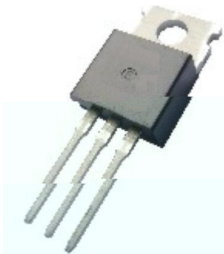
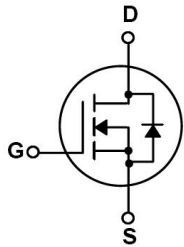


TO-220 N MOS N-CHANNEL MOSFET in a TO-220 Plastic Package.

Low thermal resistance, fast switching.

For Electronic transformer, Switch mode power supply.



PIN1 G PIN 2 D PIN 3 S

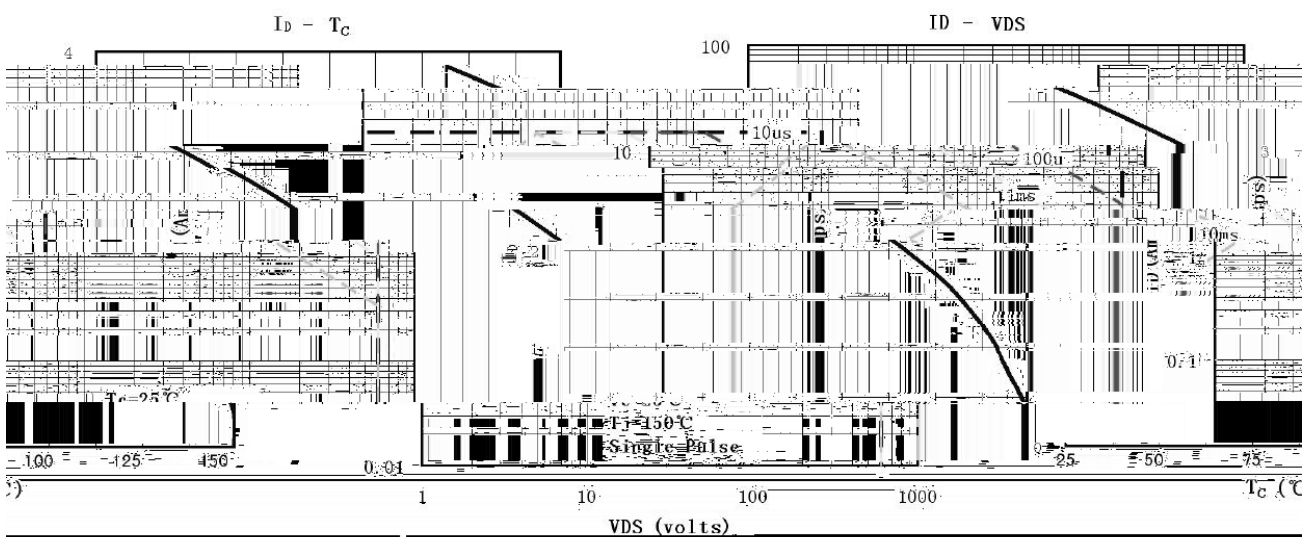
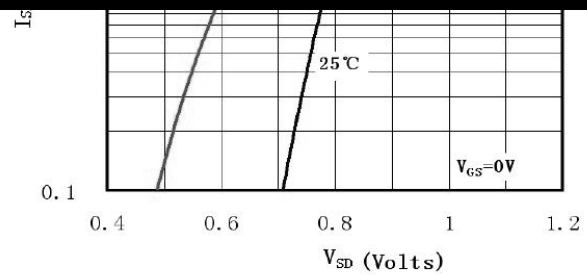
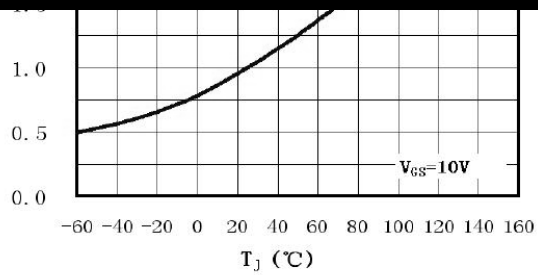
See Marking Instructions.

