TO-252 N MOS

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

V_{DS} (V) = 40V

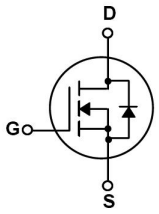
I_D =54A (V_{GS} = ¤ 20V)

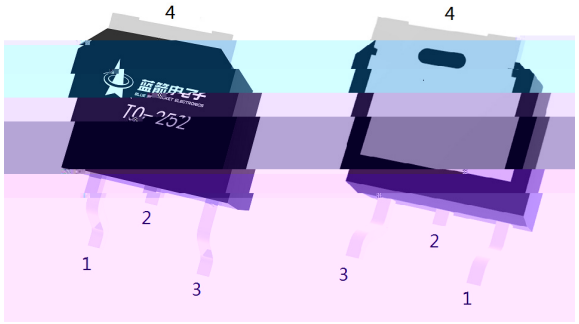
$R_{DS(ON)}$@10V Ů 8mR(Typ.7.5mR)

Â HF Product.

DC/DC

These devices are well suited for high efficiency switching DC/DC converters and switch mode power supplies.





PIN1 G PIN 2 D PIN 3 S PIN 4 D

See Marking Instructions.

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DSS}	40	V
Drain Current		I_D(Tc=25℃)	54	A
Drain Current - Pulsed		I_{DM}	113	A
Gate-Source Voltage		V_{GS}	±20	V
Single Pulsed Avalanche Energy		E_{AS}	67.6	mJ
Avalanche Current		I_{AS}	13	A
Power Dissipation		P_D(Tc=25℃)	39	W
Operating and Storage Temperature Range		T_J,T_{stg}	-55 to 150	
Junction-to-Ambient	t≤10	$R_{\theta JA}$	25	℃/W
Junction-to-Ambient	Steady-State		55	
Junction-to-Case	Steady-State	$R_{\theta JC}$	3.2	

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}=0V I_D=250 A	40	47		V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=40V V_{GS}=0V			1	A
Gate-Body Leakage Current Forward	I_{GSS}	V_{GS}=±20V V_{DS}=0V			±0.1	A
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS} I_D=250 A	1.0	1.6	2.5	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	V_{GS}=10V I_D=20A		7.5	8	m
		V_{GS}=4.5V I_D=10A		10	13	m
Drain-Source Diode Forward Voltage	V_{SD}	V_{GS}=0V I_S=1A			1.2	V
Input Capacitance	C_{iss}	V_{DS}=25V V_{GS}=0V f=1.0MHz		850		pF
Output Capacitance	C_{oss}			115		
Reverse Transfer Capacitance	C_{rss}			30		
Gate resistance	R_g	V_{GS}=0V V_{DS}=0V f=1MHz		2.4		
Total Gate Charge	$Q_{g(10V)}$	V_{GS}=10V V_{DS}=20V I_D=20A		21		nC
Total Gate Charge	$Q_{g(4.5V)}$			8.6		
Gate Source Charge	Q_{gs}			5.7		
Gate Drain Charge	Q_{gd}			3		

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	$t_{d(on)}$	V_{GS}=10V V_{DS}=20V R_L=1.0 R_{GEN}=3.0				

