

/ Descriptions

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

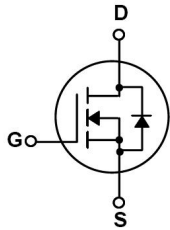
/ Features

Low gate charge, Low Crss , Fast switching.

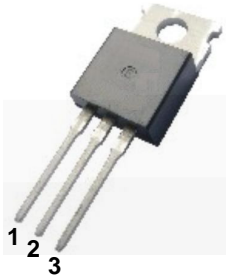
/ Applications

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

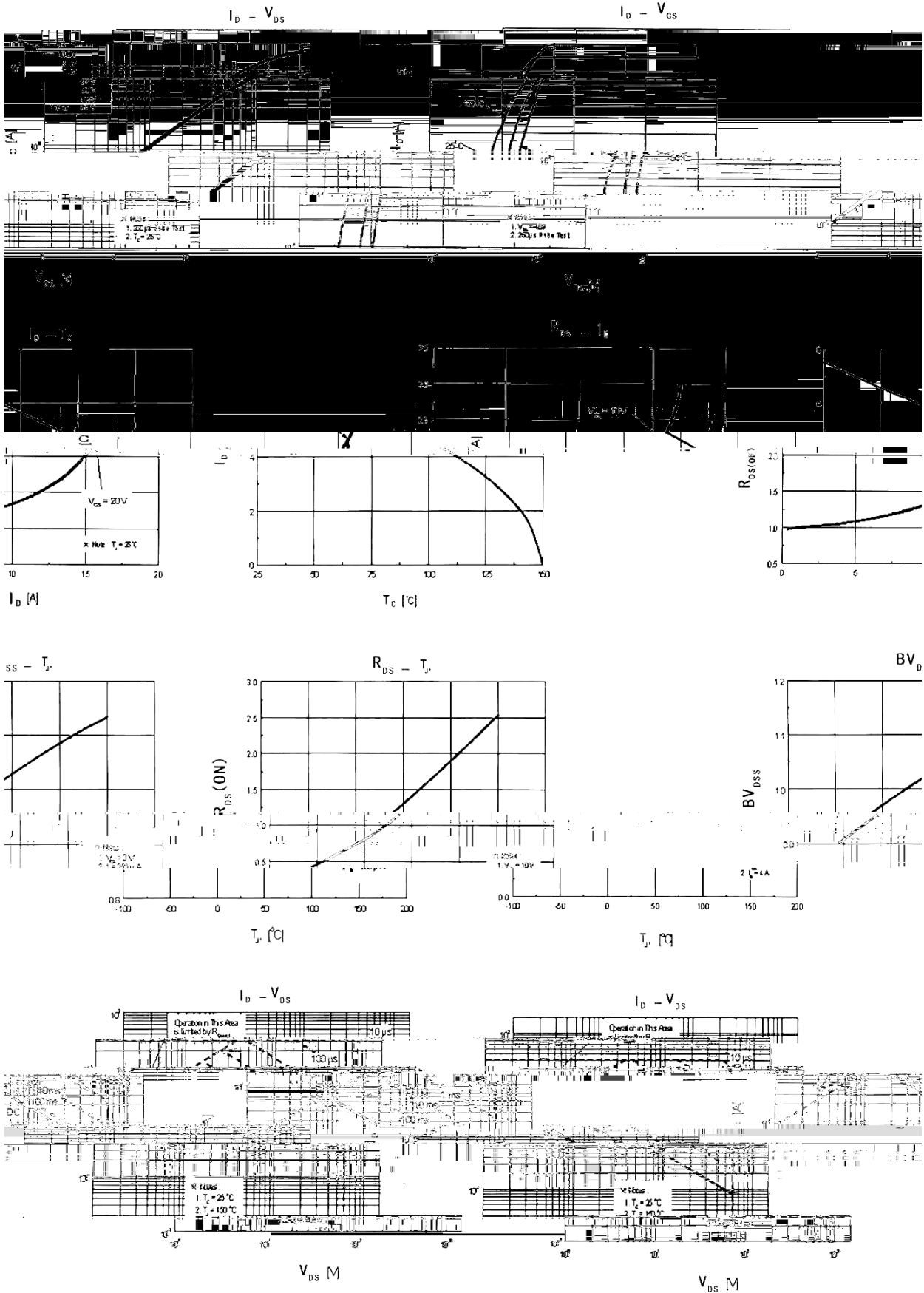
/ h_{FE} Classifications & Marking

See Marking Instructions.

