

/ Descriptions

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

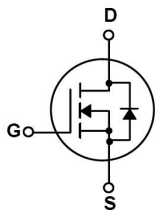
/ Features

Low gate charge, low crss, fast switching.

/ Applications

GF2GF

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



PIN1 G PIN 2 D PIN 3 S

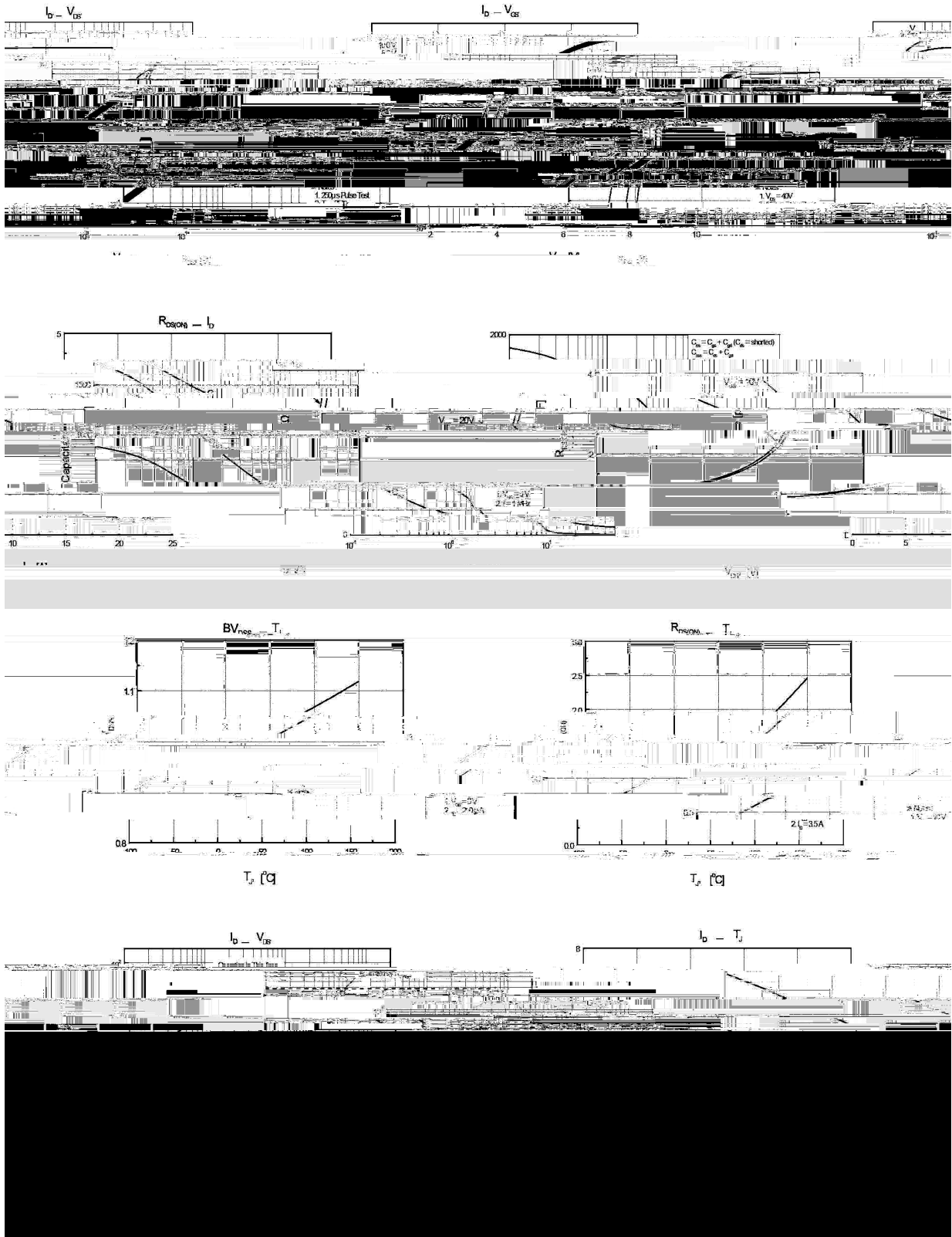
/ h_{FE} Classifications & Marking

See Marking Instructions.

