

/ Descriptions

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

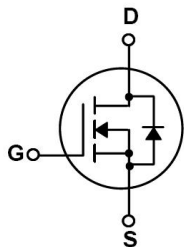
/ Features

600V MOSFET, , ,
600V Enhanced Power MOSFET, Low gate charge, low crss, fast switching.

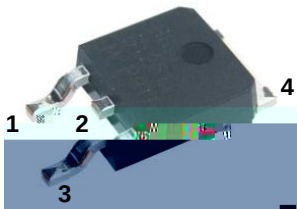
/ Applications

These devices are well suited for power switch circuit of adaptor and charger.

/ Equivalent Circuit



/ Pinning



PIN1 G PIN 2 D PIN 3 S PIN 4 D

/ h_{FE} Classifications & Marking

See Marking Instructions.

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DSS}	600	V
Drain Current	I_D	7	A
Drain Current - Pulsed	I_{DM}	28	A
Gate-Source Voltage	V_{GSS}	± 30	V
Single Pulsed Avalanche Energy	E_{AS}	500	mJ
Repetitive Avalanche Energy	E_{AR}	54	mJ
Single Pulse Avalanche Current	I_{AS}	3.3	A
Power Dissipation	$P_D(T_C=25^\circ\text{C})$	95	W
Junction and Storage Temperature Range	T_J, T_{STG}	-55 to 150	$^\circ\text{C}$
Thermal Resistance, Junction-to-Case	$R_{\theta JC}$	1.32	$^\circ\text{C/W}$
Thermal Resistance, Junction-to-Ambient	$R_{\theta JA}$	62	$^\circ\text{C/W}$

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	μA
		$V_{DS}=600V$ $T_J=150^\circ\text{C}$			100	
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		4	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V$ $I_D=3.5A$		1.0	1.3	Ω
Total Gate Charge	q_{FS}	$V_{DS}=15V$ $I_D=3.5A$		6.5		S
Drain-Source Diode Forward						

/ Electrical Characteristic Curve

Figure1. Output Characteristics ($T_J=25^{\circ}\text{C}$)

