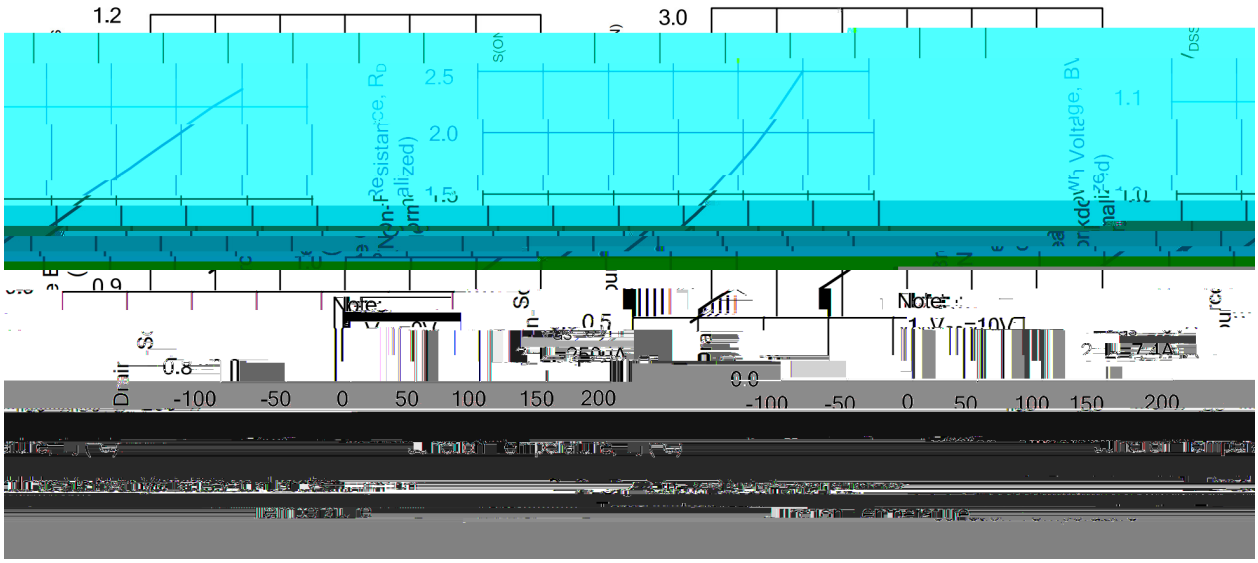
/ Absolute Maximum Ratings(Ta=25)

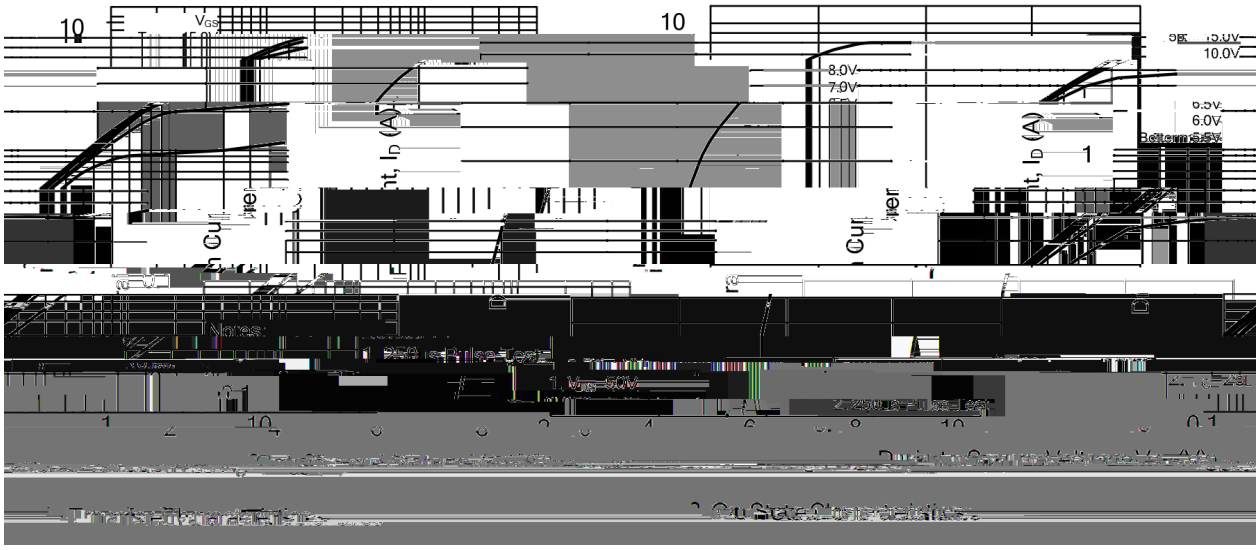
v ̈Ω Parameter	ϒ N Symbol	̈Ω Ö Rating	D Ч Unit
Drain-Source Voltage	V_{DSS}	650	V
Drain Current	I_D(Tc=25)	7.0	A
Drain Current	I_D(Tc=100)	4.4	A
Drain Current - Pulsed	I_{DM}	28	A
Gate-Source Voltage	V_{GSS}	±30	V
Single Pulsed Avalanche Energy	E_{AS}	425	mJ
Avalanche Current	I_{AR}	9.9	A
Power Dissipation	P_D(Tc=25)	100	W
Operating and Storage Temperature Range	T_j,T_{stg}	-55 to 150	
Junction to Ambient	$R_{\theta JA}$	110	/W
Junction to Case	$R_{\theta JC}$	1.25	/W

