

/ Descriptions

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

/ Features

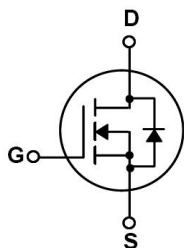
DS dv/dt
Low $R_{DS(ON)}$, Low gate charge, Low C_{rss} , Fast switching, Improved dv/dt capability.

/ Applications

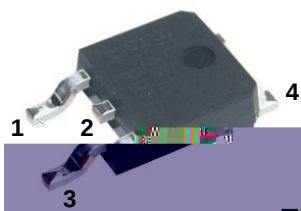
DC/DC

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.

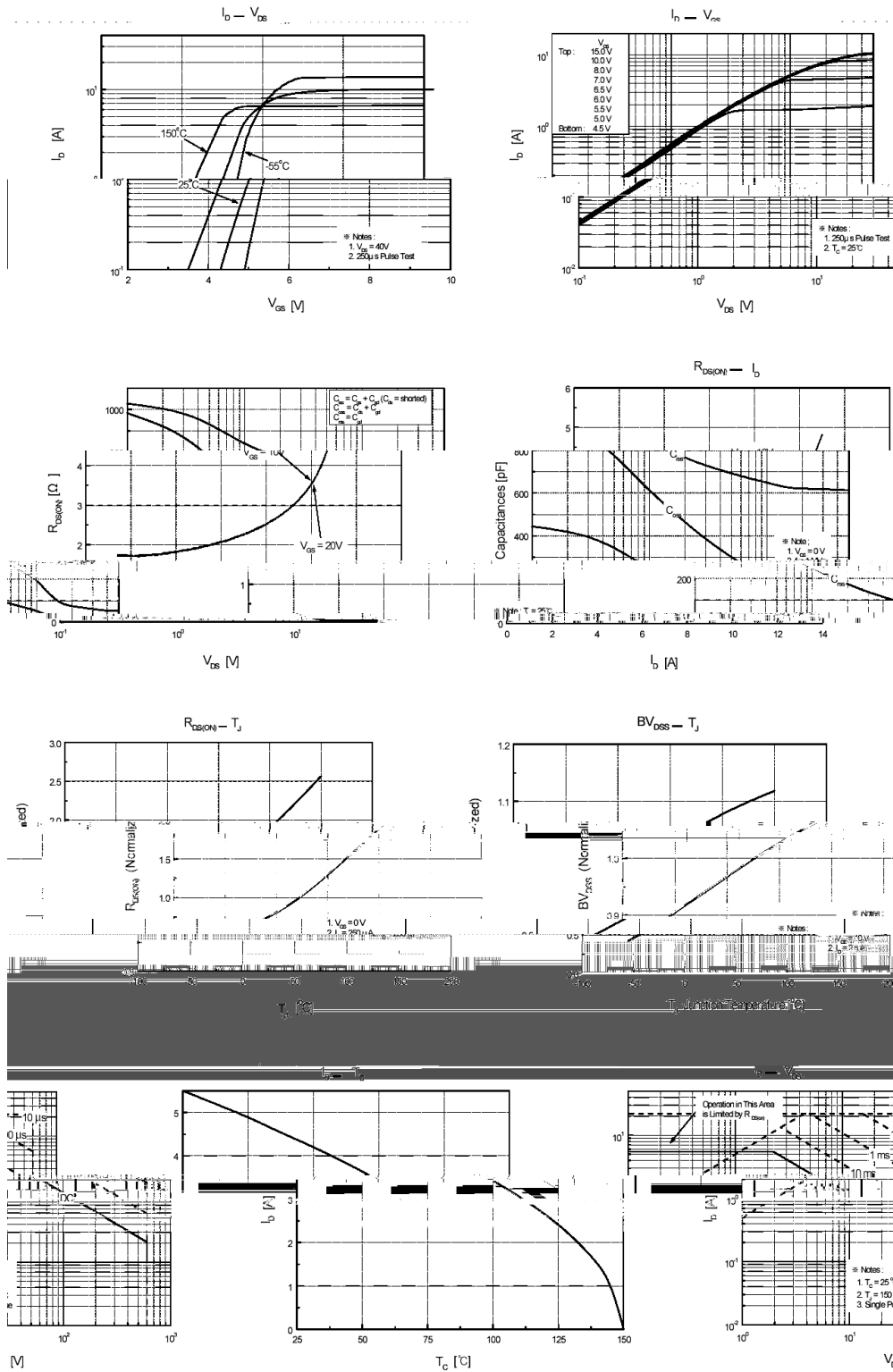
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	600	V
Drain Current	$I_D(T_C=25^{\circ}C)$	5.5	A
Drain Current	$I_D(T_C=100^{\circ}C)$	3.3	A
Drain Current - Pulsed	I_{DM}	22	A
Gate-Source Voltage	V_{GS}	± 30	V
Single Pulsed Avalanche Energy	E_{AS}	300	mJ
Repetitive Avalanche Energy	E_{AR}	12.5	mJ
Avalanche Current	I_{AR}	5.5	A
Power Dissipation	$P_D(T_C=25^{\circ}C)$	40	W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to 150	