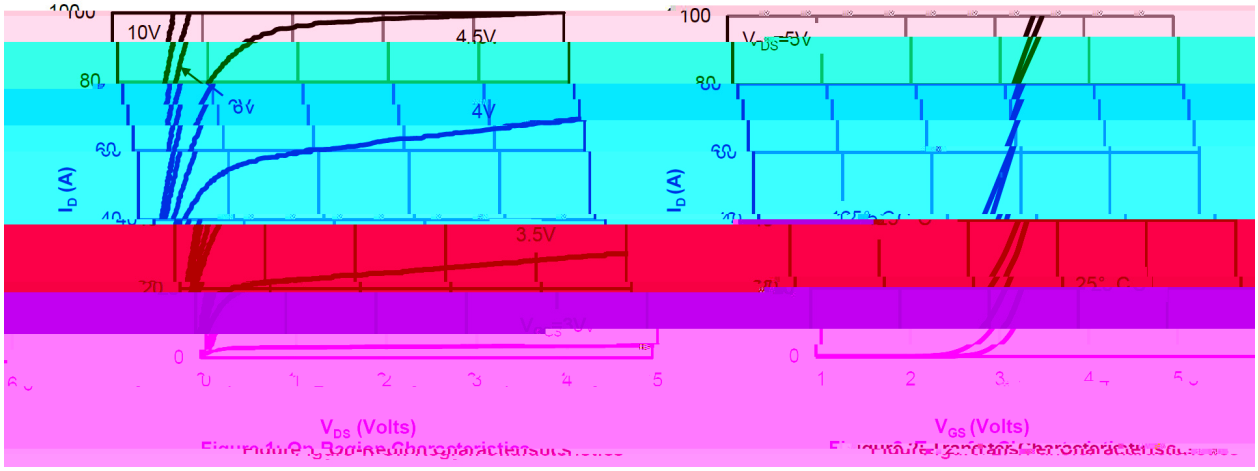
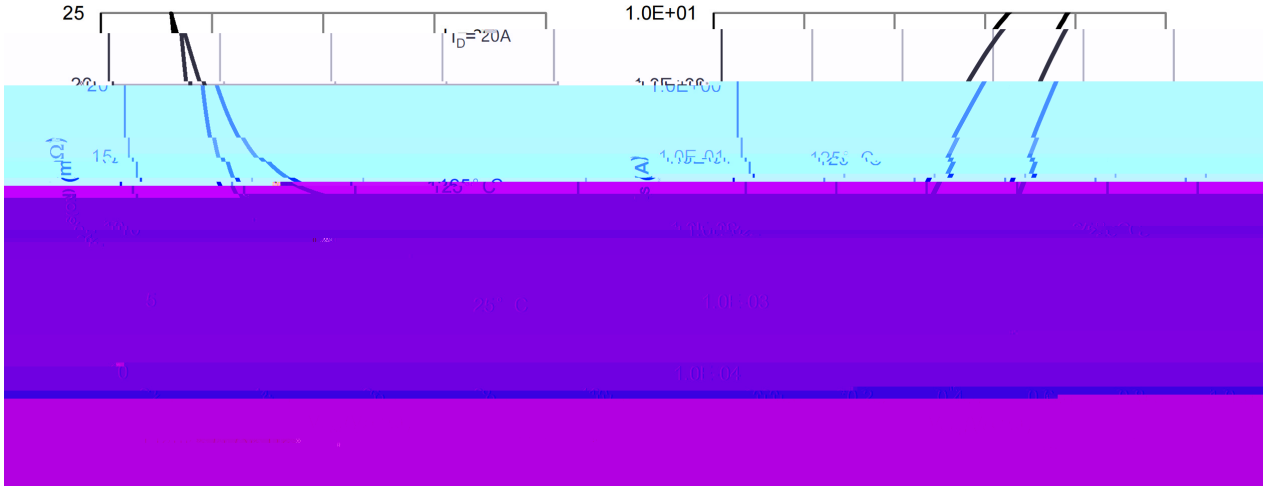
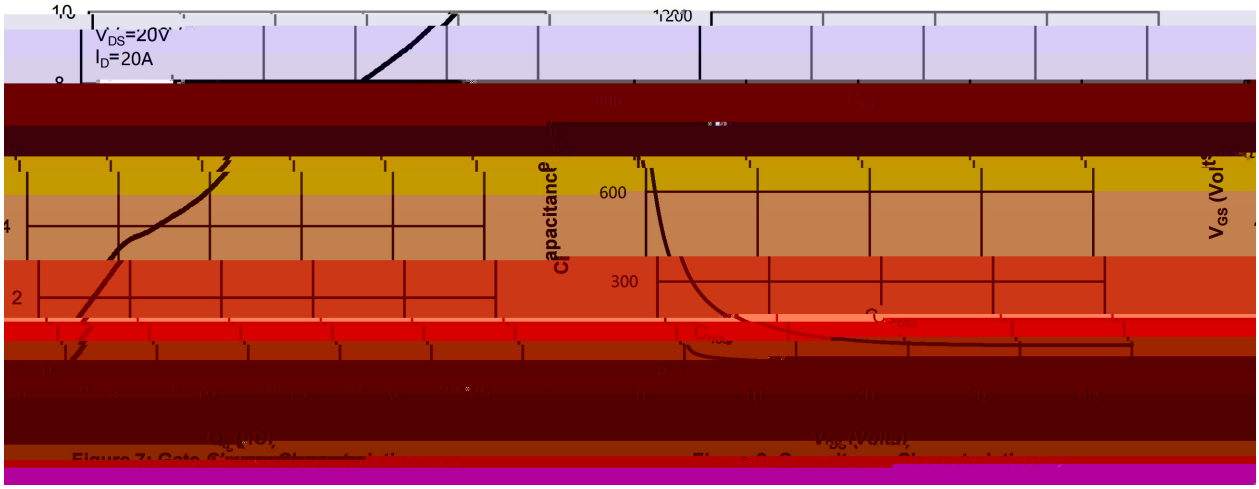


