

Rev.A Jul.-2024

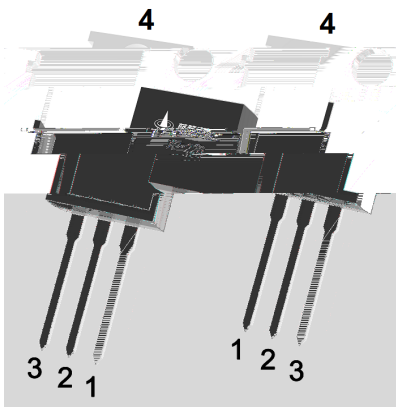
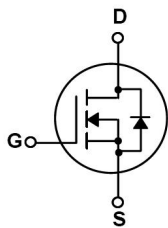
TO-220 N MOS

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

Low gate charge, low crss, fast switching, HF Product.

DC/DC

These devices are well suited for high efficiency switching DC/DC converters, and switch mode power supplies.



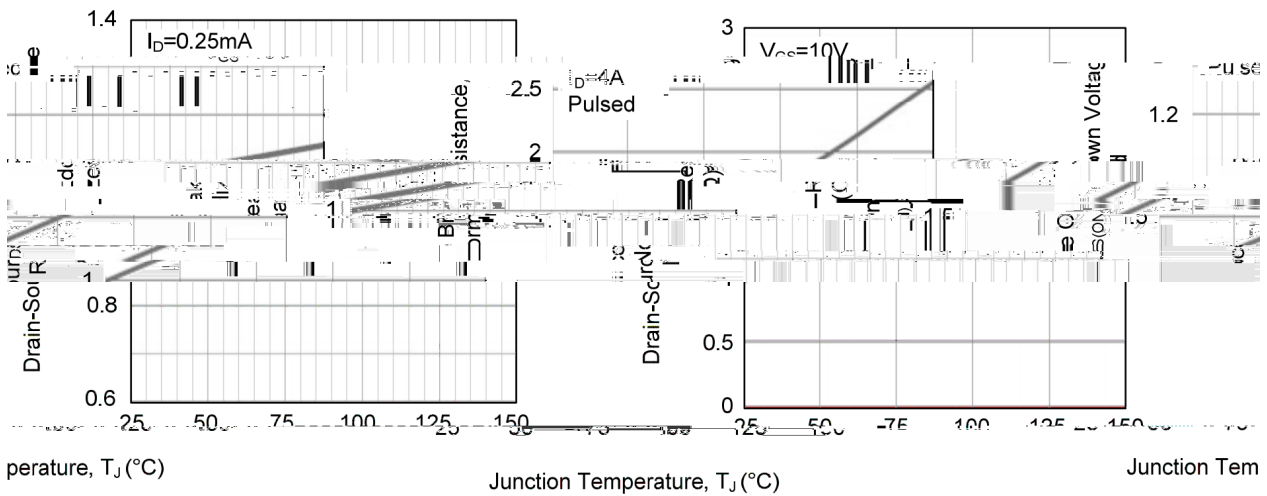
PIN1 G PIN 2 4 D PIN 3 S

See Marking Instructions.