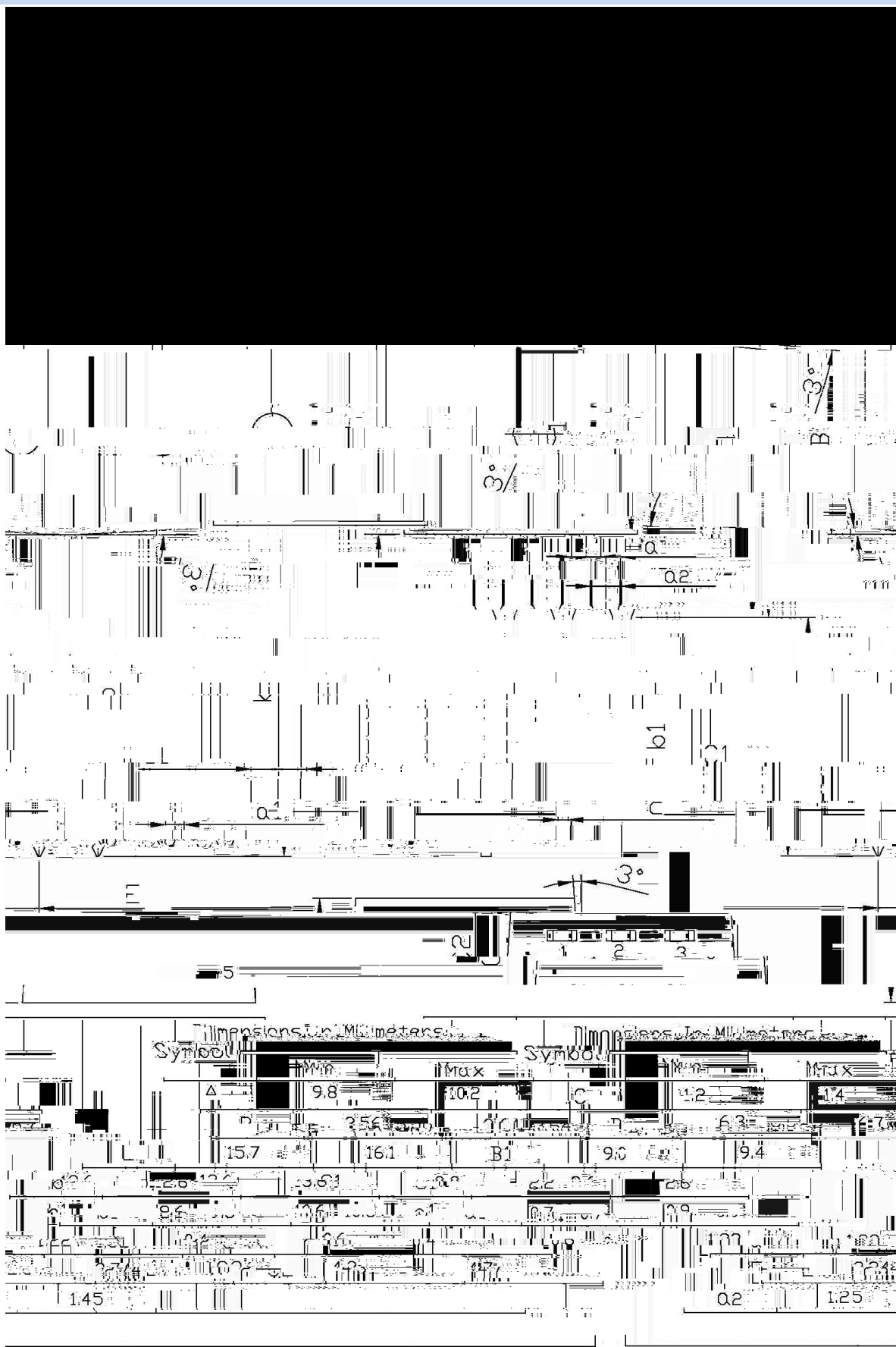
Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	650	V
Drain Current	$I_D(T_C=25^\circ\text{C})$	7.0	A
Drain Current	$I_D(T_C=100^\circ\text{C})$	4.4	A
Drain Current - Pulsed	I_{DM}	28	A
Gate-Source Voltage	V_{GS}	± 30	V
Single Pulsed Avalanche Energy	E_{AS}	420	mJ
Repetitive Avalanche Energy	E_{AR}	14.7	mJ
Avalanche Current	I_{AR}	7.0	A
Power Dissipation	$P_D(T_C=25^\circ\text{C})$	147	W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to 150	

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DS}	$V_{GS}=0V$ $I_D=250\mu A$	650			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=650V$ $V_{GS}=0V$			1.0	μA
		$V_{DS}=520V$ $T_C=125^\circ\text{C}$			100	μA
Gate-Body Leakage Current, Forward	I_{GSS}	$V_{GS}=\pm 30V$ $V_{DS}=0V$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=250\mu A$	2.0		4.0	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V$ $I_D=3.5A$			1.3	Ω
Forward Transconductance	g_{FS}	$V_{DS}=40V$ $I_D=3.5A$		8.2		S
Drain-Source Diode Forward Voltage	V_{SD}	$V_{GS}=0V$ $I_S=7.0A$			1.4	V
Input Capacitance	C_{iss}	$V_{DS}=25V$ $V_{GS}=0V$ $f=1.0MHz$		1100	1500	pF
Output Capacitance	C_{oss}			110	150	pF

