

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	100	V
Drain Current - Continuous	I_D	55	A
Drain Current – Pulsed	I_{DM}	175	A
Gate-Source Voltage	V_{GS}	± 20	V
Power Dissipation	$P_D(T_c=25^\circ\text{C})$	48	W
Single Pulse Avalanche Energy(L=0.5mH)	E_{AS}	288	mJ
Junction and Storage Temperature Range	T_j, T_{stg}	-55 to 150	
Thermal resistance, junction - ambient	$R_{\theta JA}$	55	/ W
Thermal resistance, junction - case	$R_{\theta JC}$	2.6	

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V$ $I_D=250\mu A$	100	109		V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=100V$ $V_{GS}=0V$			1.0	μA
Gate-Body Leakage Current Forward	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	1.6	2.5	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V$ $I_D=20A$		7.3	8.5	$m\Omega$
	$R_{DS(on)}$	$V_{GS}=4.5V$ $I_D=10A$		9.3	12	$m\Omega$
Drain-Source Diode Forward Voltage	V_{SD}	$V_{GS}=0V$ $I_S=1A$			1.2	V
Reverse Recovery Time	t_{rr}	$V_D=50V$, $I_D=20A$		24.8		ns
Reverse Recovery Charge	Q_{rr}	$di/dt=100A/\mu s$		18		nC
Gate resistance	R_g	$V_{GS}=0V$ $V_{DS}=0V$, $f=1MHz$		1.3		Ω
Input Capacitance	C_{iss}	$V_{DS}=25V$ $V_{GS}=0V$ $f=1.0MHz$		1520		pF
Output Capacitance	C_{oss}			700		
Reverse Transfer Capacitance	C_{rss}			50		
Total Gate Charge	$Q_{g(10V)}$	$V_{GS}=10V$, $V_{DS}=50V$, $I_D=20A$		24.3		nC
Total Gate Charge	$Q_{g(4.5V)}$			11.7		
Gate Source Charge	Q_{gs}			2.1		
Gate Drain Charge	Q_{gd}			4.2		



Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	$t_{d(on)}$	$V_{GS}=10V,$ $V_{DS}=50V,$ $I_D=20A,$ $R_g=3\ \Omega$		9.7		ns
Turn-On Rise Time	t_r			4.7		
Turn-Off Delay Time	$t_{d(off)}$			28.0		
Turn-Off Fall Time	t_f			6.0		

