

/ Descriptions

PDFN3×3-8L N MOS

Double N-CHANNEL MOSFET in a PDFN3×3-8L Plastic Package.

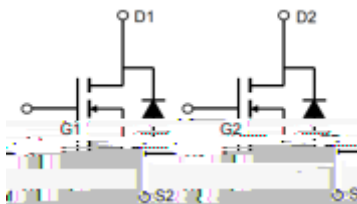
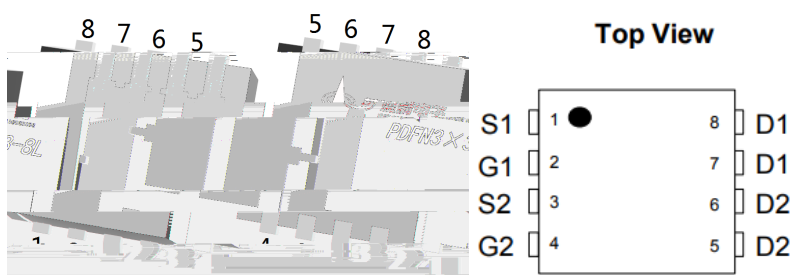
/ Features $V_{DS}=40V$ $I_D=19A$ $R_{DS(ON)}@10V<20m\Omega$ (Typ.18mR) $R_{DS(ON)}@4.5V<35m\Omega$ (Typ.24mR)

HF Product.

/ Applications

DC/DC

Synchronous Rectification,DC/DC Converter.

/ Equivalent Circuit**/ Pinning****/ Marking**

See Marking Instructions.

/ Absolute Maximum Ratings(Ta=25)

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	40	V
Drain Current		$I_D(T_C=25)$	19	A
Drain Current - Pulsed		I_{DM}	38	A
Gate-Source Voltage		V_{GS}	± 20	V
Power Dissipation		$P_D(T_C=25)$	12	W
Operating and Storage Temperature Range		T_J, T_{stg}	-55 to 150	
Junction-to-Ambient	Steady-State	$R_{\theta JA}$	95	/W
Junction-to-Case	Steady-State	$R_{\theta JC}$	10.4	