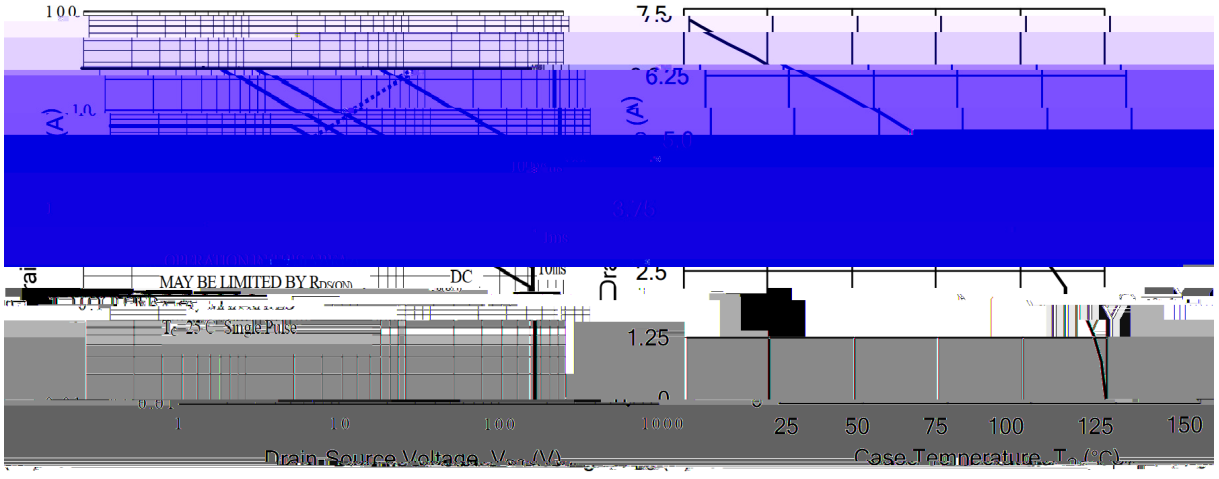
/ Electrical Characteristics(Ta=25)

v ̈Ω Parameter	ϒ N Symbol	╨ ;ᚴ Ţ Test Conditions	ѡ ṇ Ö Min	Ɛ ȝ Ö Typ	ѡ ᶻ Ö Max	D Ч Unit
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}=0V I_D=250μA	650	690		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}=±30V V_{DS}=0V			±100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS} I_D=250μA	2.0	3.2	4.0	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	V_{GS}=10V I_D=3.5A		1.1	1.5	Ω
Input Capacitance	C_{iss}	V_{DS}=25V V_{GS}=0V f=1.0MHz		1000		pF
Output Capacitance	C_{oss}			180		
Reverse Transfer Capacitance	C_{rss}			4		
Total Gate Charge	Q_G	V_{DS}= 520V, I_D= 7.0A, V_{GS}= 10V		30		nC
Gate-Source Charge	Q_{GS}			10		
Gate-Drain Charge	Q_{GD}			21		
Turn-On Delay Time	$t_{d(on)}$	V_{DD}=325V I_D=7.0A R_G=25Ω V_{GS}= 10V		52		ns
Turn-On Rise Time	t_r			160		
Turn-Off Delay Time	$t_{d(off)}$			400		
Turn-Off Fall Time	t_f			190		
Drain-Source Diode Forward Voltage	V_{SD}	V_{GS} = 0 V, I_S = 7.0A			1.4	V

/ Electrical Characteristic Curve

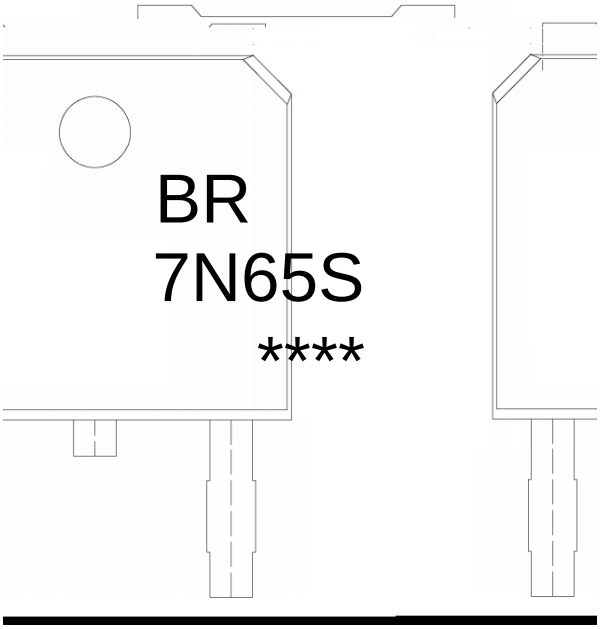






BRD7N65S
Rev.A Dec.-2023

/ Marking Instructions



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BR χ	ᵻᵿ ϛ ᴎ ᑎ
7N65S χ	ᵻᵿ ʒ ᴺ ᑎ
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Note:

BR:	Company Code
7N65S:	Product Type Code
****:	Lot No. Code, code change with Lot No

( ) / Temperature Profile for IR Reflow Soldering(Pb-Free)

ب ˝ χ

1 Ĺ ♬ □ ẙ 150 Ḱ 180 ɬ ı `H ژ 60 Ḱ 90sec;

2 Š Ө □ ẙ 245 ° 5 ɬ ı `H ژ 'Y ʌ ㎛ 5 ° 0.5sec;

3 ì ˙ ٢ ˛ ↄ ๑ ẙ ㎛ 2 Ḱ 10 ɬ /sec.

Note:

1.Preheating:150~180 ɬ , Time:60~90sec.

2.Peak Temp.:245 ° 5 ɬ , Duration:5 ° 0.5sec.

3. Cooling Speed: 2~10 ɬ /sec.

/ Resistance to Soldering Heat Test Conditions

605 ° 5 ɬ