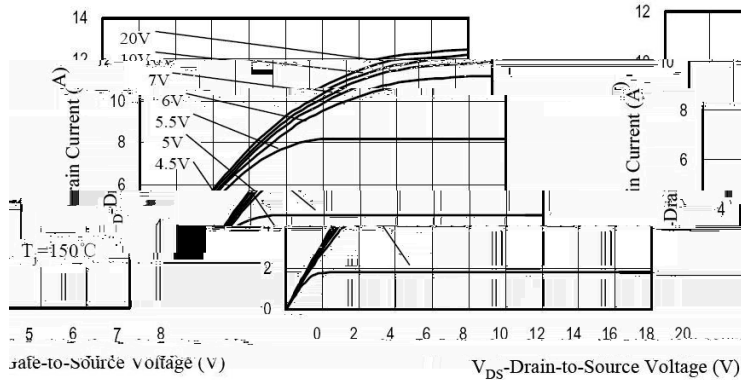


Figure5. Transfer Characteristics

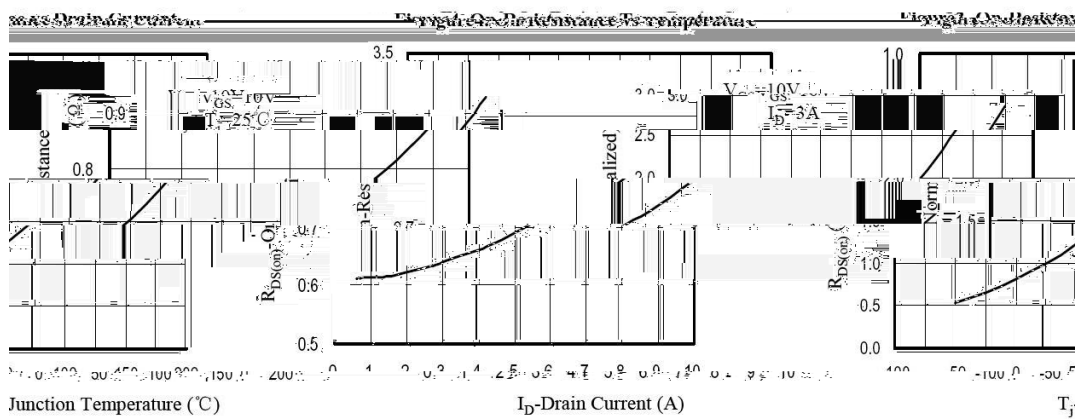
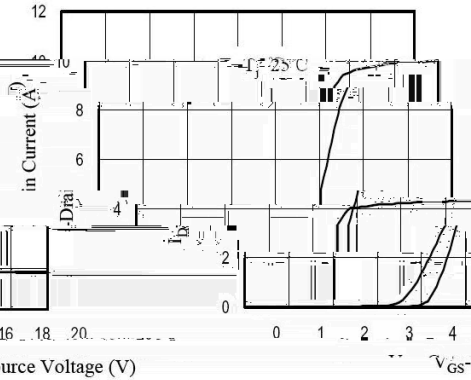


