

/ Descriptions

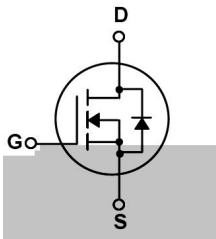
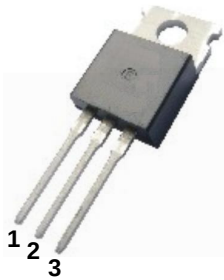
TO-220 N MOS N-CHANNEL MOSFET in a TO-220 Plastic Package.

/ Features

Low gate charge, Low Crss , Fast switching.

/ Applications

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

/ Equivalent Circuit**/ Pinning**

PIN1 G PIN 2 D PIN 3 S

/ h_{FE} Classifications & Marking

See Marking Instructions.

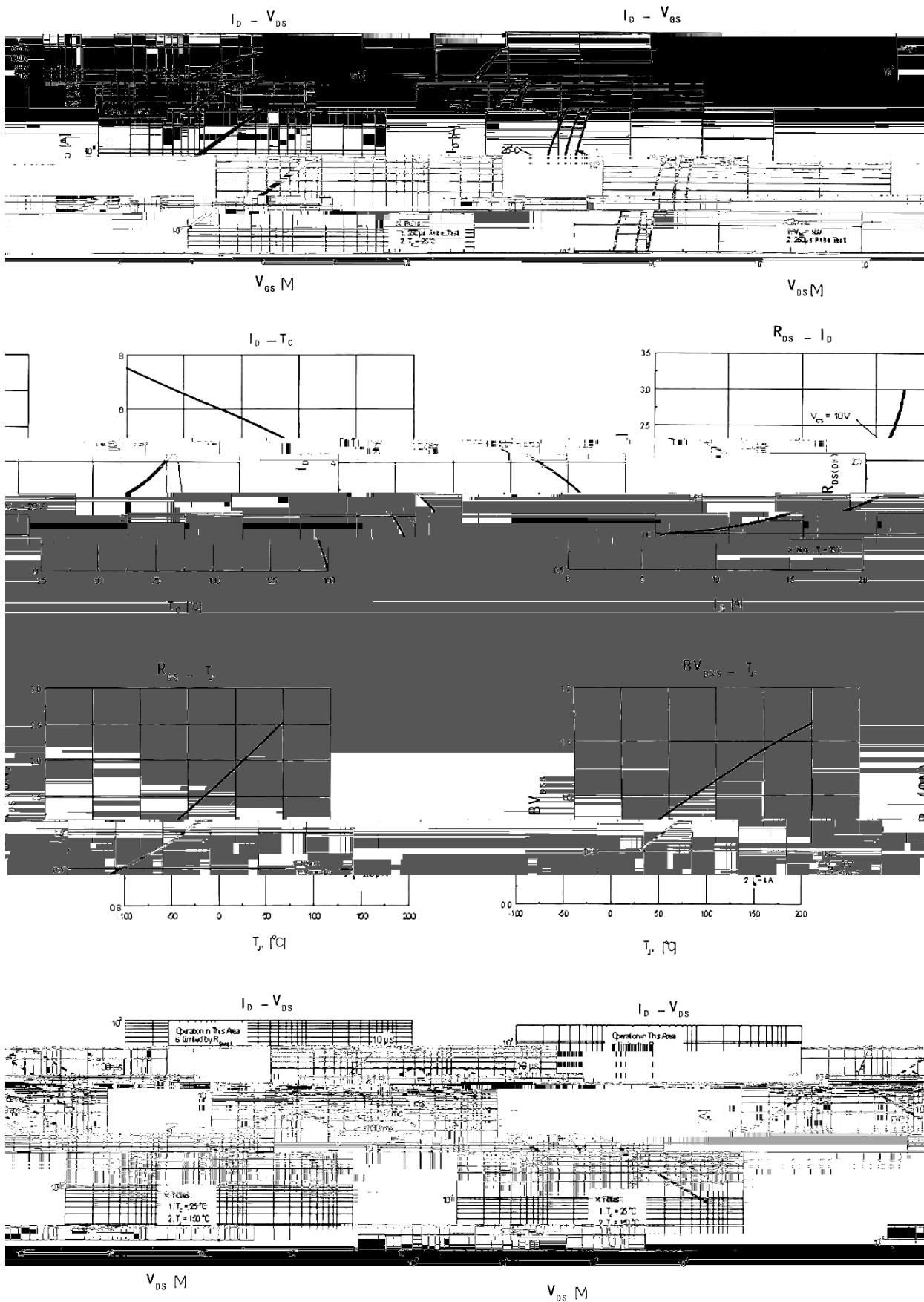
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DSS}	600	V
Drain Current	$I_D(T_C=25^{\circ}C)$	8	A
Drain Current	$I_D(T_C=100^{\circ}C)$	4.6	A
Drain Current - Pulsed	I_{DM}	30	A
Gate-Source Voltage	V_{GSS}	± 30	V
Single Pulsed Avalanche Energy	E_{AS}	230	mJ
Repetitive Avalanche Energy	E_{AR}	10	mJ
Avalanche Current	I_{AR}	7.5	A
Power Dissipation	$P_D(T_C=25^{\circ}C)$	147	W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to 150	

