

/ Descriptions

/ Features

$V_{DS}(V)=30V$ $I_D=40A$

$R_{DS(ON)}@10V<8m\Omega$ (Typ.7.5m Ω)

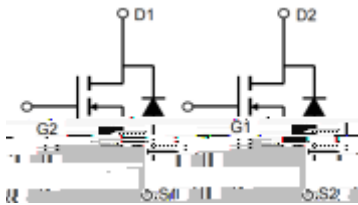
$R_{DS(ON)}@4.5V<15m\Omega$ (Typ.11m Ω)

HF Product.

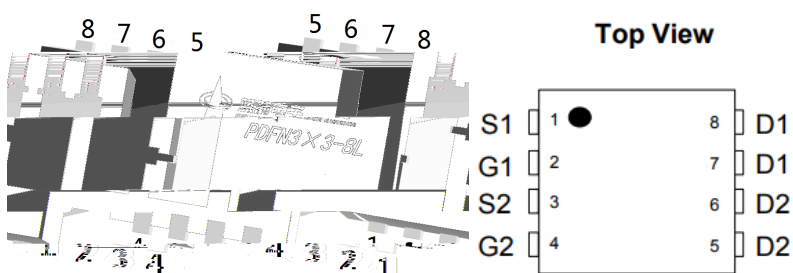
/ Applications

Battery protection switch, Mobile device battery charging and discharging, Load switch.

/ Equivalent Circuit



/ Pinning



/ Marking

See Marking Instructions.

