

/ Descriptions

TO-252 N MOS N-CHANNEL MOSFET in a TO-252 Plastic Package.

/ Features

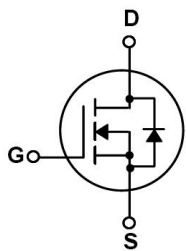
Low gate charge, low crss, fast switching.

/ Applications

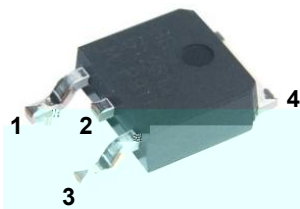
DC/DC

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 PIN 4 D

/ h_{FE} Classifications & Marking

See Marking Instructions.

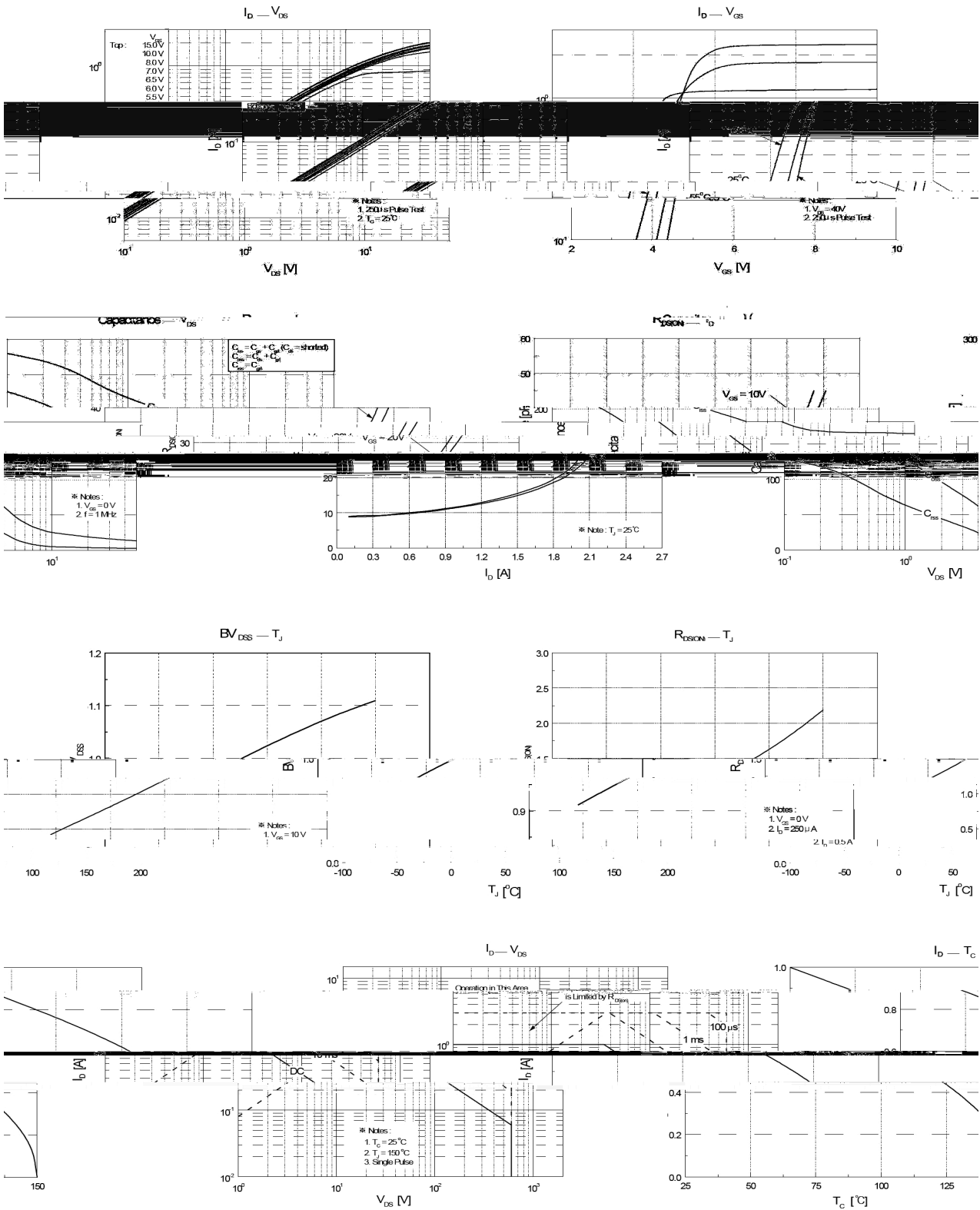
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DSS}	600	V
Drain Current	$I_D(T_C=25)$	1.0	A
Drain Current	$I_D(T_C=100)$	0.6	A
Drain Current - Pulsed	I_{DM}	3.0	A
Gate-Source Voltage	V_{GSS}	± 30	V
Single Pulsed Avalanche Energy	E_{AS}	50	mJ
Repetitive Avalanche Energy	E_{AR}	2.8	mJ
Avalanche Current	I_{AR}	1.0	A
Power Dissipation	$P_D(T_C=25)$	30	W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to 150	