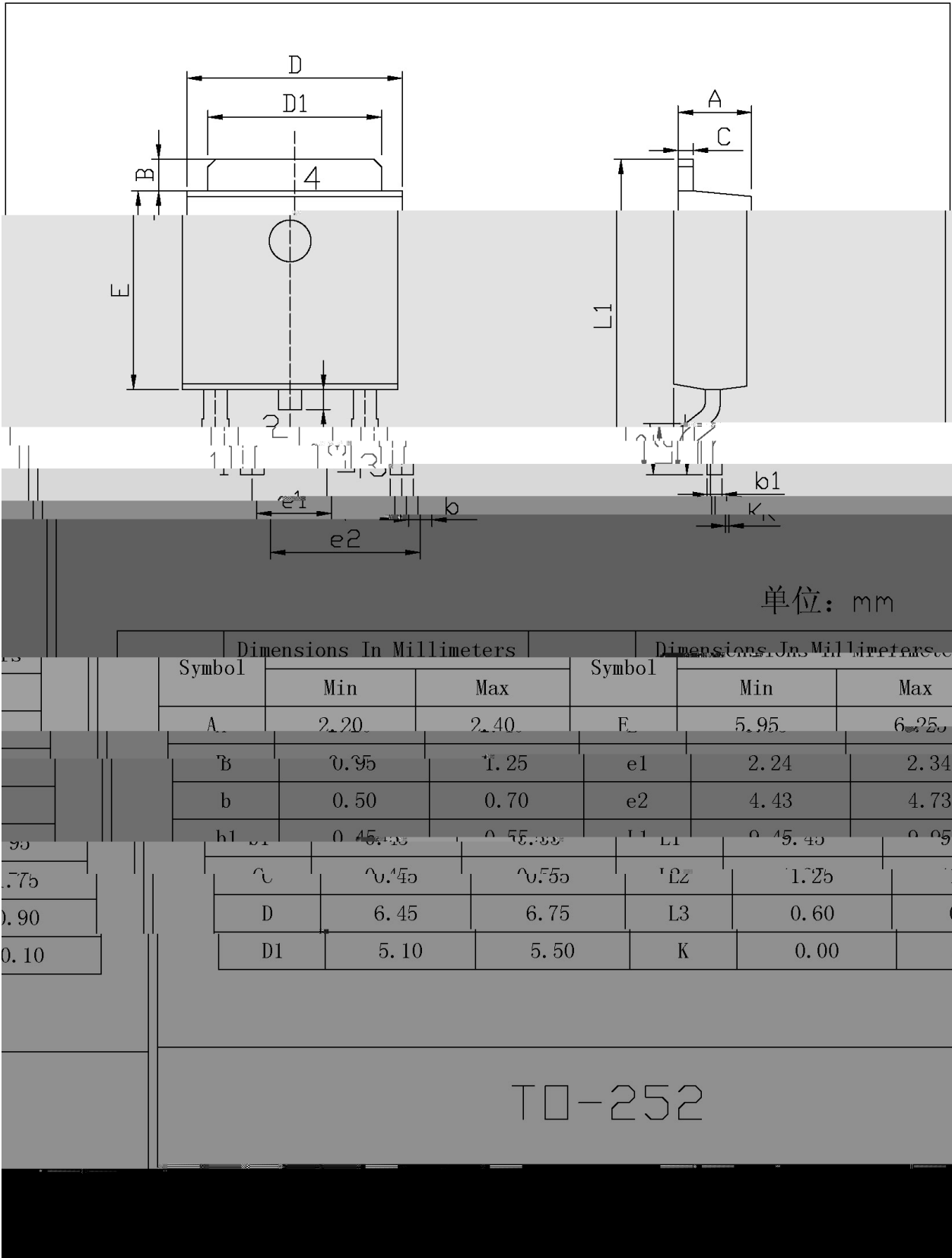
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DS}	$V_{GS}=0V$ $I_D=250\mu A$	600			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=600V$ $V_{GS}=0V$			1	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	$R_{DS(on)}$	$V_{GS}=10V$ $I_D=2.75A$		1.7	2.0	Ω
Forward Transconductance	g_{FS}	$V_{DS}=40V$ $I_D=2.75A$		4.8		S
Drain-Source Diode Forward Voltage	V_{SD}	$V_{GS}=0V$ $I_S=5.5A$			1.4	V
Input Capacitance	C_{iss}	$V_{DS}=25V$ $V_{GS}=0V$ $f=1.0MHz$		620	810	pF
Output Capacitance	C_{oss}			65	85	
Reverse Transfer Capacitance	C_{rss}			7	10	
Turn-On Delay Time	$t_{d(on)}$	$V_{DD}=300V$ $I_D=5.5A$ $R_G=25\Omega$		15	40	ns
Turn-On Rise Time	t_r			45	100	
Turn-Off Delay Time	$t_{d(off)}$			45	100	
Turn-Off Fall Time	t_f			45	100	