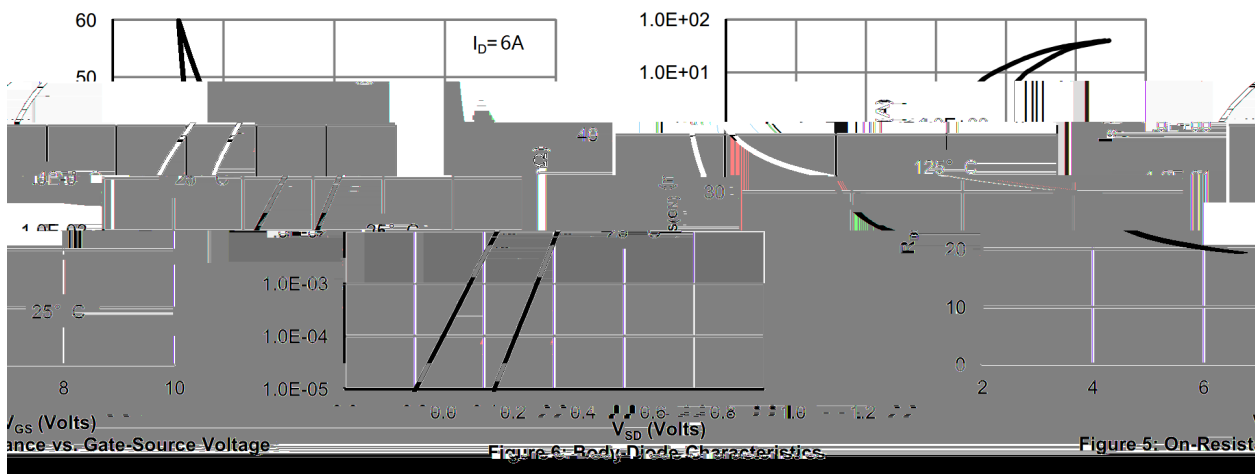
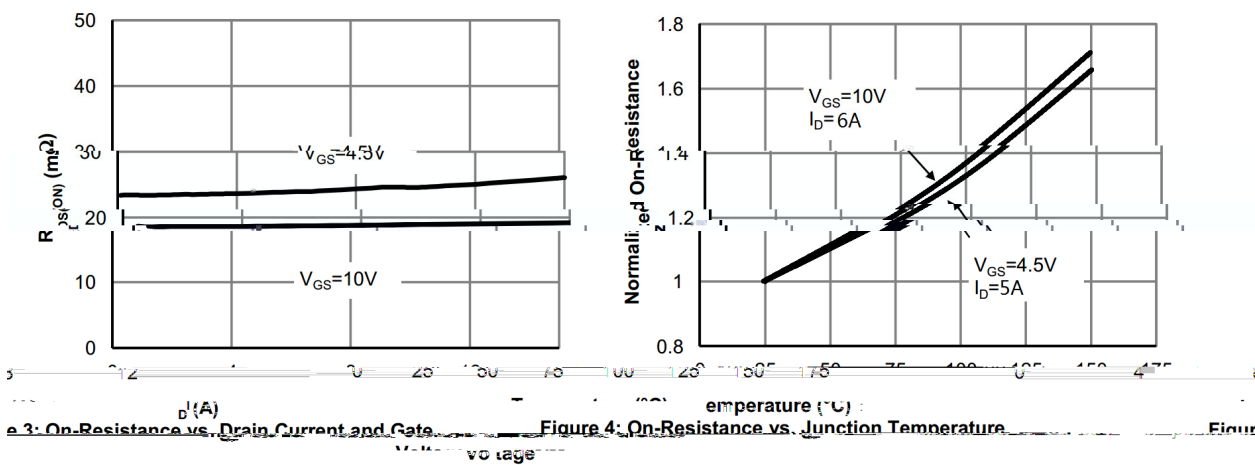
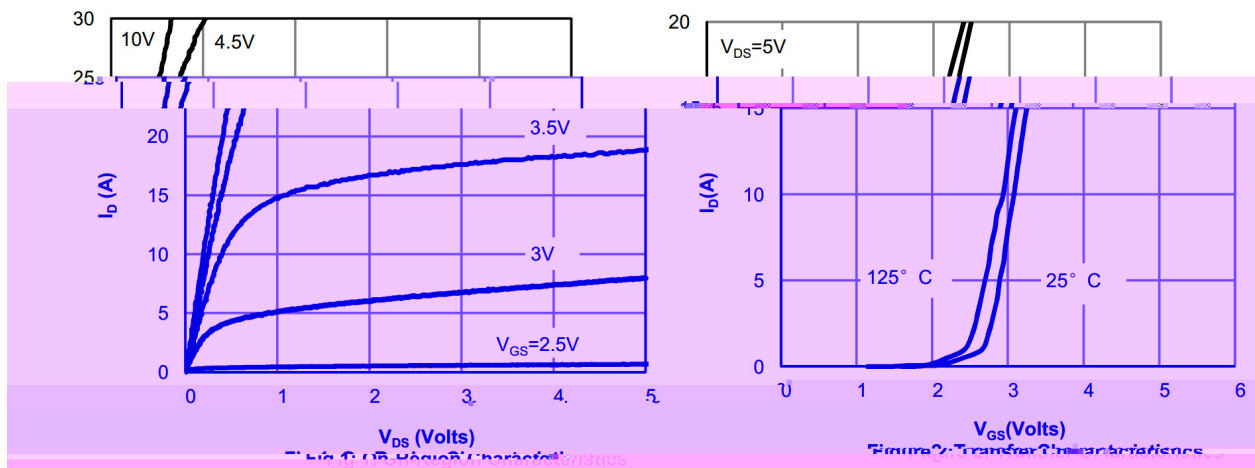
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DS}	$V_{GS}=0V$ $I_D=250\mu A$	40	45		V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=40V$ $V_{GS}=0V$			1.0	μA
Gate-Body leakage current	I_{GSS}	$V_{GS}=\pm 20V$ $V_{DS}=0V$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=250\mu A$	1	1.8	3	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V$ $I_D=6.0A$		18	20	m Ω
		$V_{GS}=4.5V$ $I_D=5.0A$		24	35	m Ω
Diode Forward Voltage	V_{SD}	$V_{GS}=0V$ $I_S=1.0A$			1.2	V
Input Capacitance	C_{iss}	$V_{DS}=25V$ $V_{GS}=0V$ $f=1.0MHz$		1200		pF
Output Capacitance	C_{oss}			350		pF
Reverse Transfer Capacitance	C_{rss}			250		pF
Gate resistance	R_g	$V_{DS}=0V$ $V_{GS}=0V$ $f=1.0MHz$		2.5		Ω
Total Gate Charge	$Q_{g(10V)}$	$V_{GS}=10V$ $V_{DS}=20V$ $I_D=6A$		9.2		nC
Total Gate Charge	$Q_{g(4.5V)}$			4.5		
Gate-Source Charge	Q_{gs}			2.5		nC
Gate-Drain Charge	Q_{gd}			1.5		nC

