

/ Descriptions

TO-252 N

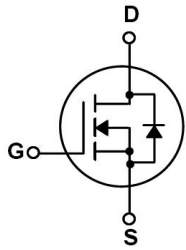
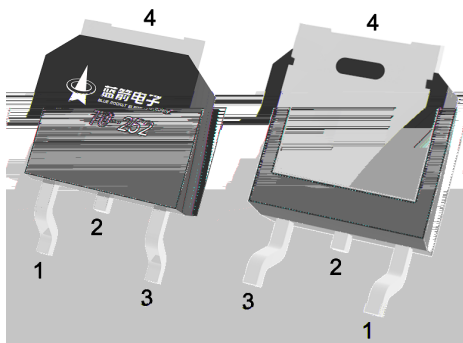
N-CHANNEL MOSFET in a TO-252 Plastic Package.

/ Features $V_{DS}=60V$ $I_D=78A$ $R_{DS(on)}@10V \leq 7m\Omega$ (Type. $5.7m\Omega$) $R_{DS(on)}@6V \leq 12m\Omega$ (Type. $6.2m\Omega$)

HF Product.

/ Applications

DC/DC Converter, Ideal for high-frequency switching and synchronous rectification.

/ Equivalent Circuit**/ Pinning**

PIN1 G

PIN 2 D

PIN 3 S

PIN 4 D

/ Marking

See Marking Instructions.

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	60	V
Drain Current		$I_D(T_C=25^{\circ}\text{C})$	78	A
Pulsed Drain Current		I_{DM}	274	A
Gate-Source Voltage		V_{GS}	¥ 20	V
Single Pulsed Avalanche Energy(L=0.5mH)		E_{AS}	720	mJ
Avalanche Current		I_{AS}	41	A
Total Power Dissipation		$P_D(T_C=25^{\circ}\text{C})$	150	W
Junction and Storage Temperature Range		T_J, T_{STG}	-55 to 150	
Thermal Resistance-Junction to Ambient	Steady-State	$R_{\theta JA}$	62.5	/W
Thermal Resistance-Junction to Case	Steady-State	$R_{\theta JC}$	1.56	

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DS}	$I_D=250\mu\text{A}, V_{GS}=0\text{V}$	60	70		V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=60\text{V}, V_{GS}=0\text{V}$			1.0	μA
Gate-Body leakage current	I_{GSS}	$V_{DS}=0\text{V}, V_{GS}=\pm 20\text{V}$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu\text{A}$	2.0	2.9	4.0	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	$V_{GS}=10\text{V}, I_D=20\text{A}$		5.7	7	m
Static Drain-Source On-Resistance	$R_{DS(ON)}$	$V_{GS}=6\text{V}, I_D=10\text{A}$		6.2	12	m
Diode Forward Voltage	V_{SD}	$I_S=1\text{A}, V_{GS}=0\text{V}$			1.2	V
Input Capacitance	C_{iss}	$V_{DS}=25\text{V}, V_{GS}=0\text{V}, f=1.0\text{MHz}$		5590		pF
Output Capacitance	C_{oss}			295		
Reverse Transfer Capacitance	C_{rss}			185		
Gate resistance	R_g	$V_{GS}=0\text{V}, V_{DS}=0\text{V}, f=1\text{MHz}$		0.77		Ω