Figure9. Body Diode Forward Voltage

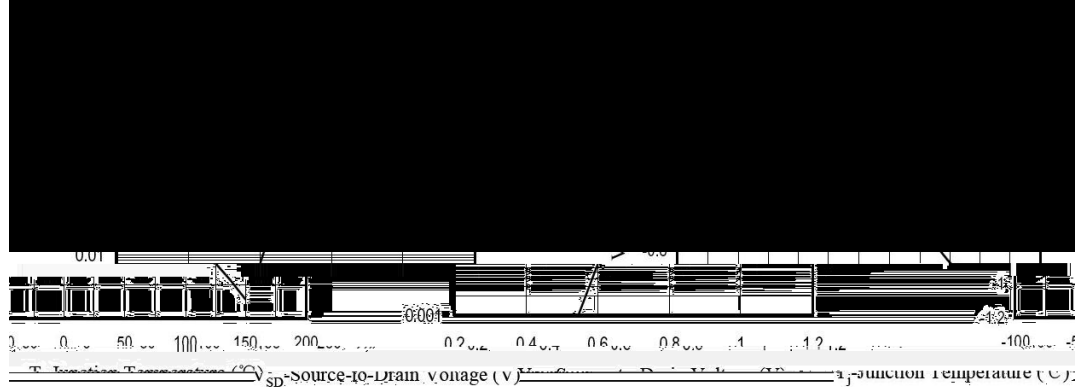


Figure7. Capacitance

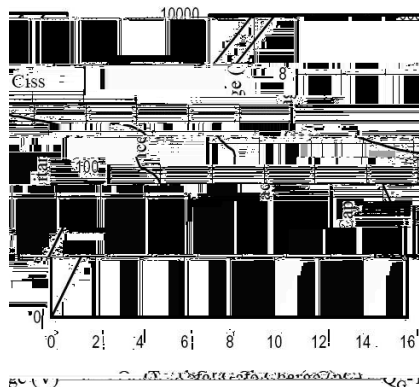
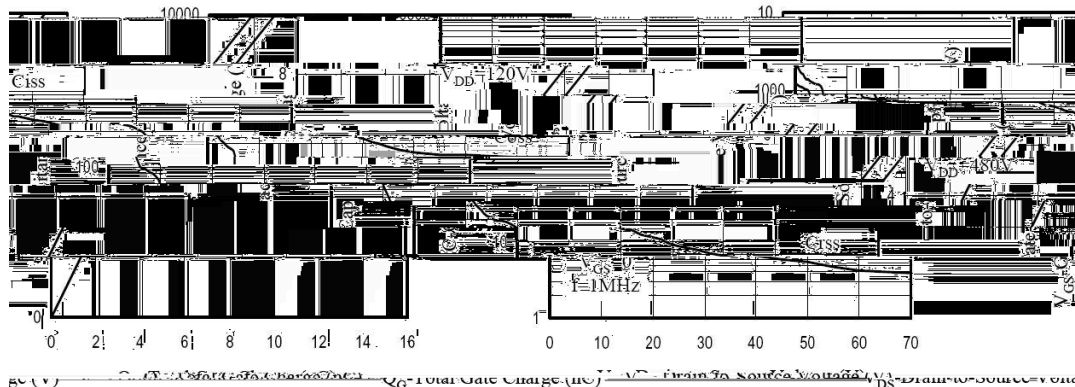
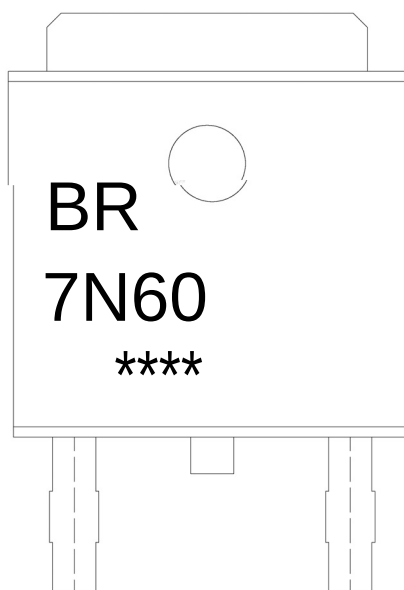


Figure8. Gate Charge



/ Marking Instructions



BR

7N60

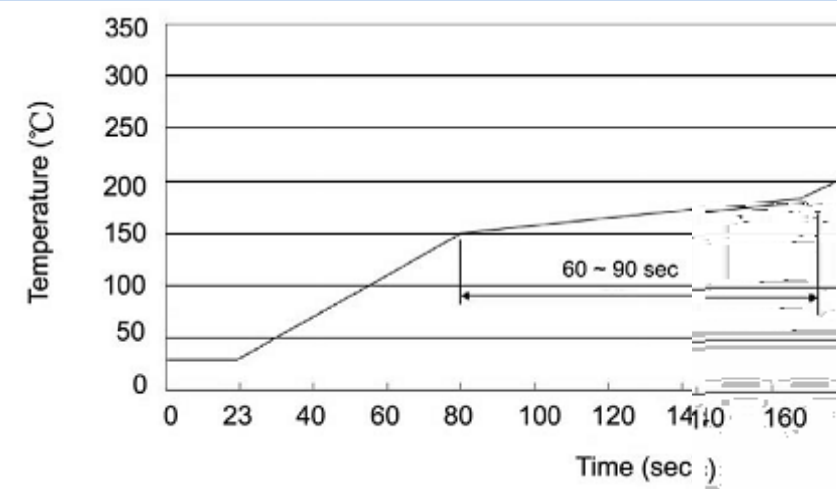
Note:

BR: Company Code

7N60: Product Type.

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

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Note:

- 1

25 150

60 90sec;

1.Preheating:25~150 ,
- 2

245±5

5±0.5sec;

2.Peak Temp.:245±5 ,
- 3

2 10 /sec.

3. Cooling Speed: 2~10

/ Resistance to Soldering Heat Test Conditions

260±5 10±1 sec. Temp.:260±5℃ T

/ Packaging SPEC.

/ REEL

Package Type 封装形式	Units 包装数量					
	Units/Reel 只/卷盘	Reels/Inner Box 卷盘/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	
TO-252	2,500	2	5,000	5	25,000	1

/ TUBE

Package Type 封装形式	Units 包装数量					T
	Units/Tube 只/套管	Tubes/Inner Box 套管/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	
TO-251/252	75	48	3,600	5	18,000	526

/ Notices