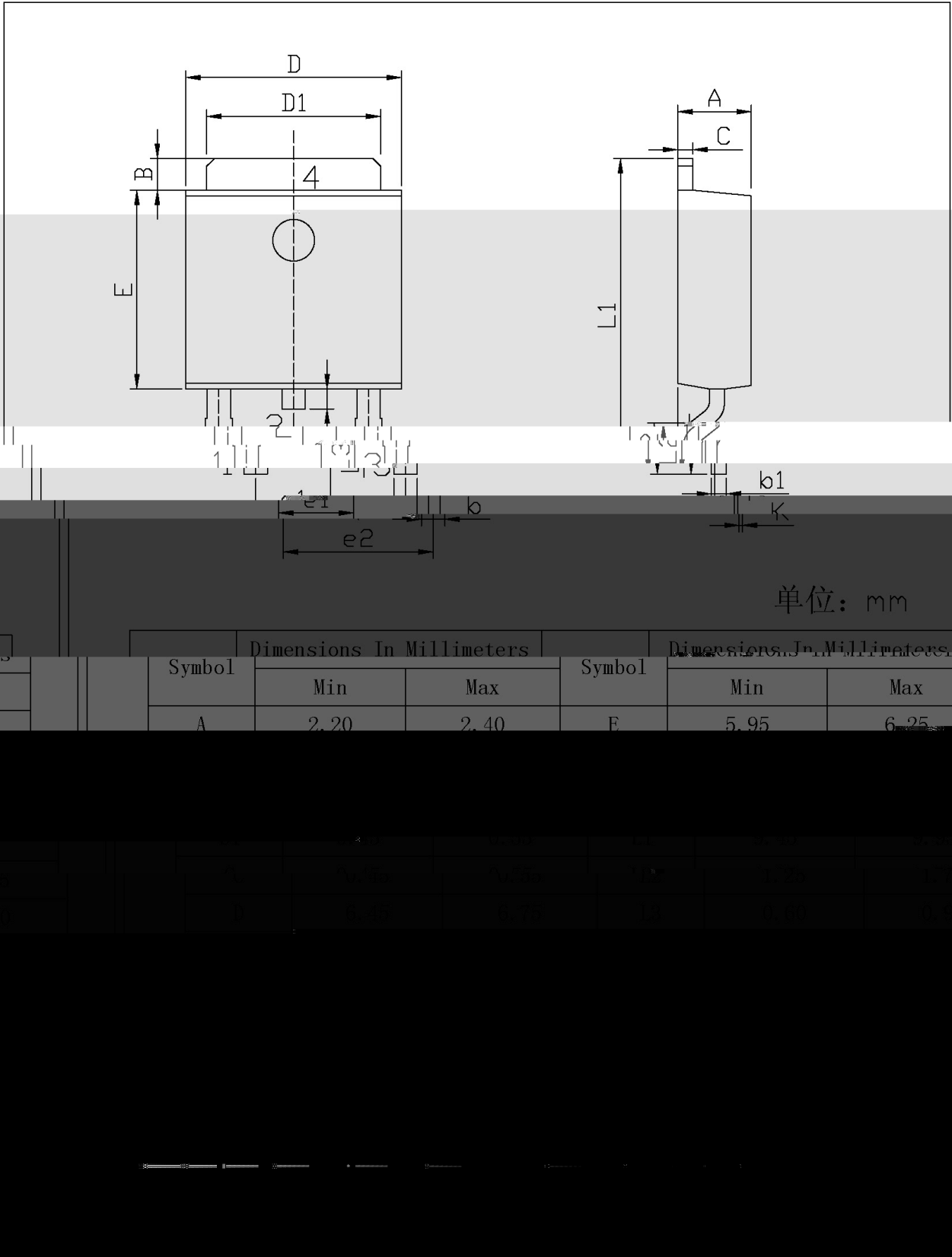
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V$ $I_D=250$ A	600			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=600V$ $V_{GS}=0V$			10	A
		$V_{DS}=480V$ $T_C=125$			100	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	$R_{DS(on)}$	$V_{GS}=10V$ $I_D=0.5A$		9.7	12	
Forward Transconductance	g_{FS}	$V_{DS}=40V$ $I_D=0.5A$		0.97		S
Drain-Source Diode Forward Voltage	V_{SD}	$V_{GS}=0V$ $I_S=1.0A$			1.4	V
Input Capacitance	C_{iss}	$V_{DS}=25V$ $V_{GS}=0V$ $f=1.0MHz$		155	200	pF
Output Capacitance	C_{oss}			20	26	pF
Reverse Transfer Capacitance	C_{rss}			3.0	4.0	pF
Turn-On Delay Time	$t_{d(on)}$	$V_{DD}=300V$ $I_D=1.2A$ $R_G=50$		10	30	ns
Turn-On Rise Time	t_r			20	50	ns
Turn-Off Delay Time	$t_{d(off)}$			16	45	ns
Turn-Off Fall Time	t_f			25	60	ns