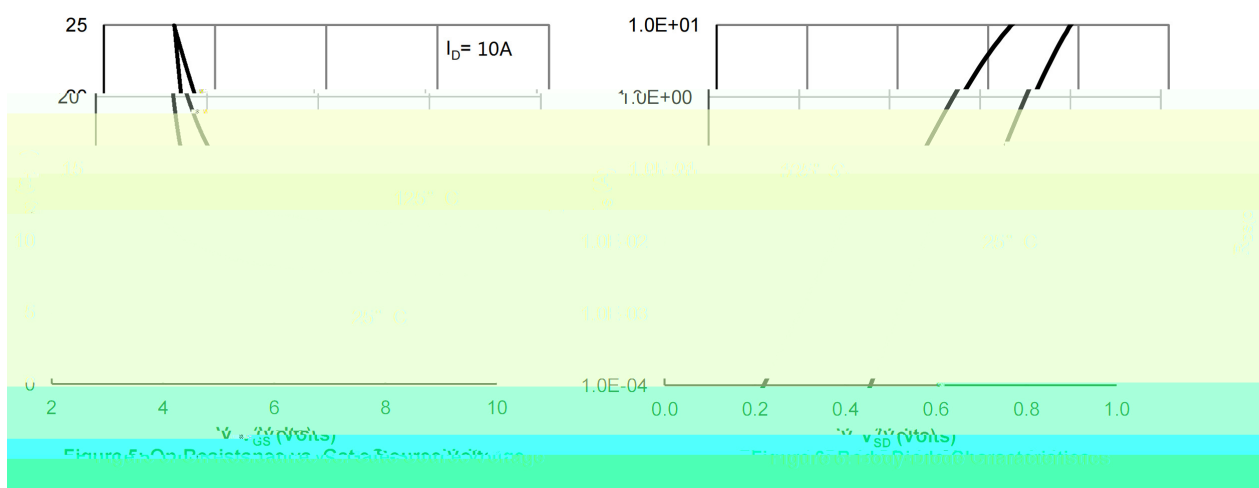
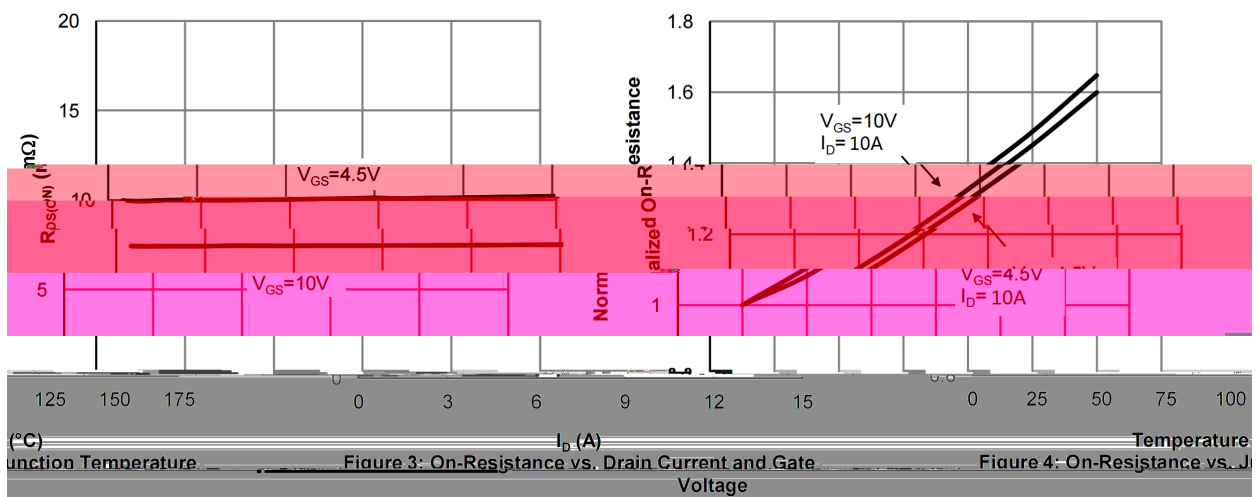
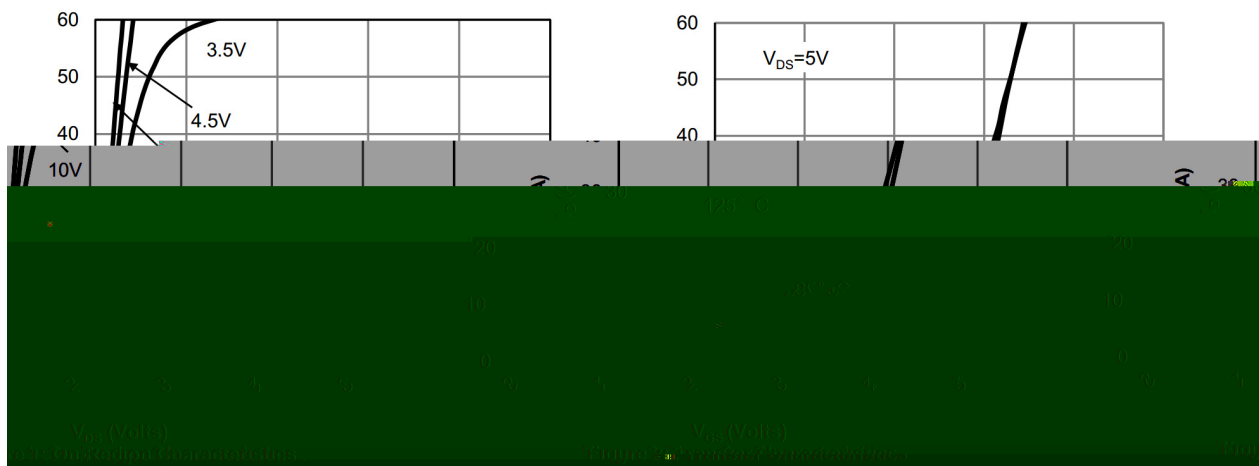
/ Absolute Maximum Ratings(Ta=25)

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	30	V
Drain Current		$I_D(T_C=25^\circ\text{C})$	40	A
Drain Current - Pulsed		I_{DM}	88	A
Gate-Source Voltage		V_{GS}	± 20	V
Power Dissipation		$P_D(T_C=25^\circ\text{C})$	21	W
Operating and Storage Temperature Range		T_J, T_{stg}	-55 to 150	
Junction-to-Ambient	Steady-State	$R_{\theta JA}$	63.5	/W
Junction-to-Case	Steady-State	$R_{\theta JC}$	6	