Figure 3—On-Resistance vs. Drain Current and Gate Voltage

Figure 4—On-Resistance vs. Junction Temperature



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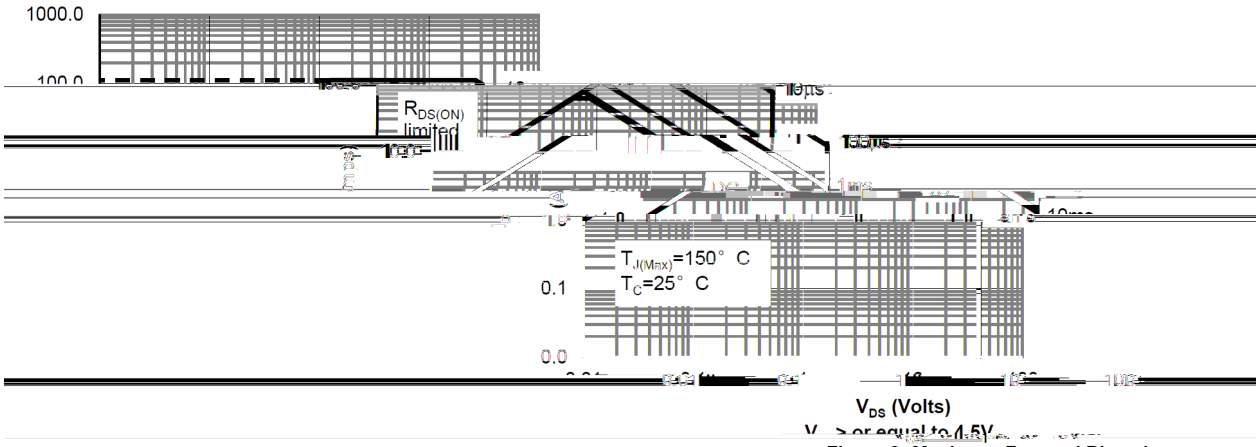
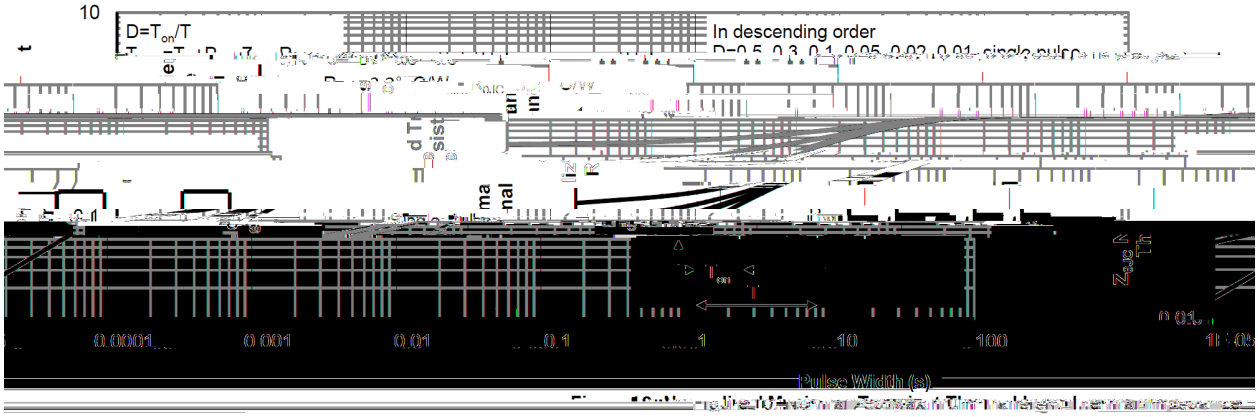
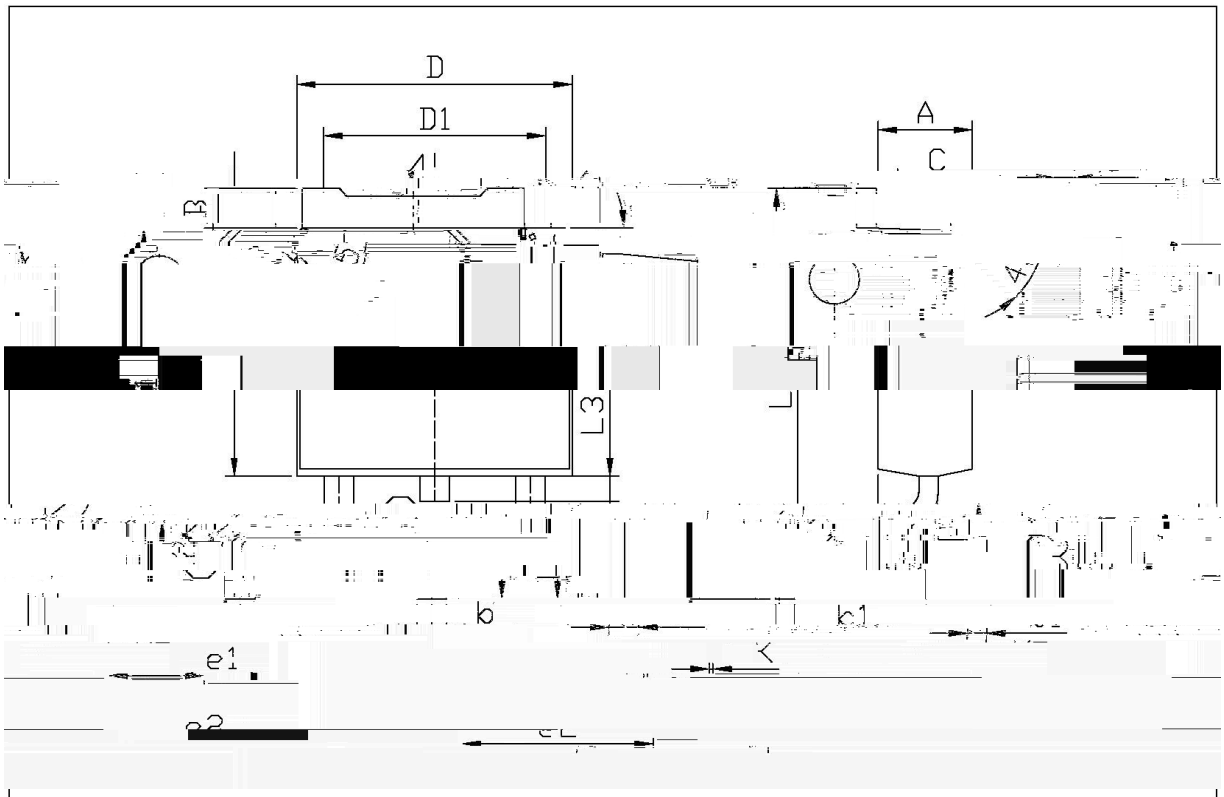