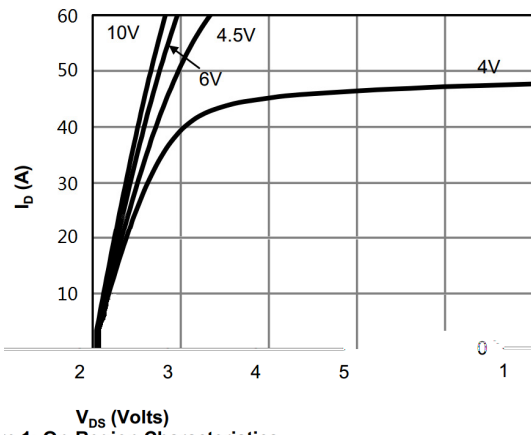


Figure 1: On-Region Characteristics

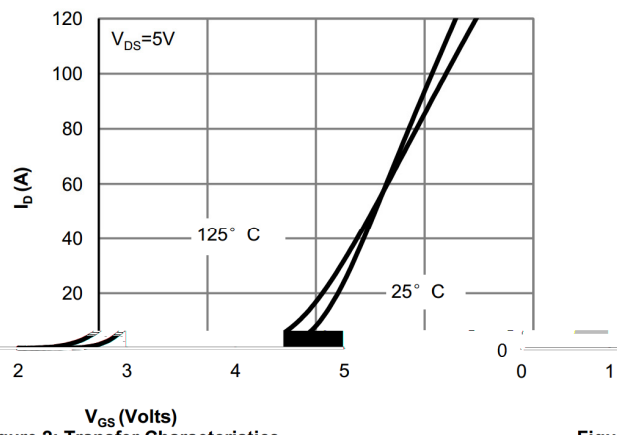


Figure 2: Transfer Characteristics

Figure

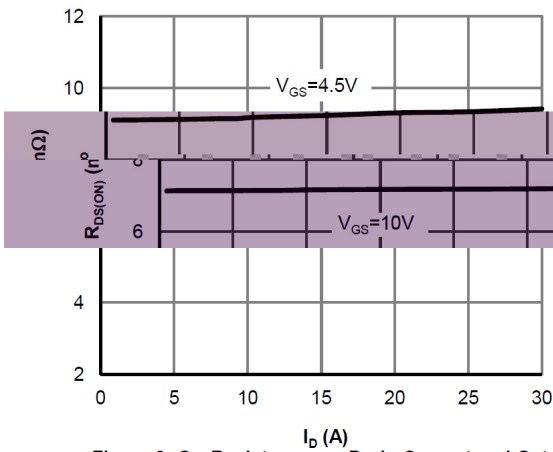


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