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	$t_{d(on)}$	$V_{DS}=20V$ $V_{GS}=10V$ $R_L=3.3\Omega$ $R_{GEN}=3\Omega$		6.5		ns
Turn-On Rise Time	t_r			3.7		ns
Turn-Off Delay Time	$t_{d(off)}$			18.2		ns
Turn-Off Fall Time	t_f			7.1		ns

/ Electrical Characteristic Curve



N- / N-CHANNEL Electrical Characteristic Curve

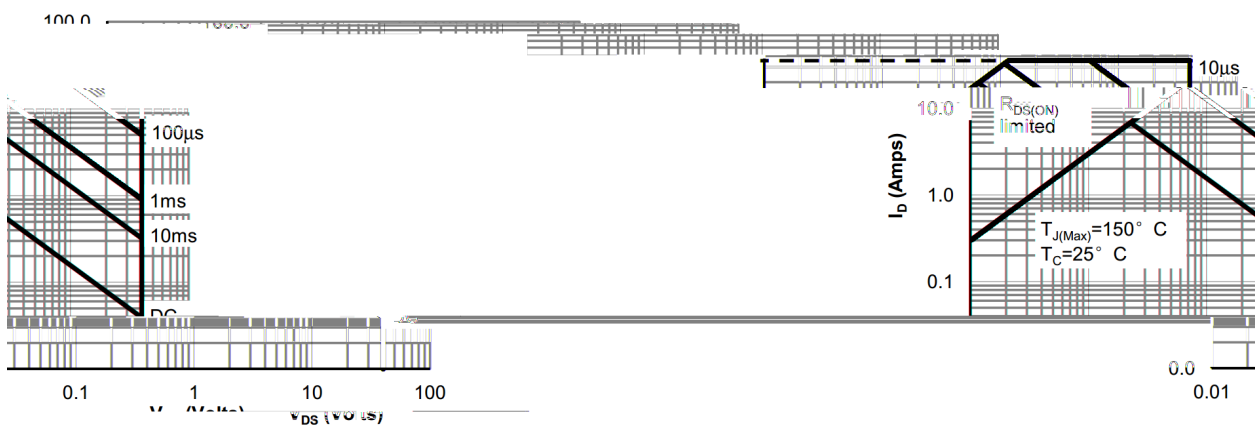
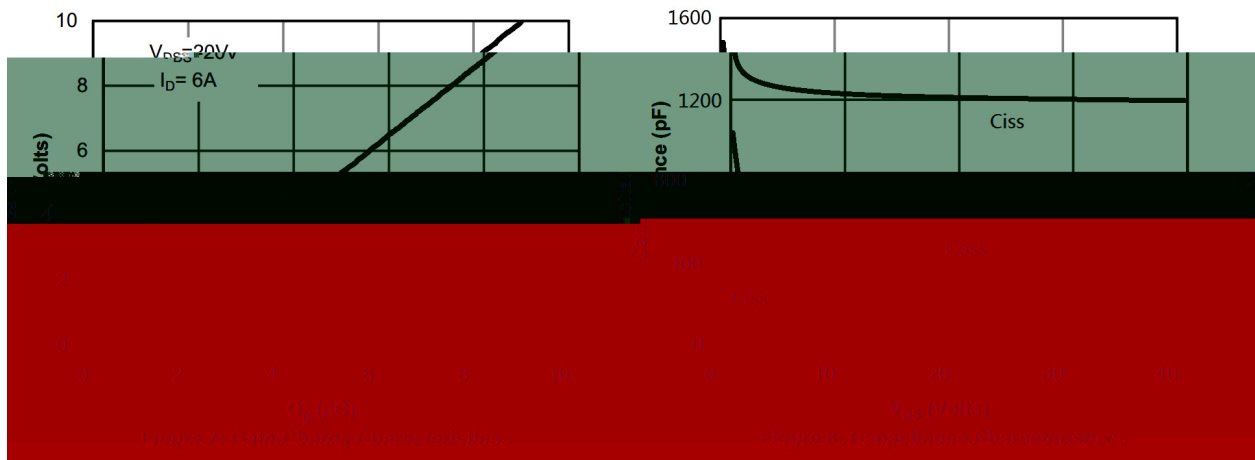