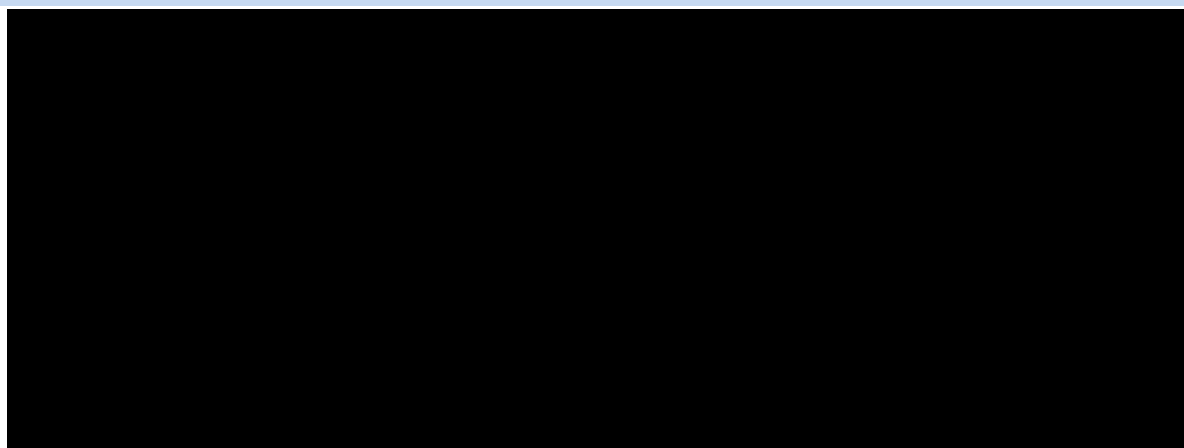
Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	700	V
Gate-Source Voltage	V_{GS}	± 30	V
Drain Current	$I_D(T_c=25^\circ\text{C})$	4.0	A
Drain Current	$I_D(T_c=100^\circ\text{C})$	2.5	A
Drain Current - Pulsed	$I_{DM}^{(1)}$	16	A
Single Pulsed Avalanche Energy	$E_{AS}^{(2)}$	260	mJ
Power Dissipation	P_{tot}	106	W
Junction Temperature Range	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55~150	$^\circ\text{C}$
Thermal Resistance Junction-case	R_{-JC}	1.18	$^\circ\text{C/W}$
Thermal Resistance Junction-ambient	R_{-JA}	62.5	$^\circ\text{C/W}$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V$ $I_D=250\text{ A}$	700			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=700V$ $V_{GS}=0V$ $T_j=25^\circ\text{C}$			1	A
		$V_{DS}=560V$ $V_{GS}=0V$ $T_j=125^\circ\text{C}$			10	A
Gate-Body Leakage Current, Forward	I_{GSS}	$V_{GS}=\pm 30V$			± 100	nA
Continuous Diode Forward Current	I_S				4.0	A
Drain-Source Diode Forward Voltage	V_{SD}	$I_S=4.0A$ $V_{GS}=0V^{(3)}$ $T_j=25^\circ\text{C}$			1.4	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V$ $I_D=2.0A^{(3)}$			2.8	
Gate Threshold Voltage	$V_{GS(TH)}$	$V_{GS}=V_{DS}$ $I_D=250\text{ A}$	2.0		4.0	V
Reverse Recovery Time	t_{rr}	$I_f=4.0A$ $T_j=25^\circ\text{C}$ $di/dt=100A/s^{(3)}$		250		nS
Reverse Recovery Charge	Q_{rr}			1.5		uC
Input Capacitance	C_{iss}	$V_{GS}=0V$ $V_{DS}=25V$ $V_F=1.0MHz$		520		pF
Turn-Off Delay Time	$t_{d(off)}$	$V_{DD}=350V$ $I_D=4.0A$ $R_G=25\text{ }^{(3)}$		25		ns
Forward Transconductance	g_{fs}	$V_{DS}=40V$ $I_D=2.0A^{(3)}$		4.0		S
Total Gate Charge	Q_g	$I_D=4.0A$ $V_{DS}=560V$ $V_{GS}=10V^{(3)}$		17.4		nC
Gate-to-Source Charge	Q_{gs}			4.8		nC
Gate-to-Drain Charge	Q_{gd}			5.4		nC