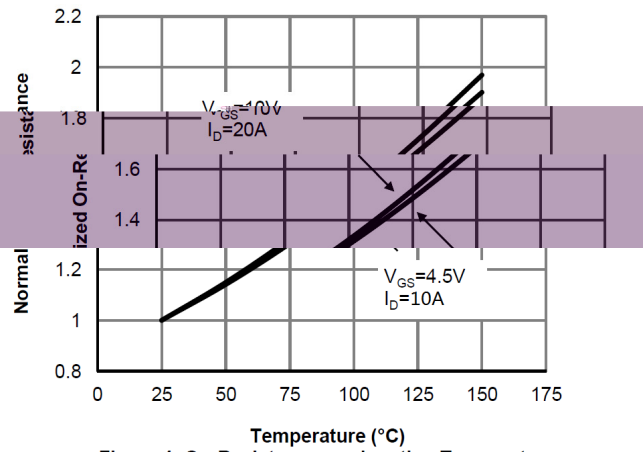


Figure 4: On-Resistance vs. Junction Temperature

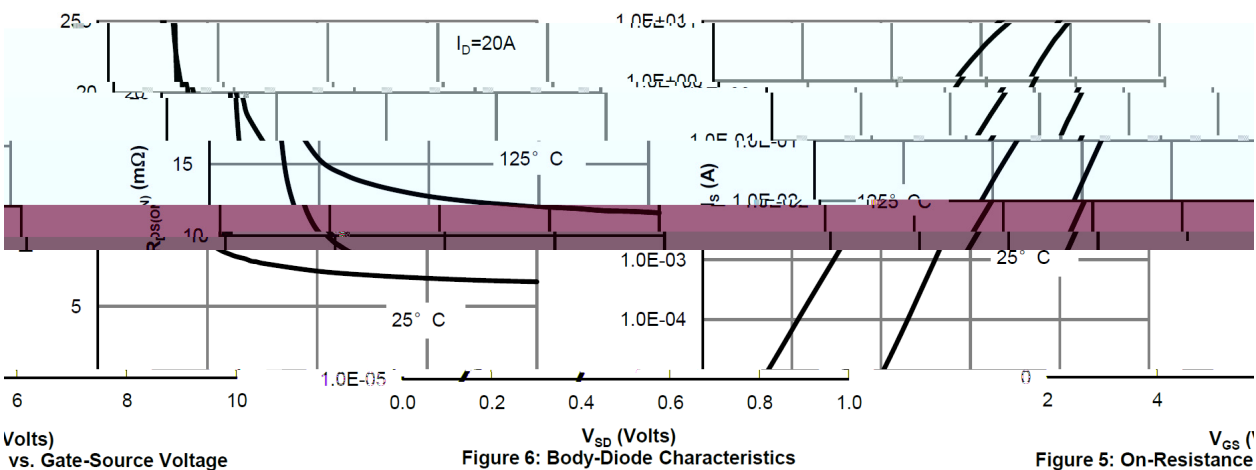


Figure 5: On-Resistance vs. Gate-Source Voltage

Figure 6: Body-Diode Characteristics

