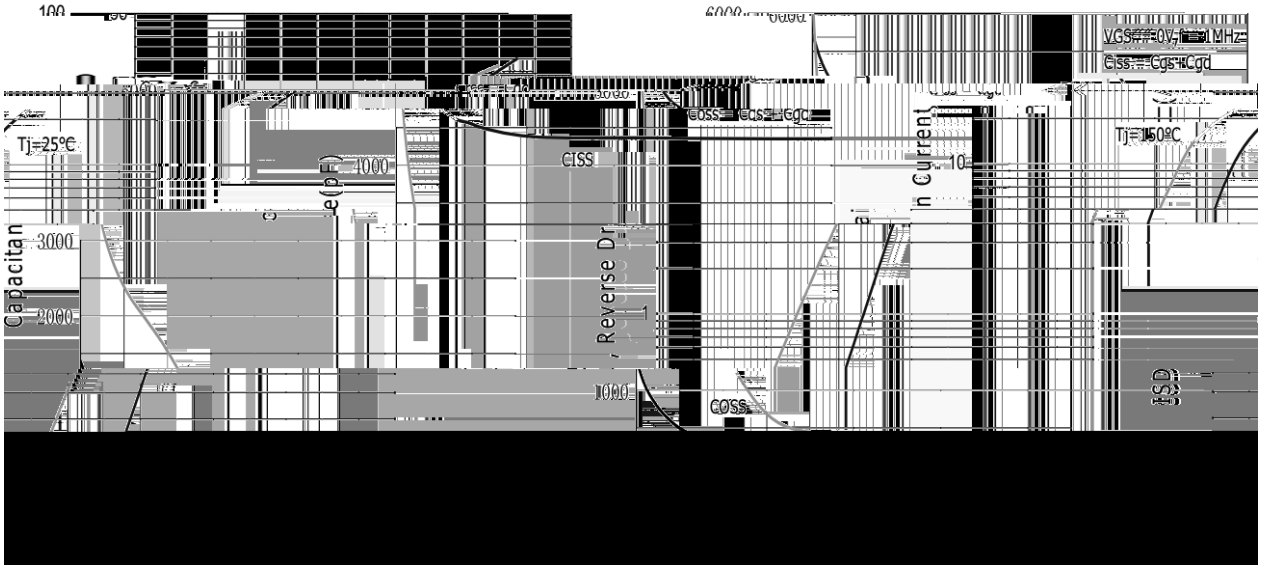
PIN1 G PIN 2 D PIN 3 S

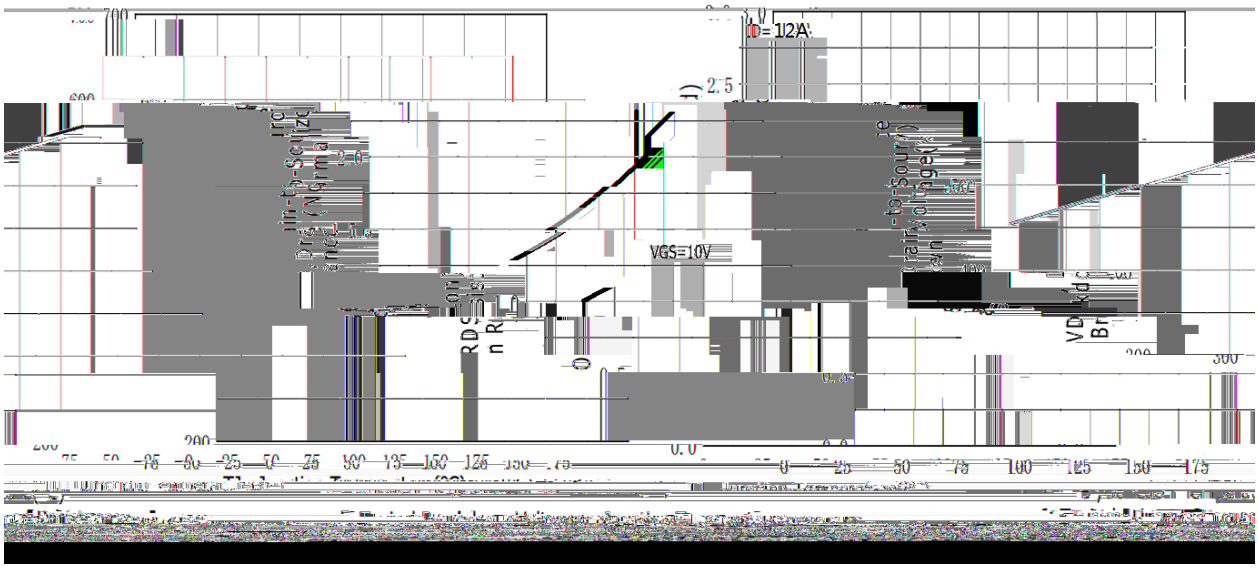
See Marking Instructions.