Figure 9: Maximum Forward Biased Safe

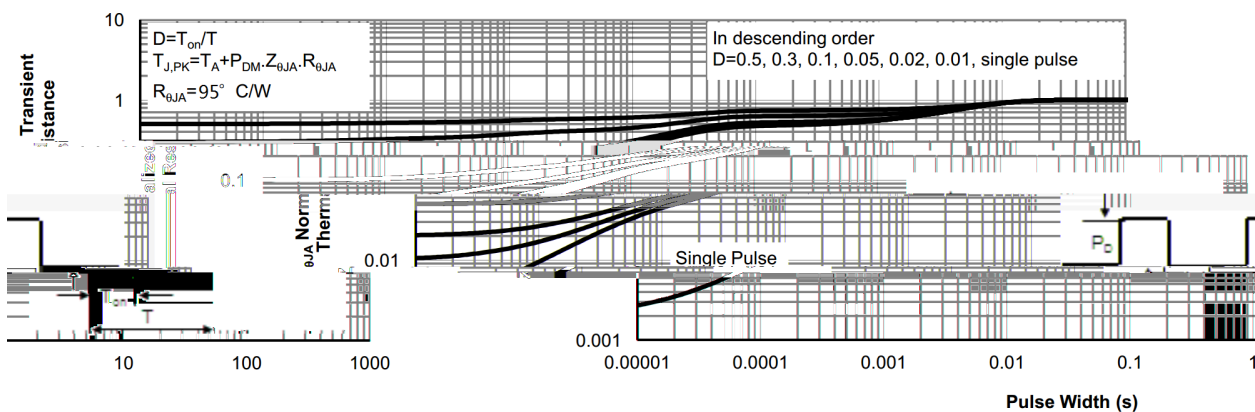
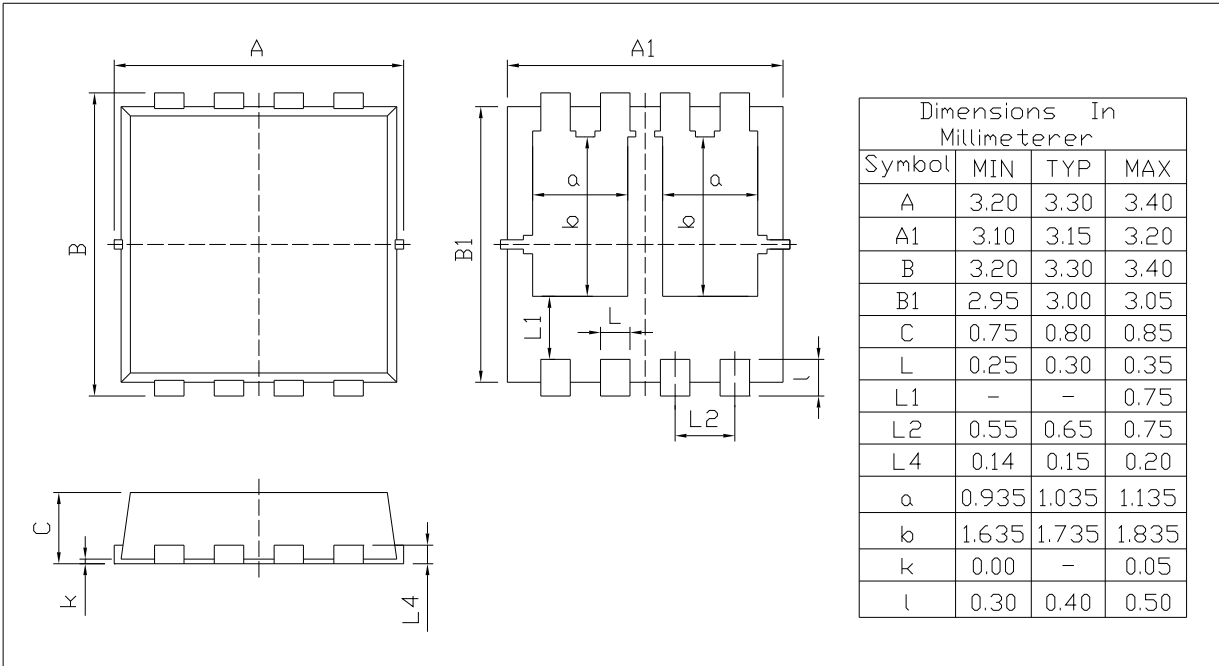