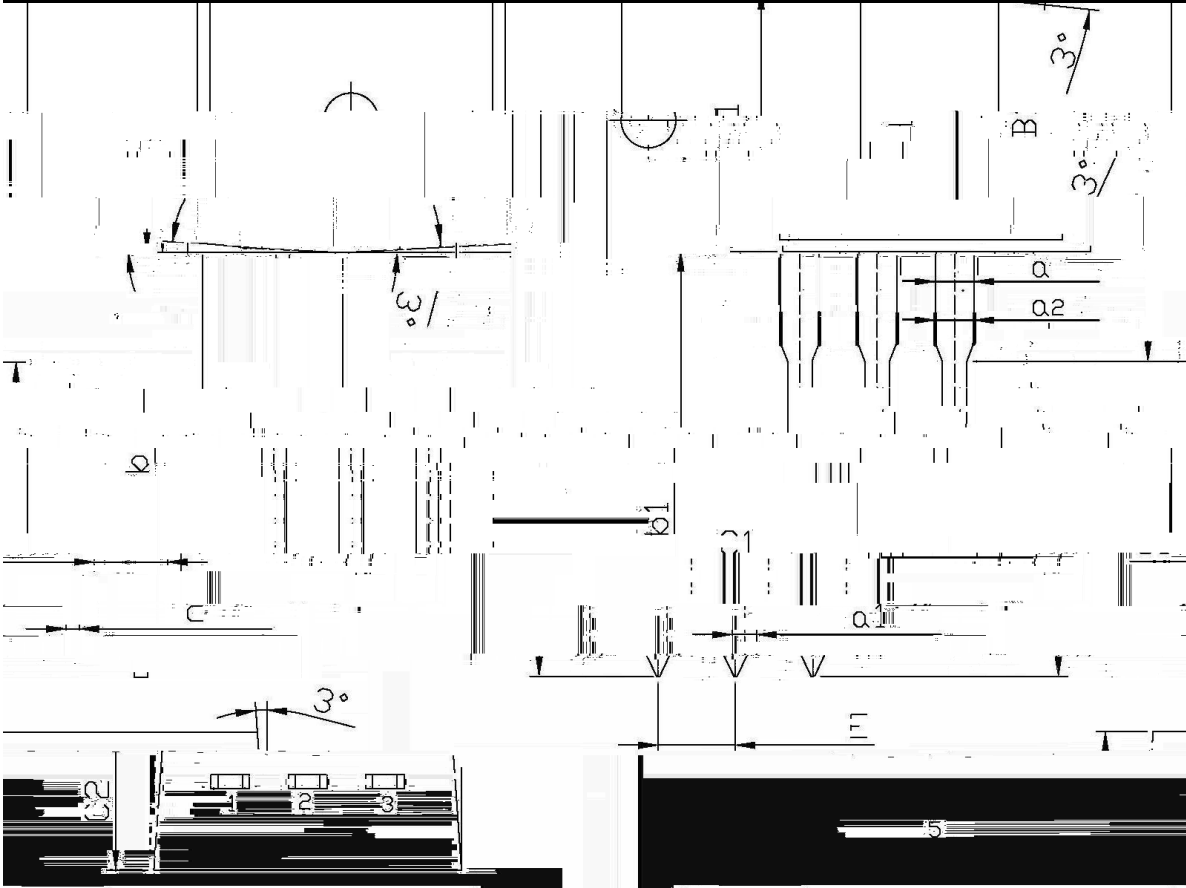
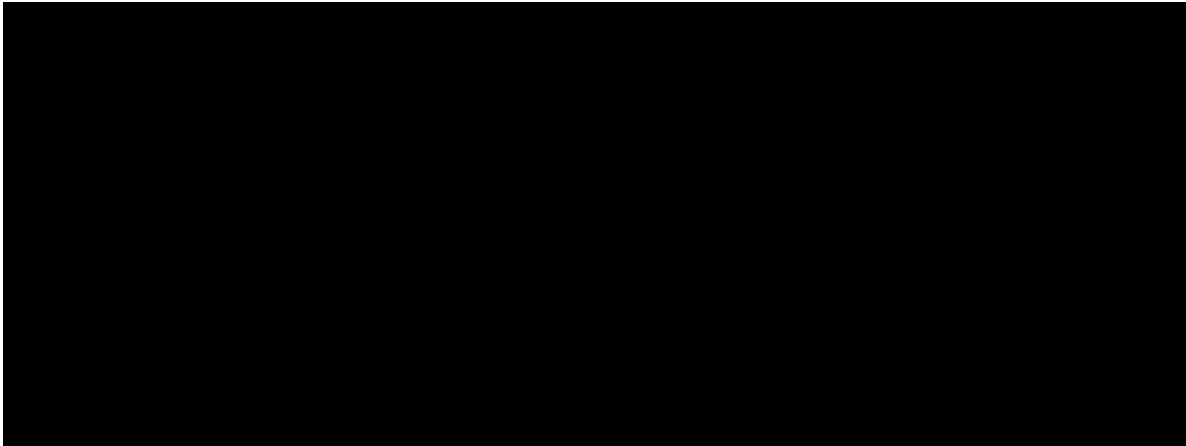
Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DSS}	600	V
Drain Current	$I_D(T_C=25^\circ C)$	8	A
Drain Current	$I_D(T_C=100^\circ C)$	4.6	A
Drain Current - Pulsed	I_{DM}	30	A
Gate-Source Voltage	V_{GSS}	± 30	V
Single Pulsed Avalanche Energy	E_{AS}	230	mJ
Repetitive Avalanche Energy	E_{AR}	10	mJ
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	