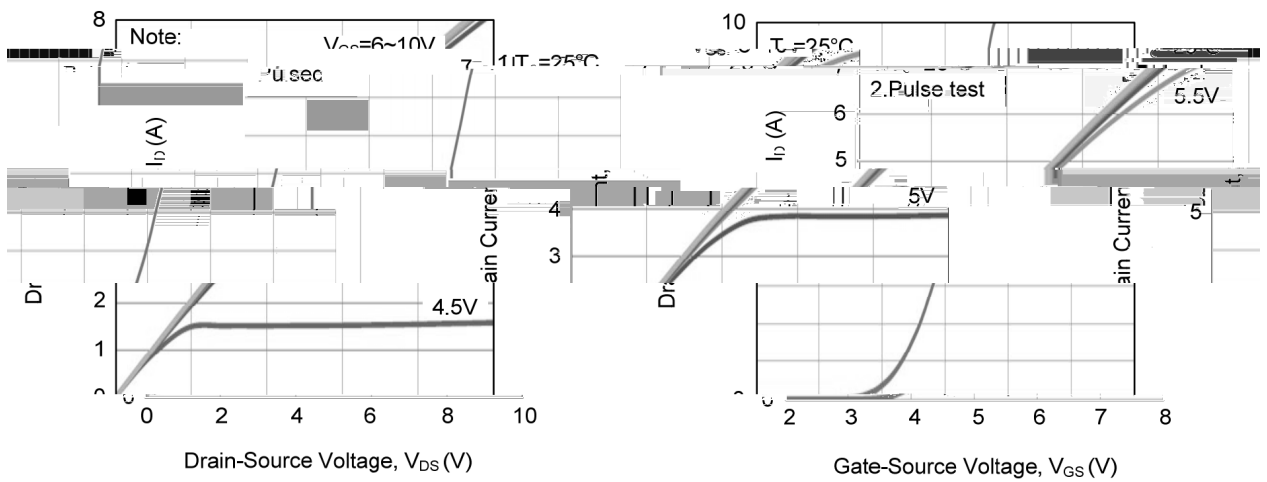
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Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	650	V
Drain Current	$I_D(T_c=25^\circ\text{C})$	8	A
Drain Current - Pulsed	I_{DM}	32	A
Gate-Source Voltage	V_{GS}	± 30	V
Single Pulsed Avalanche Energy	E_{AS}	597	mJ
Avalanche Current	I_{AR}	10.5	A
Power Dissipation	$P_D(T_c=25^\circ\text{C})$	110	W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to 150	
Thermal resistance, junction- case	$R_{\theta JC}$	1.14	/W

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DS}	$V_{GS}=0V$ $I_D=250\mu A$	650	700		V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=650V$ $V_{GS}=0V$			1.0	μA
Gate-Body Leakage Current, Forward	I_{GSS}	$V_{GS}=\pm 30V$ $V_{DS}=0V$			± 0.1	μA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=250\mu A$	2.0	2.7	4.0	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V$ $I_D=4.0A$		1.1	1.25	Ω
Drain-Source Diode Forward Voltage	V_{SD}	$V_{GS}=0V$ $I_S=8.0A$			1.4	V
Input Capacitance	C_{iss}	$V_{DS}=25V$ $V_{GS}=0V$ $f=1.0MHz$		1100		pF
Output Capacitance	C_{oss}			100		
Reverse Transfer Capacitance	C_{rss}			12		
Total Gate Charge	Q_G	$V_{DS}=480V$ $V_{GS}=10V$ $I_D=8.0A$ $I_G=1mA$		24.5		pF
Gate-Source Charge	Q_{GS}			5.8		pF
Gate-Drain Charge	Q_{GD}			6.5		pF
Turn-On Delay Time	$t_{d(on)}$	$V_{DD}=100V$ $V_{GS}=10V$ $I_D=8A$ $R_G=25\Omega$		11		ns
Turn-On Rise Time	t_r			20.5		
Turn-Off Delay Time	$t_{d(off)}$			80		
Turn-Off Fall Time	t_f			32.3		