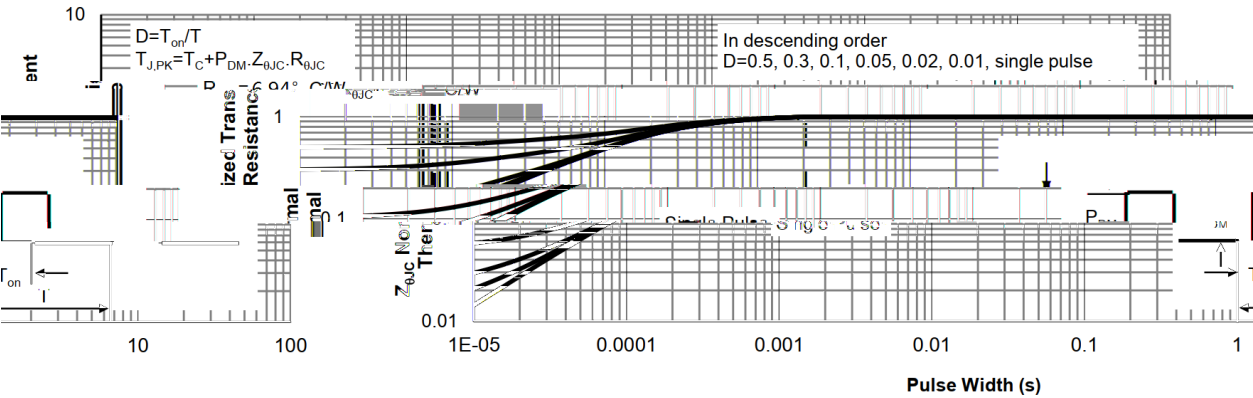
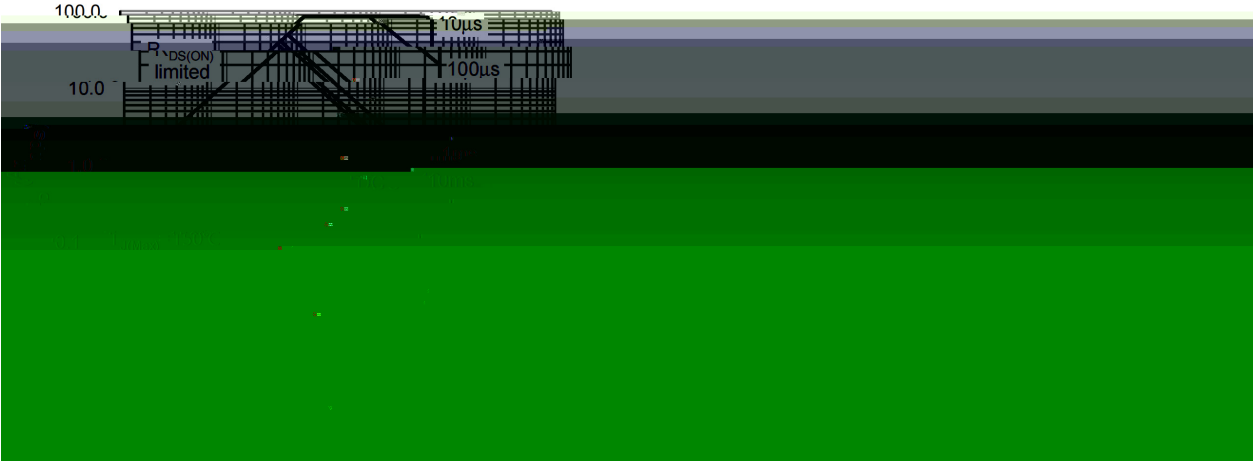
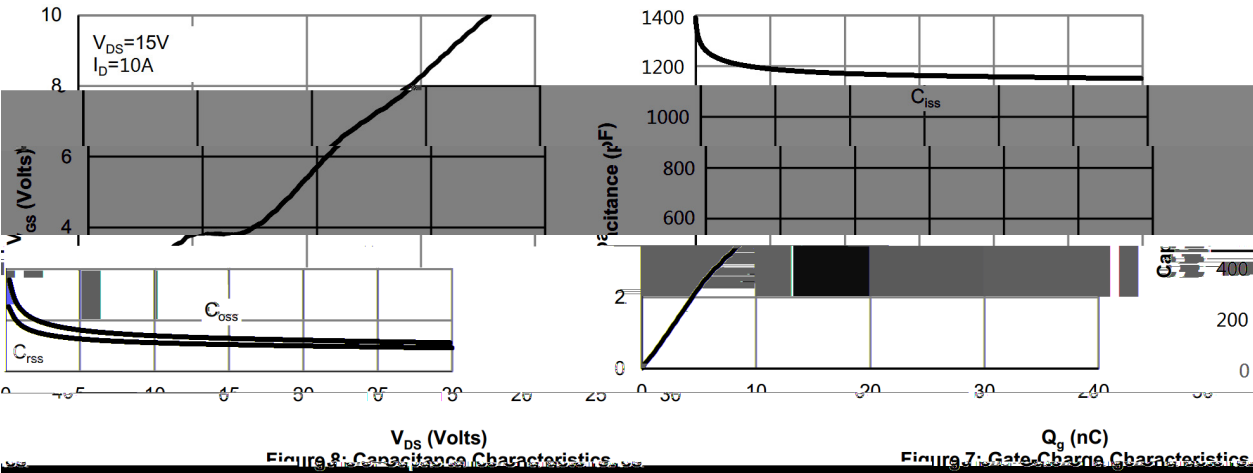
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DS}	$V_{GS}=0V$ $I_D=250\mu A$	30	35.5		V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=30V$ $V_{GS}=0V$			1.0	μA
Gate-Body leakage current	I_{GSS}	$V_{GS}=\pm 20V$ $V_{DS}=0V$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=250\mu A$	1.0	1.8	2.5	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V$ $I_D=10A$		7.5	8	m Ω
		$V_{GS}=4.5V$ $I_D=10A$		11	15	m Ω
Diode Forward Voltage	V_{SD}	$V_{GS}=0V$ $I_S=1.0A$			1.4	V
Input Capacitance	C_{iss}	$V_{DS}=25V$ $V_{GS}=0V$ $f=1.0MHz$		1170		pF
Output Capacitance	C_{oss}			110		pF
Reverse Transfer Capacitance	C_{rss}			100		pF
Gate resistance	R_g	$V_{DS}=0V$ $V_{GS}=0V$ $f=1.0MHz$		3.7		
Total Gate Charge	$Q_{g(10V)}$	$V_{GS}=10V$ $V_{DS}=15V$ $I_D=10A$		40		nC
Total Gate Charge	$Q_{g(4.5V)}$			22		nC
Gate-Source Charge	Q_{gs}			11		nC
Gate-Drain Charge	Q_{gd}			5		nC
Turn-On Delay Time	$t_{d(on)}$	$V_{DS}=15V$ $V_{GS}=10V$ $R_L=0.75\Omega$ $R_{GEN}=3\Omega$		11		ns
Turn-On Rise Time	t_r			14		ns
Turn-Off Delay Time	$t_{d(off)}$			38		ns
Turn-Off Fall Time	t_f			10		ns