Figure 10: Normalized Maximum Transient Thermal Imp

/ Package Dimensions

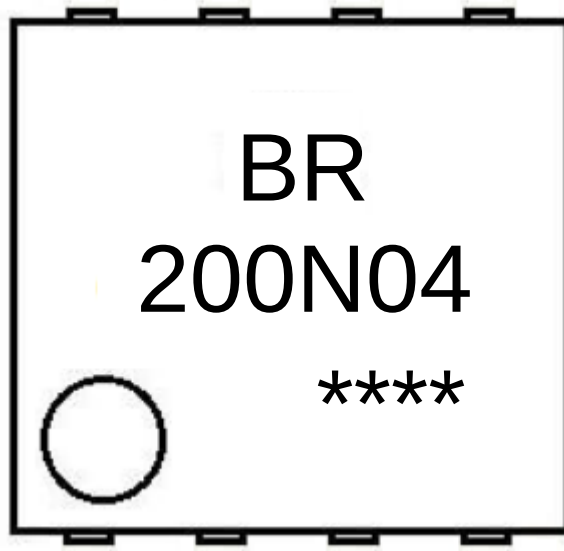
PDFN3X3-8L

Unit:mm



Rev.00 202011

/ Marking Instructions



BR

200N04

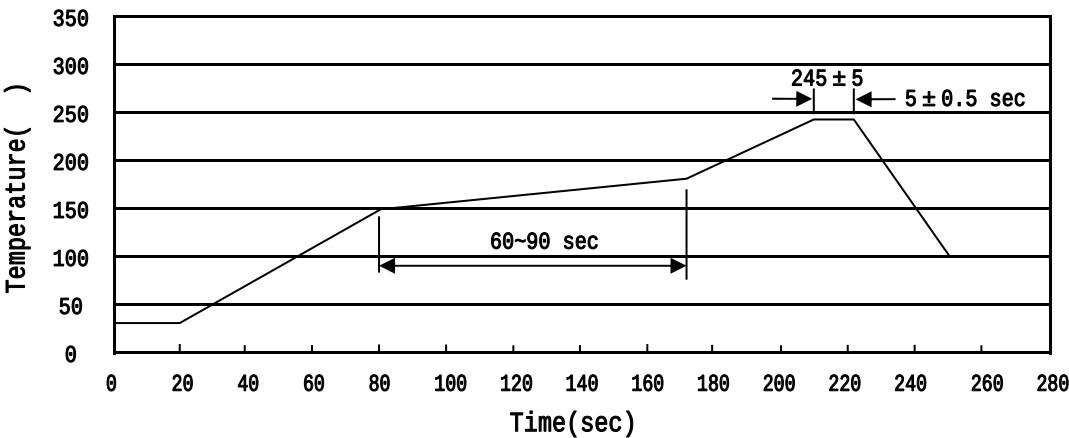
Note:

BR: Company Code

200N04: 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

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm³)		
	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	Reel	Inner Box 盒	Outer Box 箱
PDFN3×3-8L	5,000	2	10,000	6	60,000	13 ×12	360×360×50	380×335×366

/ Notices