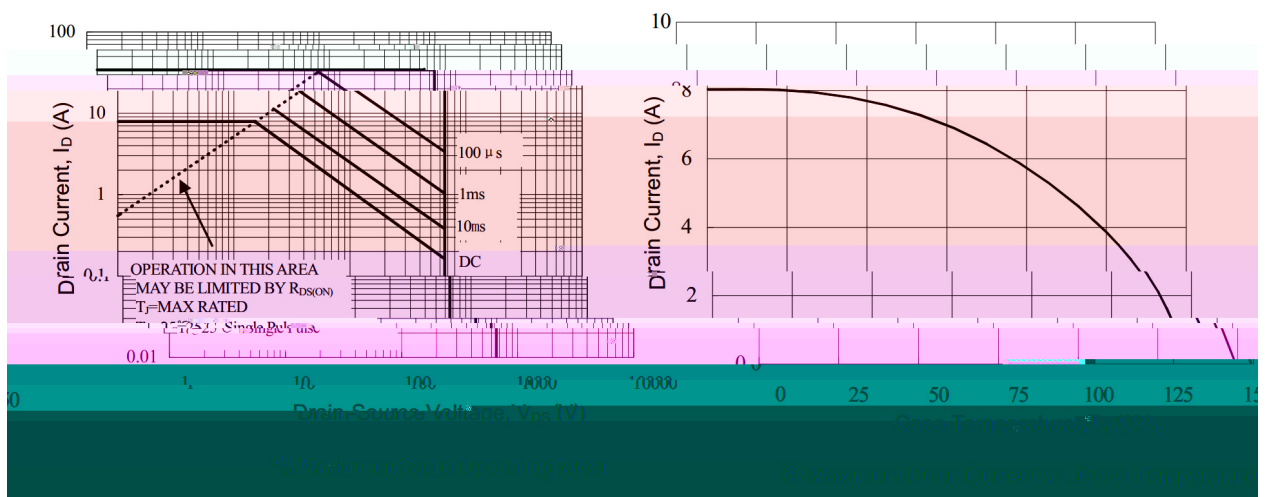


1. Drain-Source On-Resistance vs. Junction Temperature



3. Drain Current vs. Drain-Source Voltage

4. Drain Current vs. Gate-Source Voltage

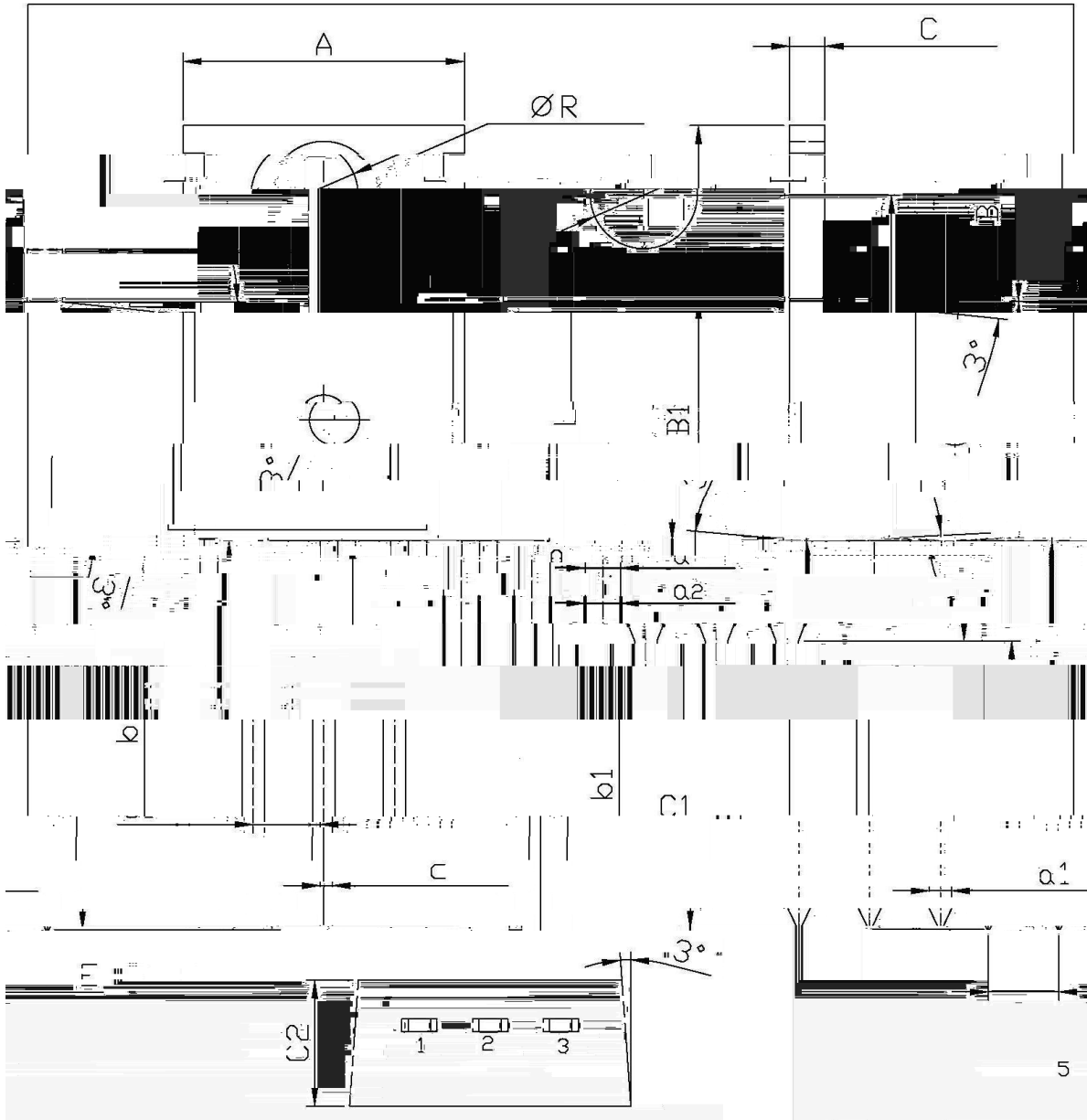


5. Maximum Drain Current vs. Drain-Source Voltage

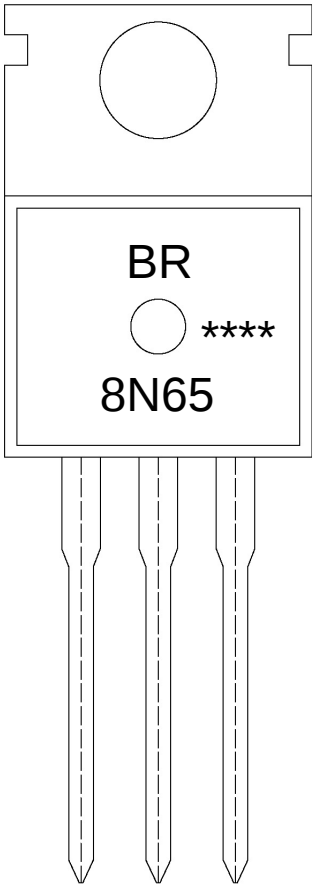
6. Maximum Drain Current vs. Case Temperature

TD-220

单位: mm



Dimensions In Millimeters			Dimensions In Millimeters		
Symbol	Min	Max	Symbol	Min	Max
A	9.8	10.2	B	3.64	3.68