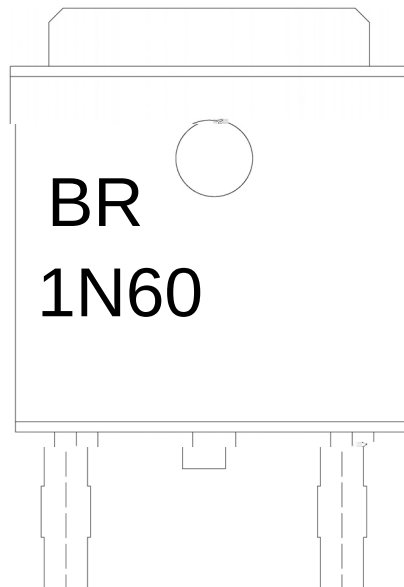
/ Electrical Characteristic Curve



/ Package Dimensions



/ **Marking Instructions**



BR

1N60

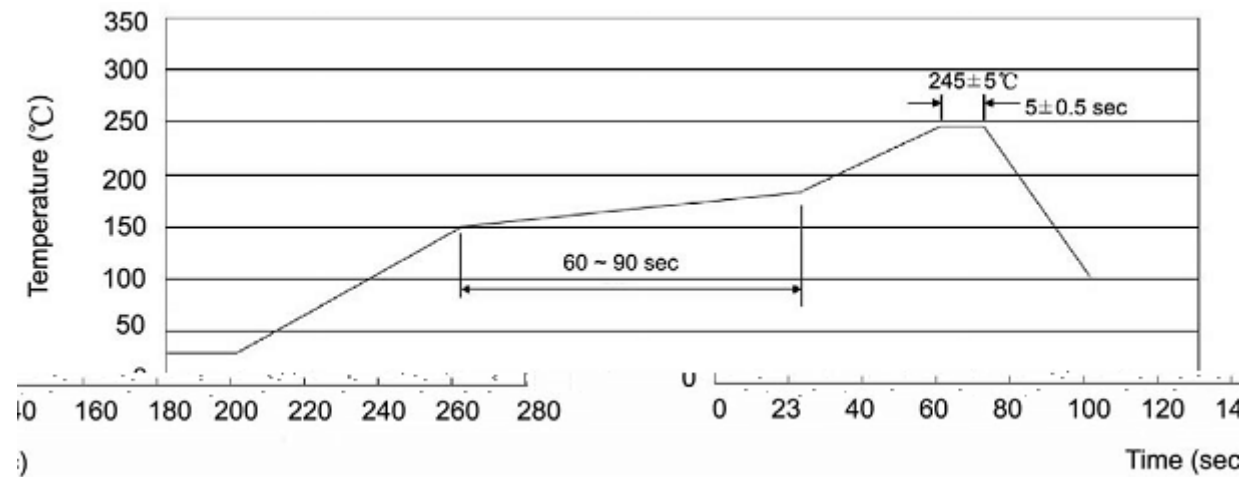
Note:

BR: Company Code

1N60: Product Type.

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

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Note:

- 1

25 150

60 90sec;

1.Preheating:25~150 , Time:60~90sec.
- 2

245±5

5±0.5sec;

2.Peak Temp.:245±5 , Duration:5±0.5sec.
- 3

2 10 /sec.

3. Cooling Speed: 2~10 /sec.

/ Resistance to Soldering Heat Test Conditions

260±5 10±1 sec. Temp.:260±5 Time:10±1 sec

/ Packaging SPEC.

/ REEL

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	只 卷盘	卷盘 盒	只 盒	盒 箱	只 箱		盒	箱