Figure 5: On-Resistance

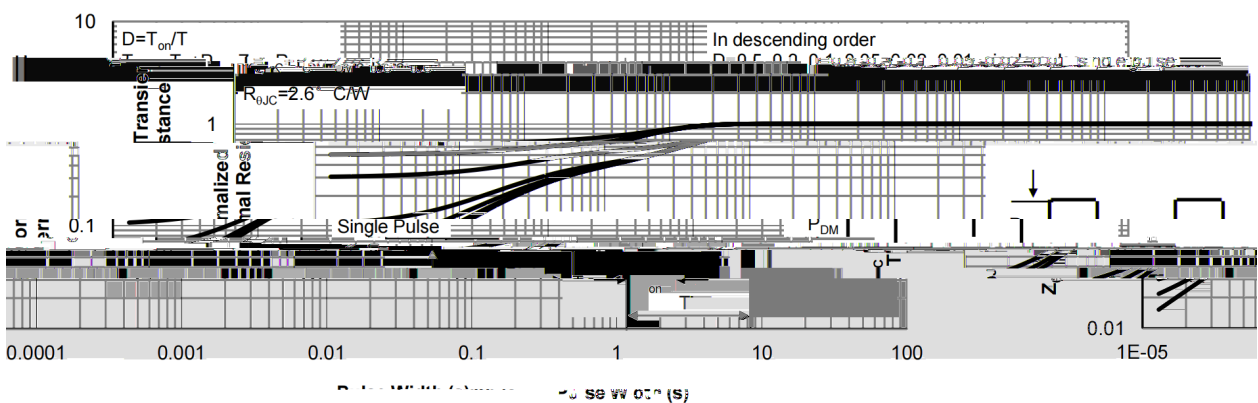
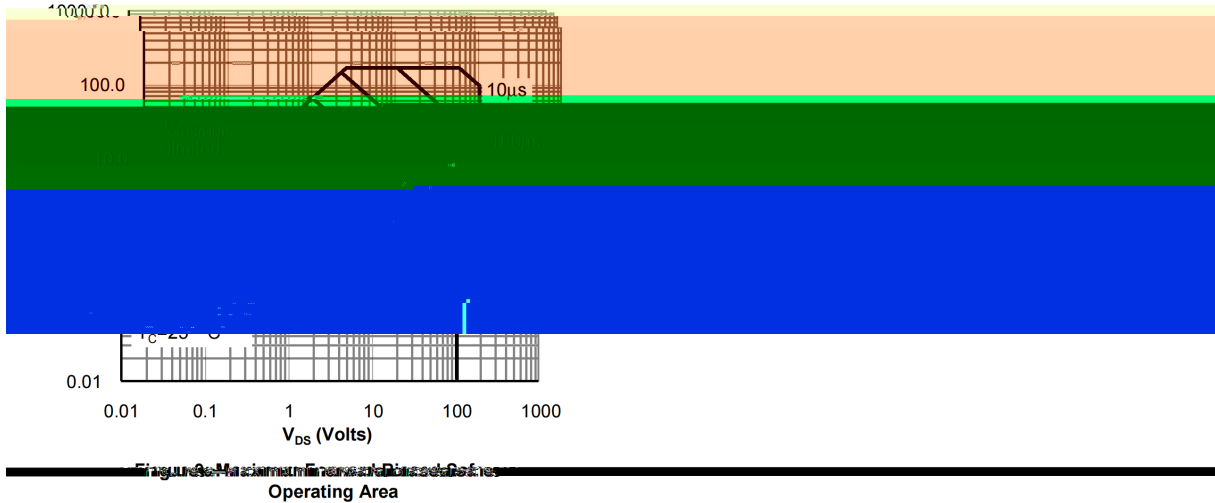
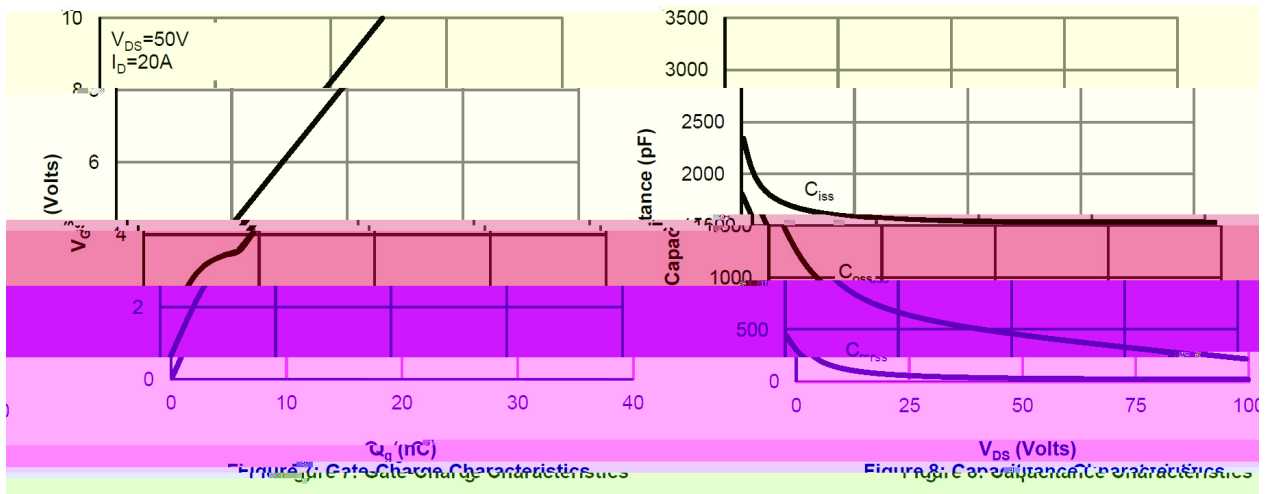
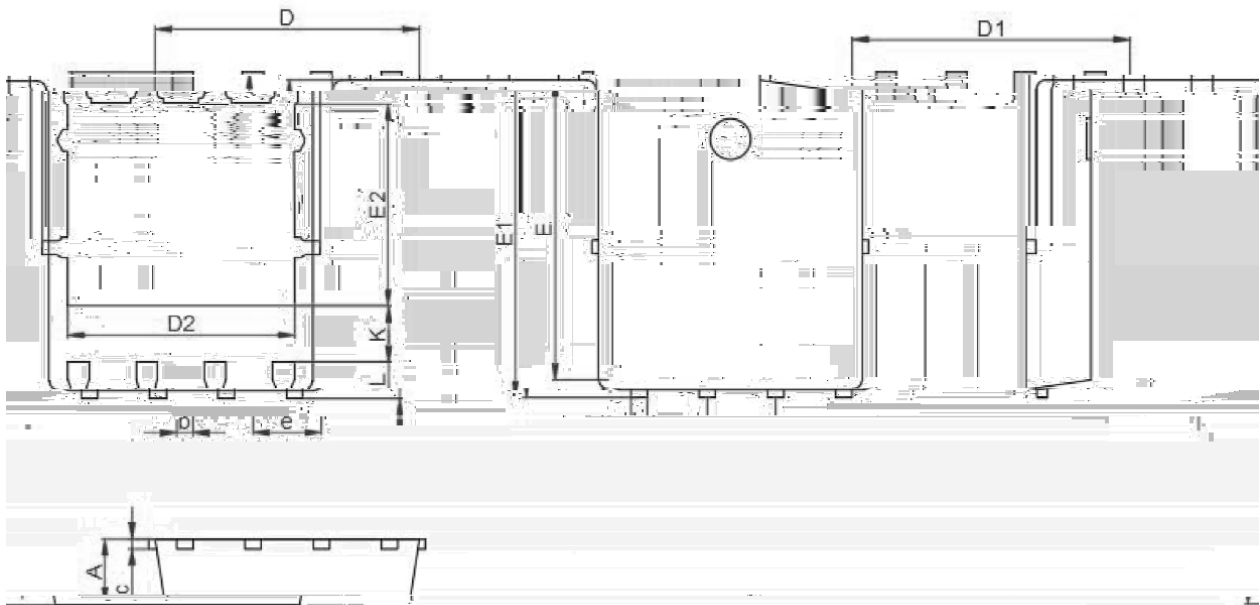
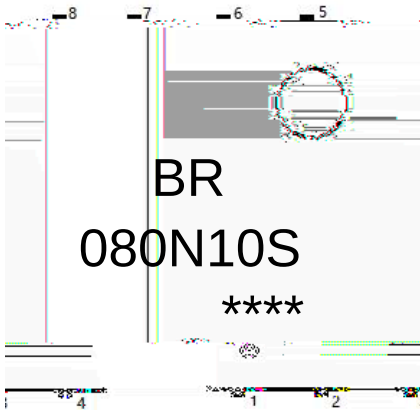