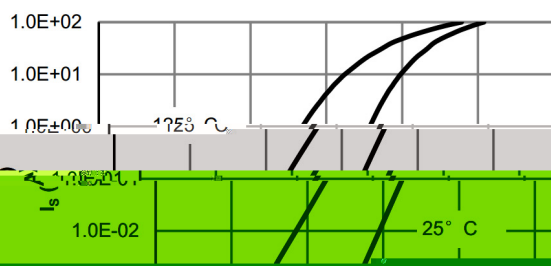
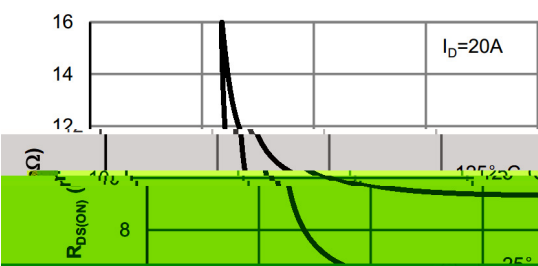
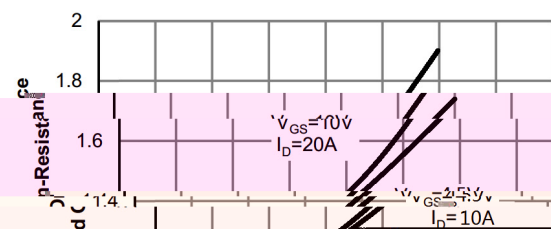
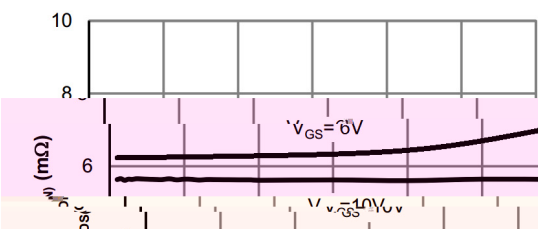
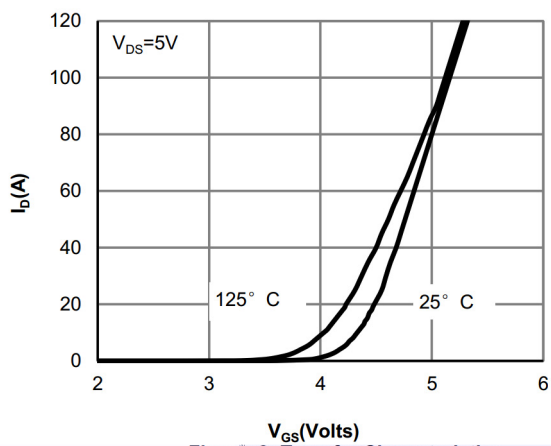
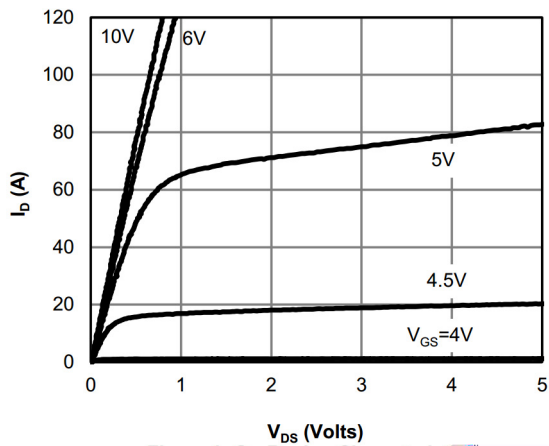
Total Gate Charge