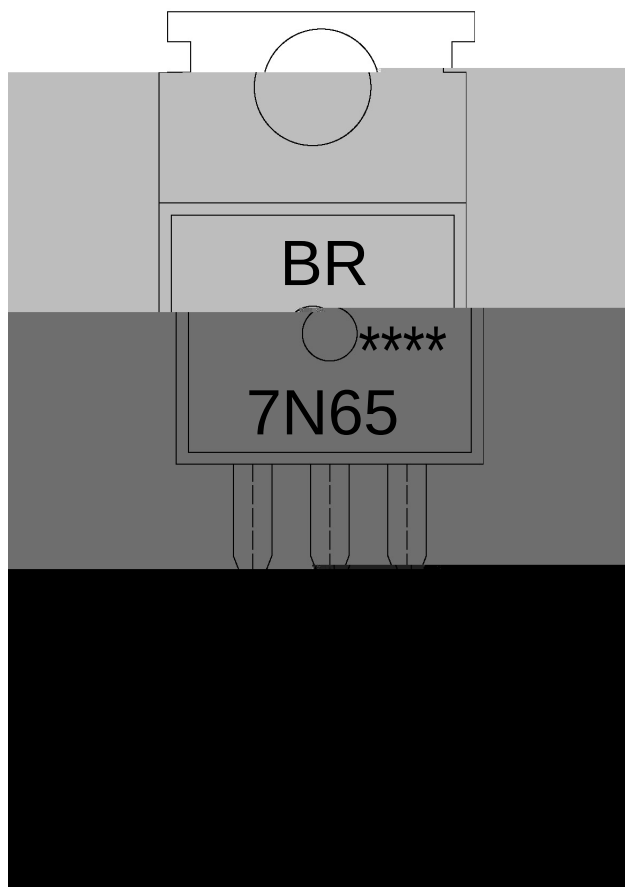
/ Electrical Characteristic Curve



/ Package Dimensions



/ Marking Instructions



BR

: Q98

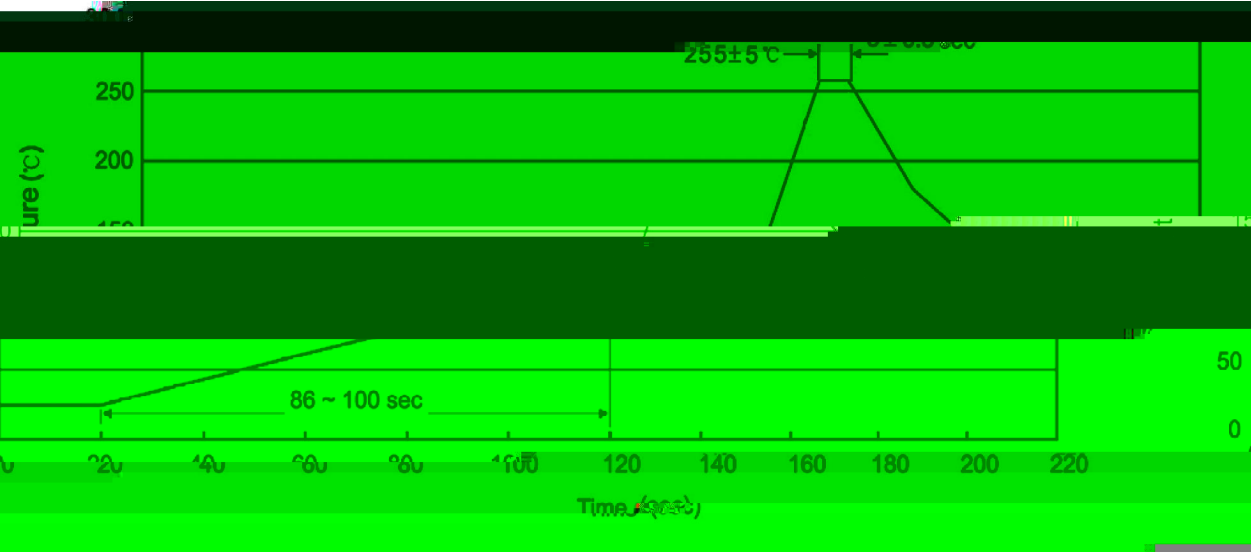
Note:

BR: Company Code

7N65: Product Type.

****: Lot No. Code, code change with Lot No.

() / Temperature Profile for Dip Soldering(Pb-Free)



Note:

1 25 150%