Figure 9: Maximum Forward Biased Safe Operating Area

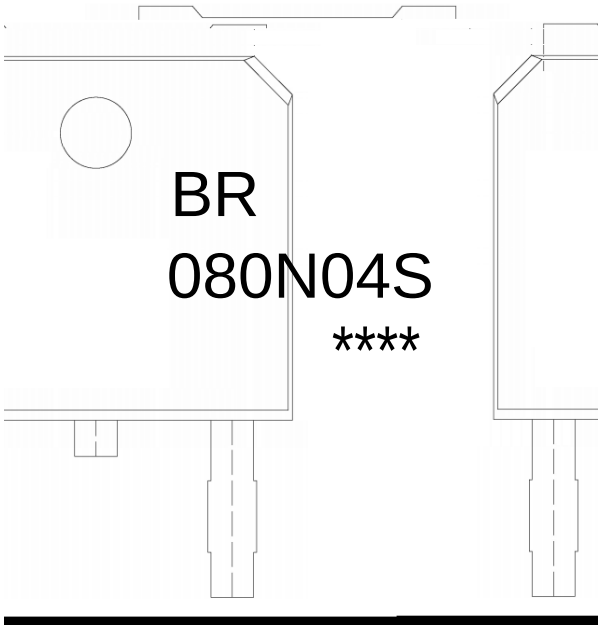




单位：mm

Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min.	Max.		Min.	Max.
B	0.95	1.25	e1	2.24	2.3
h	0.45	0.55		0.85	0.35
D1	5.10	5.50	K	0.00	0.10

TO-252



BR

080N04S

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Note:

BR:	Company Code
080N04S:	Product Type
****:	Lot No. Code, code change with Lot No

Temperature Profile for IR Reflow Soldering(Pb-Free)