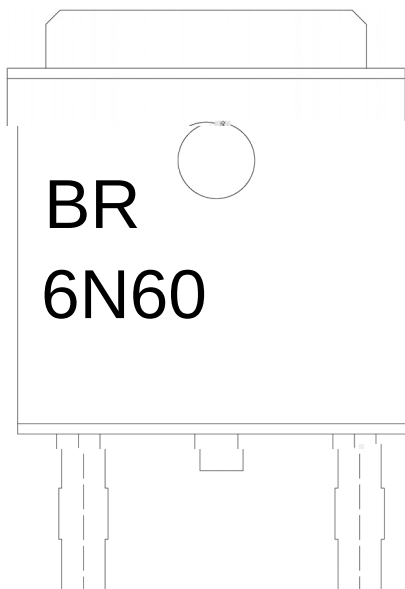
/ Electrical Characteristic Curve



/ Package Dimensions



/ Marking Instructions



BR

6N60

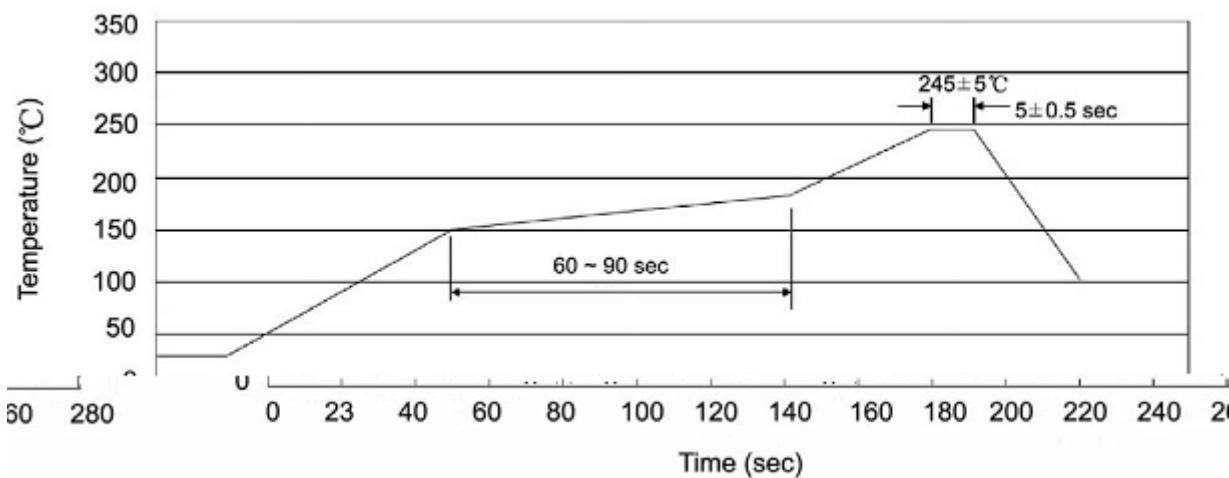
Note:

BR: Company Code

6N60: 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
						"		

/ 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