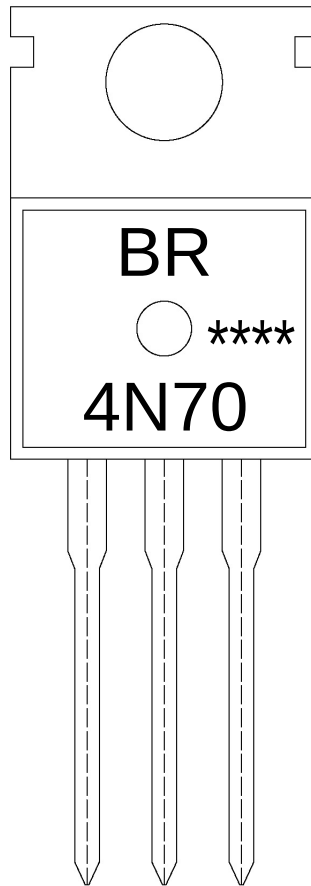
(Notes):

- ① : / Repetitive rating: Pulse width limited by maximum junction temperature
 ② : $=25^\circ\text{C}$, $V_{DD}=50V$, $L=30mH$, $R_G=25\Omega$, $I_{AS}=4.0A$ /Starting $T_j=25^\circ\text{C}$, $V_{DD}=50V$, $L=30mH$, $R_G=25\text{ }^{(3)}$, $I_{AS}=4.0A$
 ③ : $\leq 300\mu s$ ≤ 2 / Pulse Test: Pulse width 300 μs , Duty cycle 2%





Symbol		Dimensions In Millimeters		Symbol		Dimensions In Millimeters	
		Min	Max			Min	Max
	A	9.8	10.2		C	1.2	1.4
	R	3.56	3.64		B	6.3	6.7
	L	15.7	16.1		B1	9.0	9.4
	b	12.6	13.6		O1	2.2	2.6
	b1	9.6	10.6		a1	0.7	0.9
	A1	1.32	1.38		E	2.34	2.74
	Q2	1.25	1.45				



BR

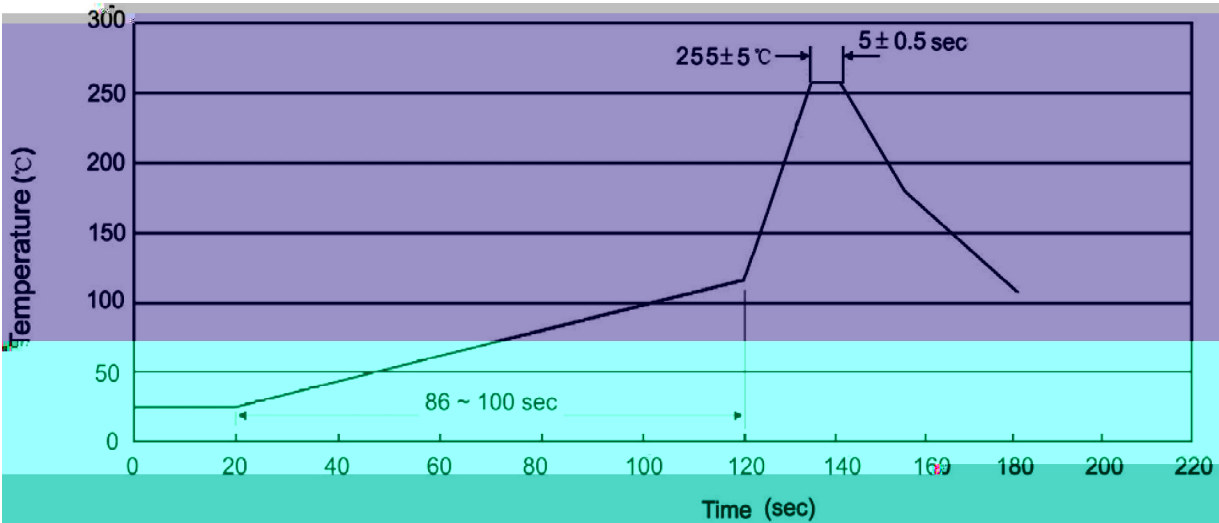
4N70

Note:

BR: Company Code

4N70: 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

/ BULK

Package Type	Units					Dimension (unit mm ³)		
	Units/Bag /	Bags/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Bag	Inner Box	Outer Box
TO-220/F	200	10	2,000	5	10,000	135×190	237×172×102	560×245×195

/ 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
TO-220/F	50	20	1,000	5	5,000	532×31.4×5.5	555×164×50	575×290×180