Figure 10: Normalized Maximum Transient Thermal Impedance

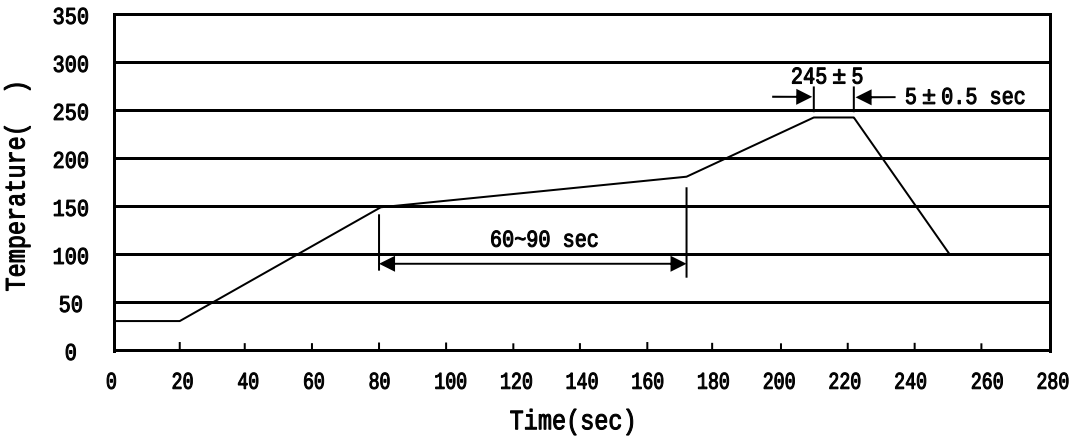


Symbol	Dimensions In Millimeters	
	Min	Max
A	0.90	1.10
D	4.80	5.00
D1	4.80	5.20
D2	3.80	4.20
E	5.65	5.85
E1	5.80	6.20
E2	3.30	3.65
K	1.30 BSC	
e	1.27 BSC	
b	0.25	0.35
c	0.20	0.30
L	0.45	0.75



BR
080N10S

Note	
BR	Company Code
080N10S	Product Type Code
****	Lot No. Code, code change with Lot No



Note:

- 1

150 180

60 90sec;

1.Preheating:150~180 °C , Time:60~90sec.
- 2

245±5

5±0.5sec;

2.Peak Temp.:245±5 °C , Duration:5±0.5sec.
- 3

2 10

/sec.

3. Cooling Speed: 2~10 °C /sec.

260±5

10±1 sec.

Temp.:260±5

Time:10±1 sec

/ REEL

Package Type	Units					Dimension (unit mm ³)		
	/	/	/	/	/			
PDFN5×6	5,000	2	10,000	6	60,000	13"×12	360×360×50	380×335×366

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