/ Electrical Characteristics(Ta=25)

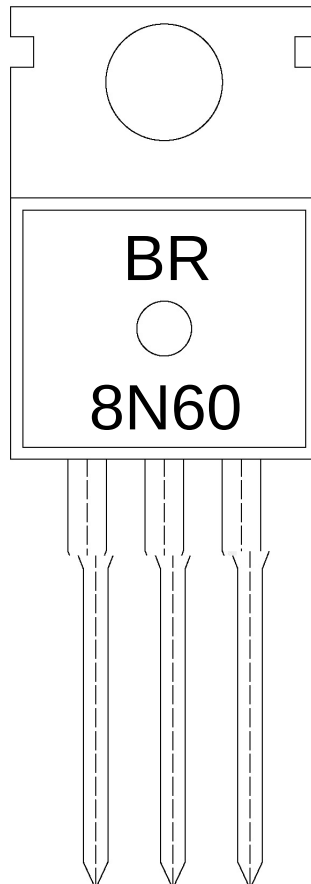
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V$ $I_D=250\mu A$	600			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=600V$ $V_{GS}=0V$			1.0	μA
		$V_{DS}=480V$ $T_C=125^{\circ}C$			10	μA
Gate-Body Leakage Current, Forward	I_{GSS}	$V_{GS}=\pm 30V$ $V_{DS}=0V$			± 0.1	μA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=250\mu A$	2.0		4.0	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V$ $I_D=3.75A$		1.0	1.2	Ω
Forward Transconductance	g_{FS}	$V_{DS}=40V$ $I_D=3.75A$		8.7		S
Drain-Source Diode Forward Voltage	V_{SD}	$V_{GS}=0V$ $I_S=7.5A$			1.4	V
Input Capacitance	C_{iss}	$V_{DS}=25V$ $V_{GS}=0V$ $f=1.0MHz$		965	1255	pF
Output Capacitance	C_{oss}			105	135	pF
Reverse Transfer Capacitance	C_{rss}			12	16	pF
Turn-On Delay Time	$t_{d(on)}$	$V_{DD}=300V$ $I_D=7.5A$ $=25\Omega$				
Turn-On Rise Time	t_r			60.5	130	ns
Turn-Off Delay Time	$t_{d(off)}$			81	170	ns
Turn-Off Fall Time	t_f			64.5	140	ns

/ Electrical Characteristic Curve



BR8N60
Rev. F Jul.-2018

/ Marking Instructions



BR

Note:

BR: Company Code

8N60: Product Type.

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

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



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. |

/ Resistance to Soldering Heat Test Conditions

270 5 10 1 sec. Temp.:270±5 Time:10±1 sec

/ Packaging SPEC.

/ 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

/ 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

/ Notices