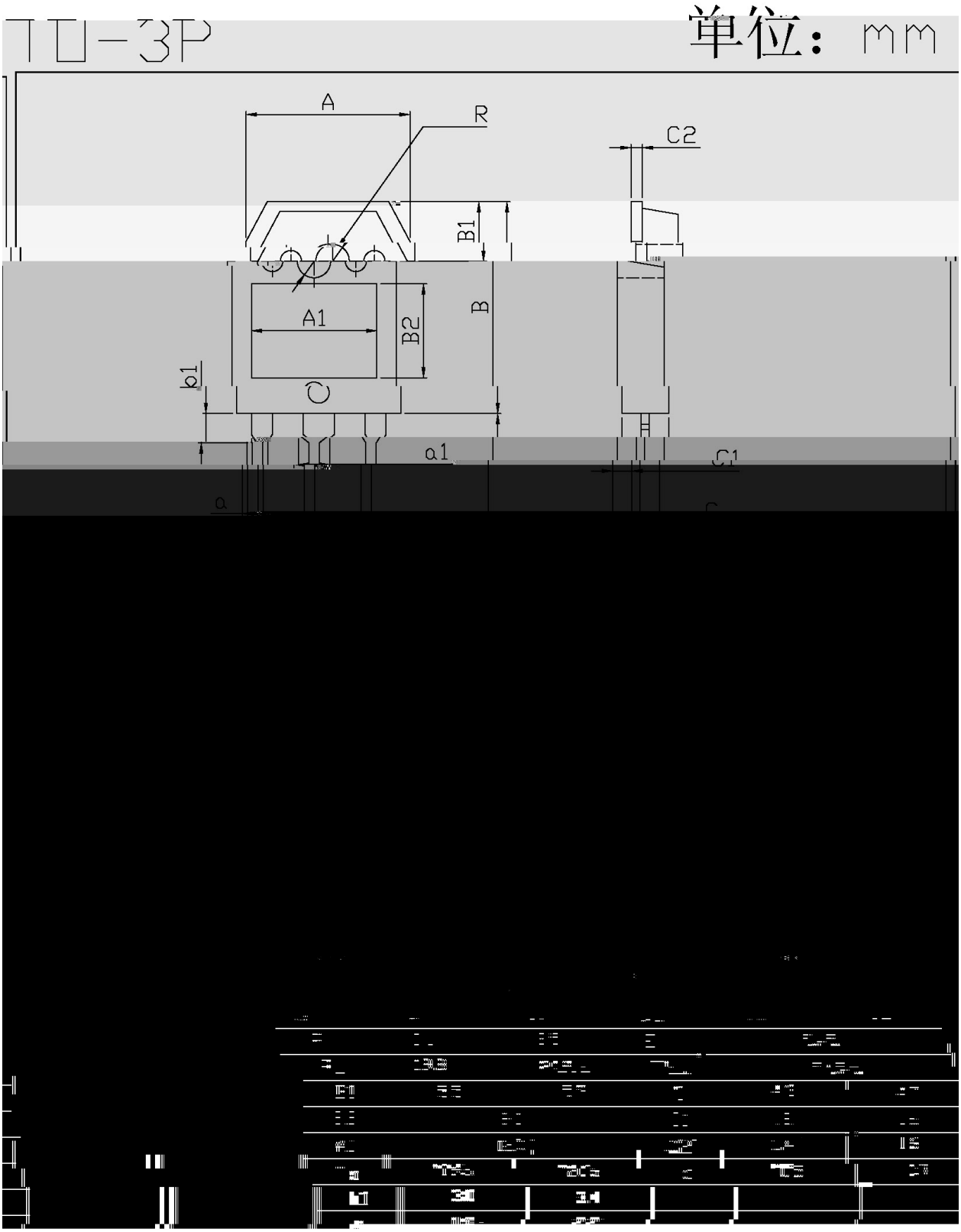
Parameter		Symbol	Rating	Unit
Drain-to-Source Breakdown Voltage		V_{DSS}	500	V
Continuous Drain Current		I_D(Tc=25)	24	A
Drain Current Pulsed		I_{DM}	90	A
Gate-to-Source Voltage		V_{GS}	±30	V
Avalanche Current		I_{AS}	21	A
Single Pulse Avalanche Energy		E_{AS}	1960	mJ
Power Dissipation		P_D(Tc=25)	270	W
Junction Temperature Range		T_j	150	
Storage Temperature Range		T_{stg}	-55 150	
Thermal Resistance Junction-Case		$R_{\theta JC}$	0.46	/W