 Q_{gg}

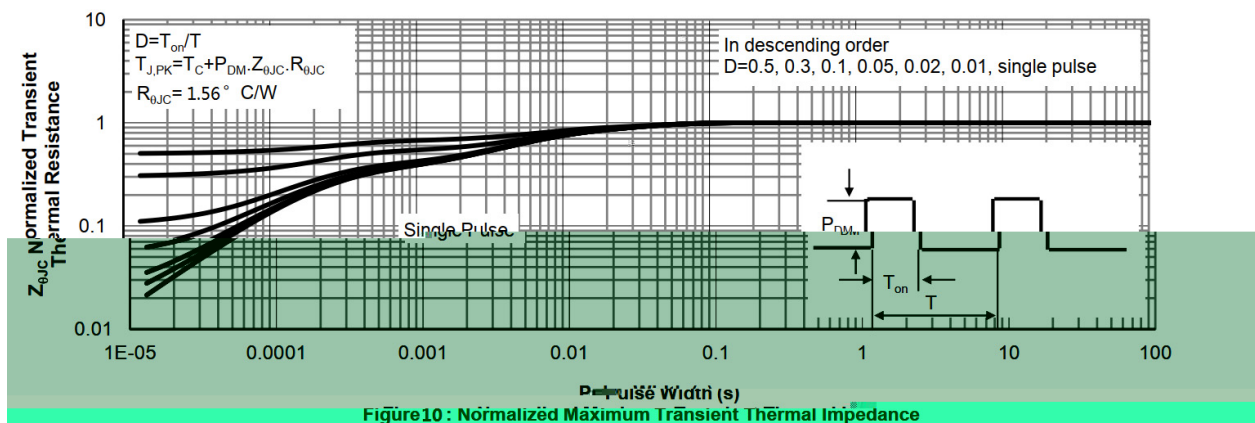
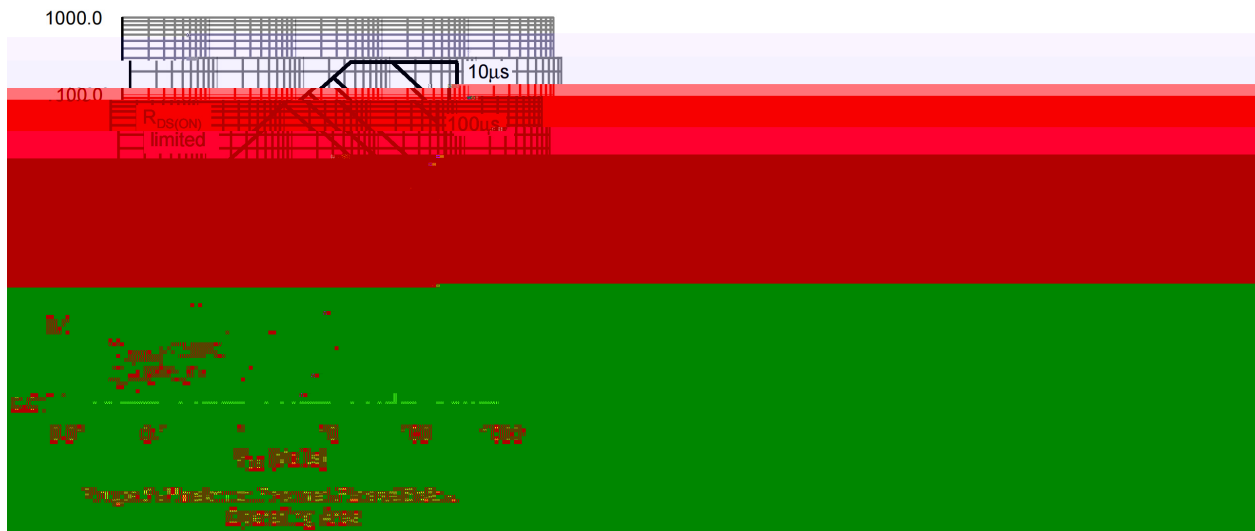
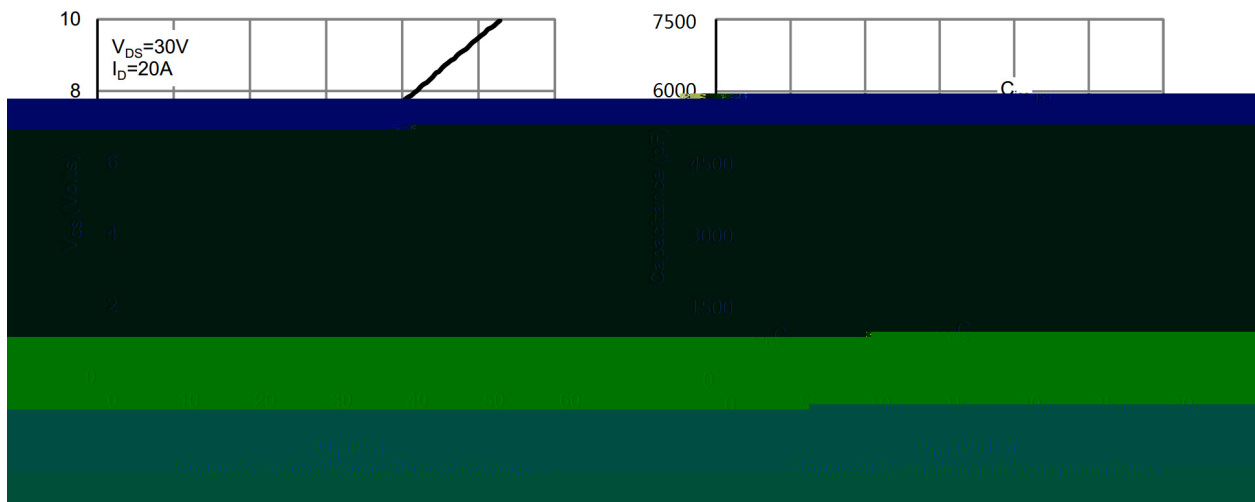
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	t _{d(on)}	V _{GS} =10V V _{DS} =30V R _L =1.5 á R _{GEN} =3 á		21		ns
Turn-On Rise Time	t _r			23		
Turn-Off Delay Time	t _{d(off)}			35		
Turn-Off Fall Time	t _f			4.2		

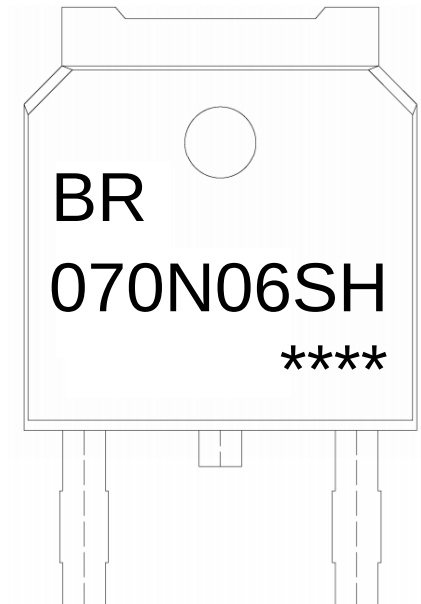
/ Electrical Characteristic Curve



/ Electrical Characteristic Curve



/ Marking Instructions



BR

070N06SH

Note:

BR: Company Code

070N06SH: Product Type Code

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

() / Temperature Profile for IR Reflow Soldering(Pb-Free)

- Note:
- 1

150 180 60 90sec;

1.Preheating:150~180 , 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

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