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V$ $I_D=250$ A	600			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=600V$ $V_{GS}=0V$			1.0	A
		$V_{DS}=480V$ $T_C=125^\circ C$			10	A
Gate-Body Leakage Current, Forward	I_{GSS}	$V_{GS}=\pm 30V$ $V_{DS}=0V$			± 0.1	A
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=250$ 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	
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	$t_{d(on)}$	$V_{DD}=300V$ $I_D=7.5A$				

/ Electrical Characteristic Curve

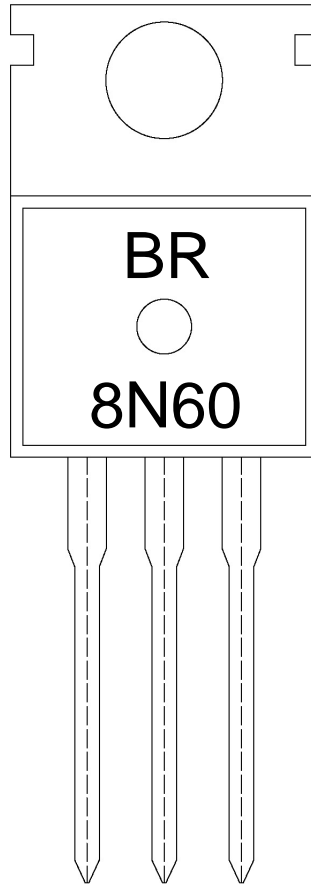


/ Package Dimensions



Symbol		Dimensions in Millimeters		Symbol		Dimensions in Millimeters	
	Min	Max		Min	Max		Max
Δ	9.8	10.2	C	1.2	1.4		
	2.5	3.0	3.54	1.3	1.6		
	9.4	15.7	B	10.7	9.0		
	2.6	12.6	01	2.2			
	0.9	9.6	b1	0.7			
	0.5	1.3		1.3			
	1.0	1.7		2.3	2.7		
				0.2	1.25	1.45	

/ Marking Instructions



BR

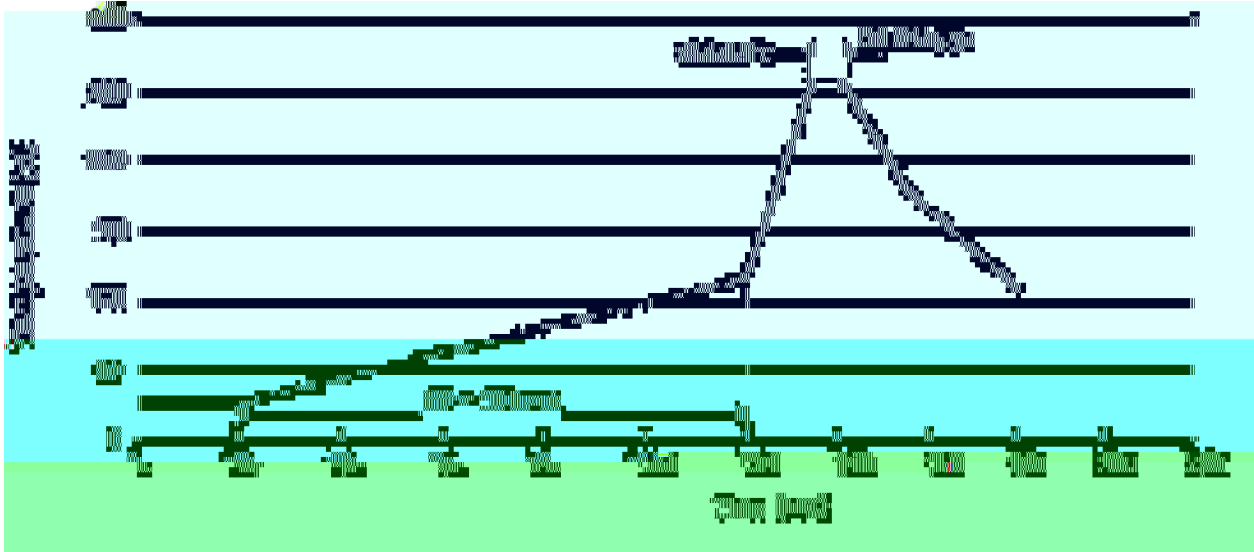
Note:

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