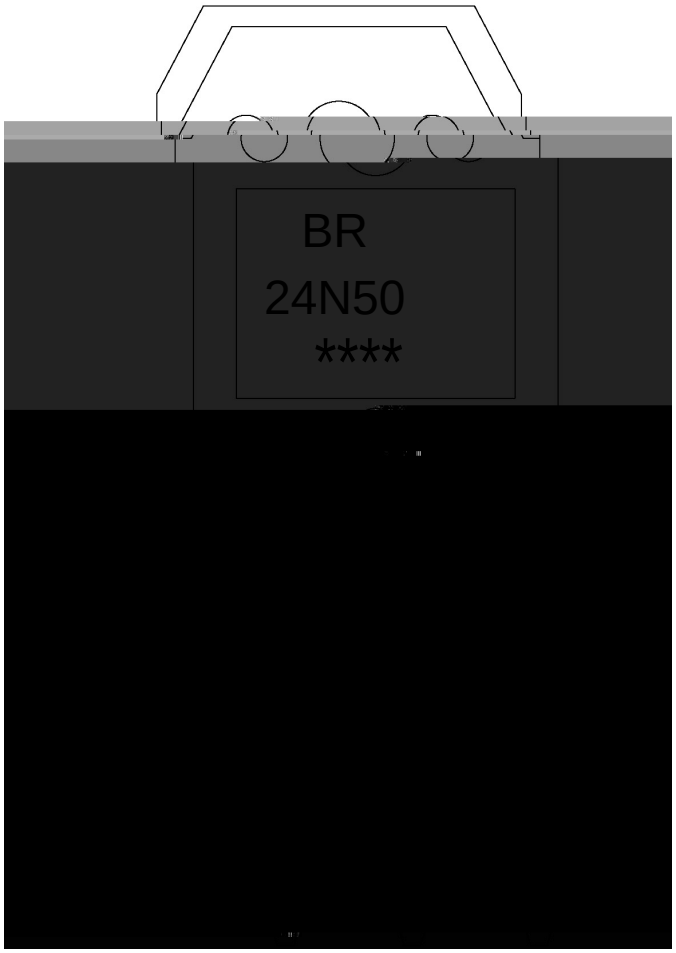
Parameter	Symbol	Test Conditions		Min	Typ	Max	Unit
Drain-to-Source Breakdown Voltage	V_{DSS}	V_{GS}=0V	I_D=250μA	500	550		V
Drain-to-Source Leakage Current	I_{DSS}	V_{DS}=500V	V_{GS}=0V			1.0	μA
Gate-to-Source Forward Leakage	I_{GSS}	V_{GS}=±30V	V_{DS}=0V			±100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS}	I_D=250μA	2.0		4.0	V
Static Drain-to-Source On-Resistance	$R_{DS(on)}$	V_{GS}=10V	I_D=12A		0.17	0.25	Ω
Static Drain-to-Source On-Resistance	$R_{DS(on)}$	V_{GS}=6V	I_D=6A		0.18	0.3	Ω
Diode Forward Voltage	V_{SD}	V_{GS}=0V	I_{SD}=24A			1.4	V
Input Capacitance	C_{iss}	V_{DS}=25V f=1.0MHz	V_{GS}=0V		4364		pF
Output Capacitance	C_{oss}				311		
Reverse Transfer Capacitance	C_{rss}				138		
Turn-On Delay Time	$t_{d(on)}$	V_{DD}=250V R_G=10Ω	I_D=24A		28.8		ns
Rise Time	t_r				5.6		
Turn-Off Delay Time	$t_{d(off)}$				106.4		
Fall Time	t_f				9.6		
Total Gate Charge	Q_g	V_{DS}=400V V_{GS}=10V	I_D=24A		214		nC
Gate-Source Charge	Q_{gs}				104		
Gate-Drain Charge	Q_{gd}						