I Electrical Characteristic Curve



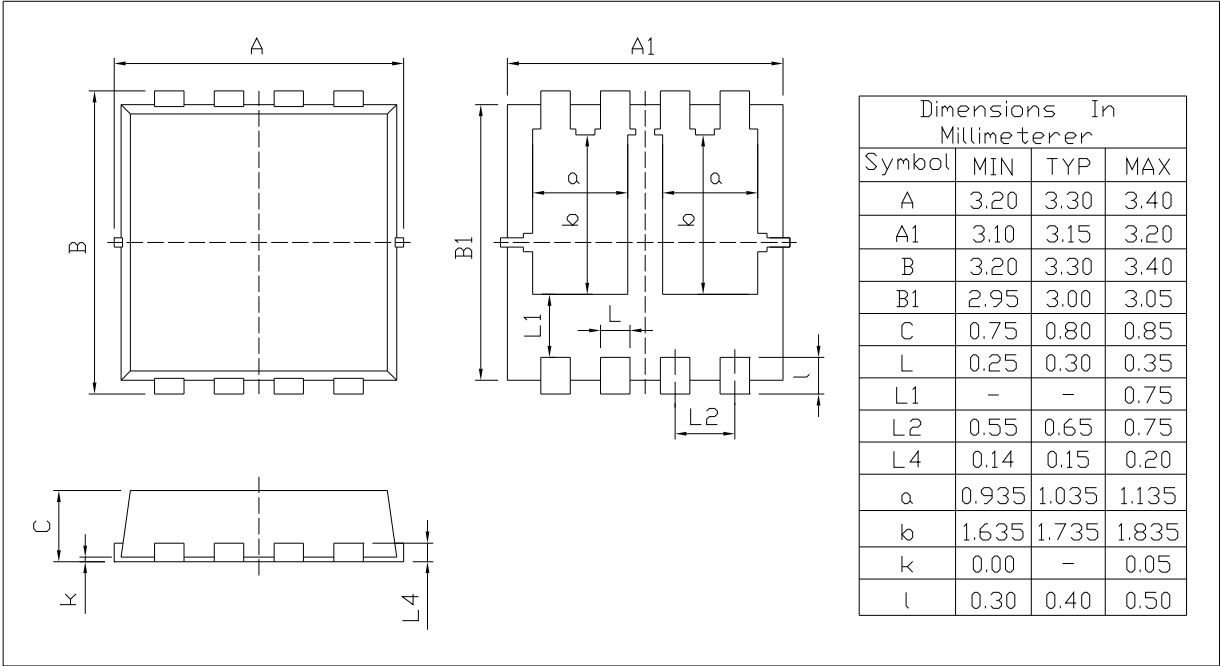
N- / N-CHANNEL Electrical Characteristic Curve