B1	3.56	3.64	B2	12.6	13.6
C	15.7	16.1	C1	12.6	13.6
C2	12.6	13.6	C3	12.6	13.6



BR

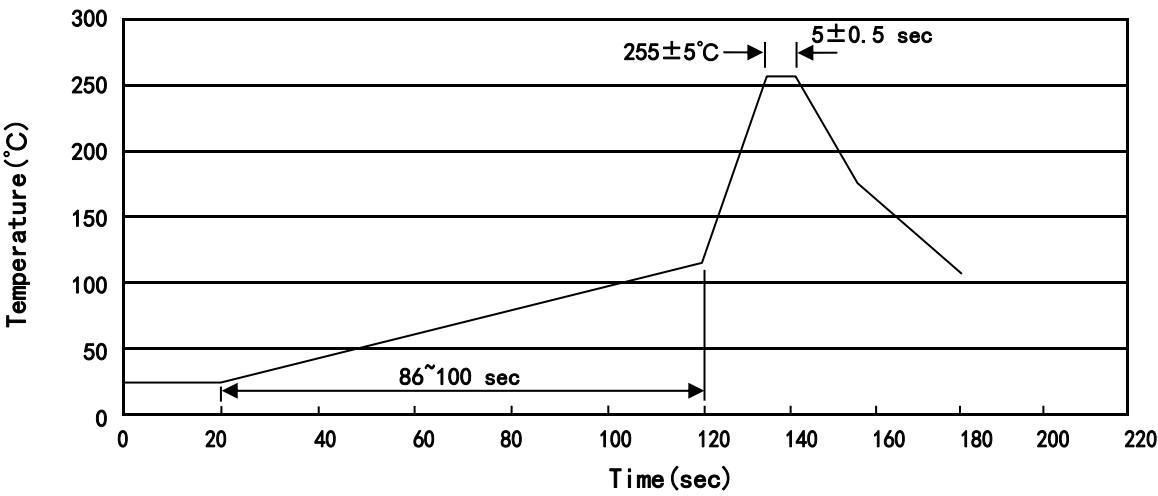
8N65

Note:

BR: Company Code

8N65: 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

/ BULK

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	只袋	袋盒	只盒	盒箱	只箱	袋	盒	箱
TO-220/F	200	10	2,000	5	10,000	135×190	237×172×102	560×245×195

/ TUBE

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	只套管	套管盒	只盒	盒箱	只箱	套管	盒	箱
TO-220/F	50	20	1,000	5	5,000	532×31.4×5.5	555×164×50	575×290×180