Tj=25℃
VGS=10V


Tj=25℃
Capacitan
CISS
COSS
Reverse Dr
Tj=150℃
ISD)


ID=12A
VGS=10V


TO-3P
单位：mm
A
R
C2
B1
B
A1
B2
b1
a1
C1



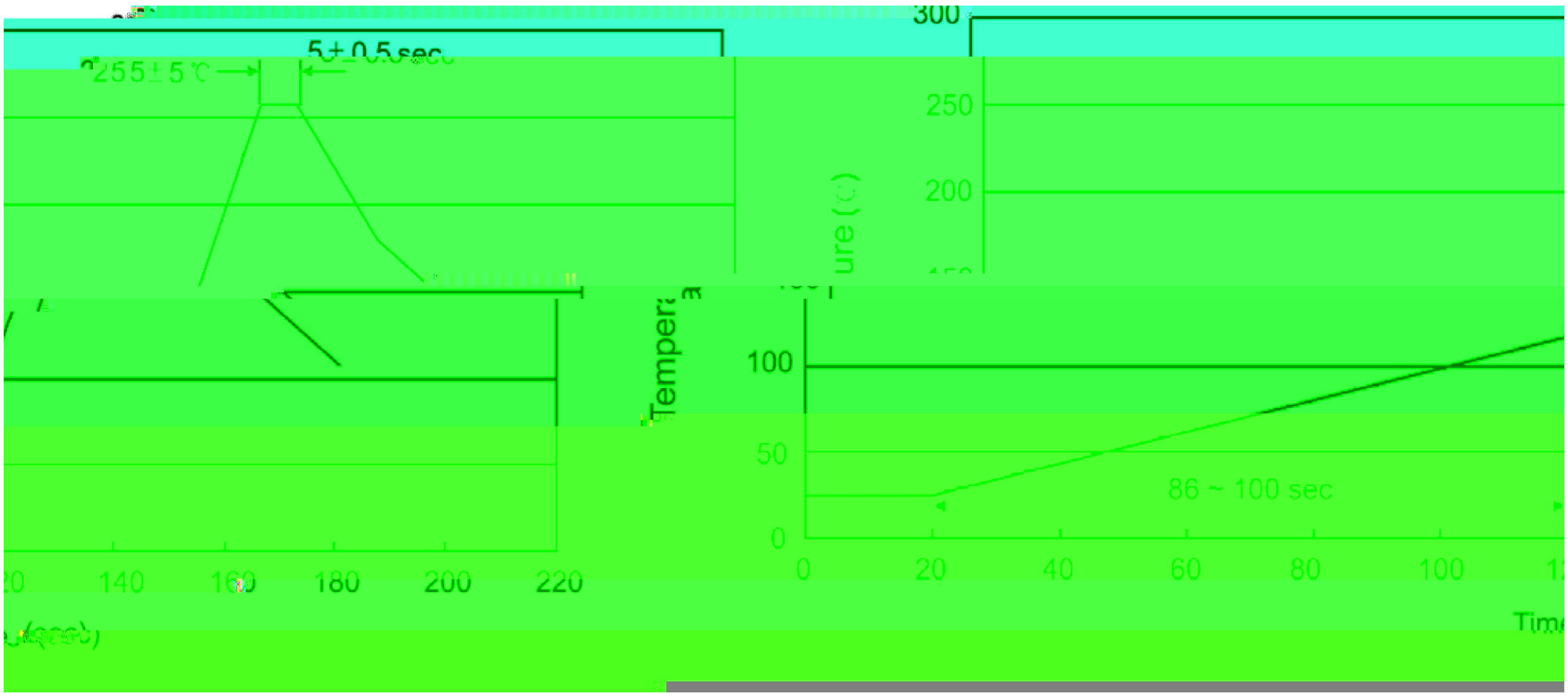
BR:

24N50

****

Note:

BR:	Company Code
24N50:	Product Type
****:	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 mm^3)		
	Units/Tube /	Tubes/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Tube	Inner Box	Outer Box

! ‘ B T R