/ Package Dimensions

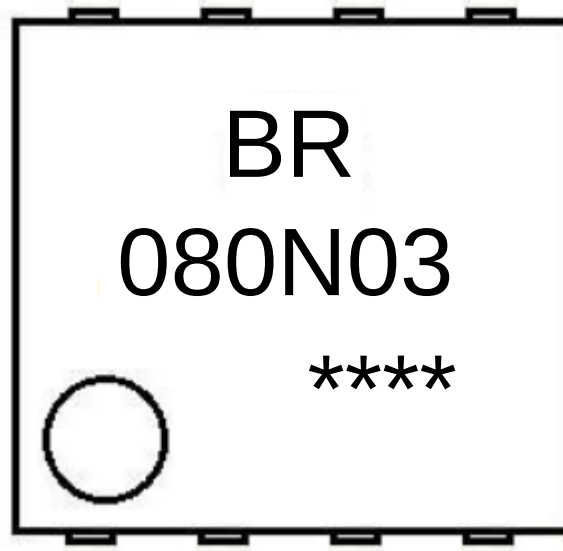
PDFN3X3-8L

Unit:mm



Rev.00 202011

/ Marking Instructions



BR

080N03

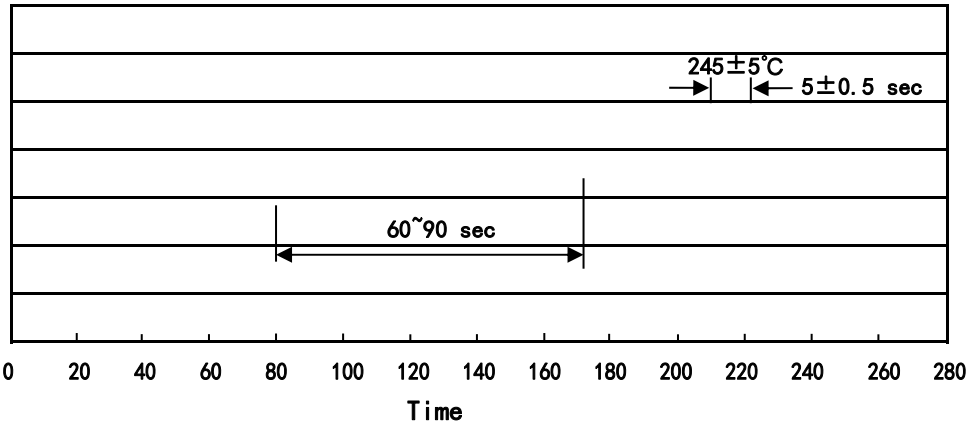
Note:

BR: Company Code

080N03: 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	Units					Dimension (unit mm ³)		
	Units/Reel /	Reels/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Reel	Inner Box	Outer Box
PDFN3×3-8L	5,000	2	10,000	6	60,000	13 ×12	360×360×50	380×335×366

/ Notices