

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	500	V
Drain Current	$I_D(T_c=25^\circ\text{C})$	1.4	A
Drain Current - Pulsed	I_{DM}	4.3	A
Gate-Source Voltage	V_{GS}	± 30	V
Single Pulsed Avalanche Energy	E_{AS}	112.5	mJ
Avalanche Current	I_{AS}	4.5	A
Power Dissipation	$P_D(T_c=25^\circ\text{C})$	25	W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to 150	
Junction to Case	$R_{\theta JC}$	8.3	/W

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DS}	$V_{GS}=0V$ $I_D=250\text{ A}$	500			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=500V$ $V_{GS}=0V$			1	A
Gate-Body Leakage Current Forward	I_{GSS}	$V_{GS}=\pm 30V$ $V_{DS}=0V$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=250\text{ A}$	2.0	3.0	4.0	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V$ $I_D=1.5A$		2.8	3.5	
Drain-Source Diode Forward Voltage	V_{SD}	$V_{GS}=0\text{ V}$ $I_S=3.0A$			1.4	V
Input Capacitance	C_{iss}	$V_{DS}=25V$ $V_{GS}=0V$ $f=1.0MHz$		220		pF
Output Capacitance	C_{oss}			130		
Reverse Transfer Capacitance	C_{rss}			5		
Total Gate Charge	Q_G	$V_{DS}=400V$ $I_D=3.0A$ $V_{GS}=10V$		12.5		nC
Gate-Source Charge	Q_{GS}			3.2		
Gate-Drain Charge	Q_{GD}			4.2		

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	$t_{d(on)}$	V_{DD}				

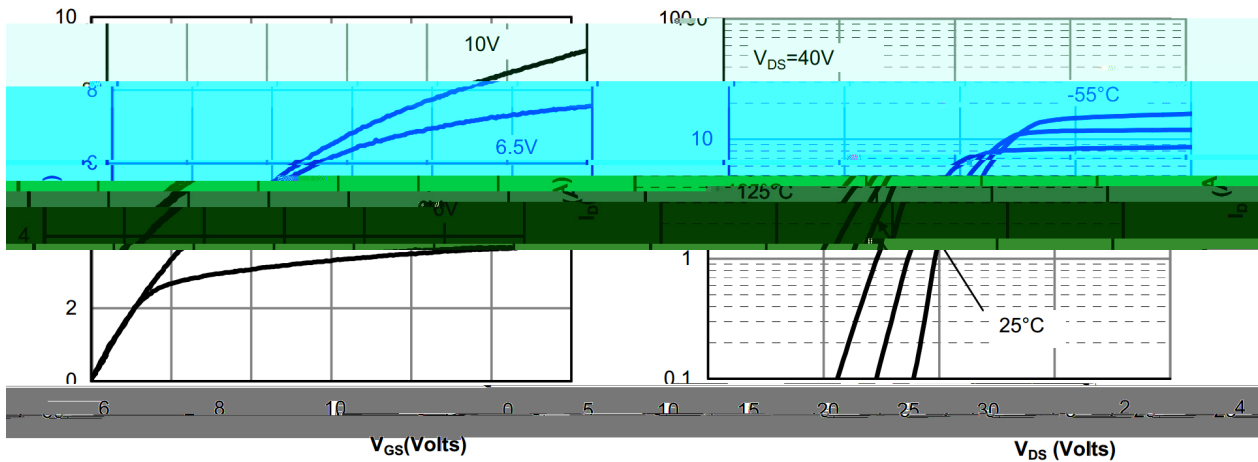


Figure 2: Transfer Characteristics

Fig 1: On-Region Characteristics

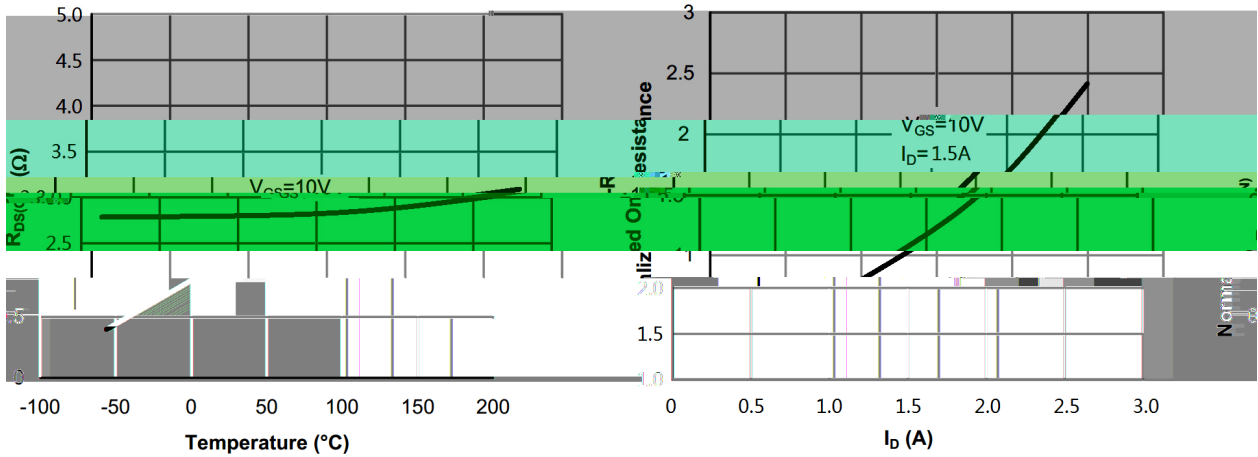
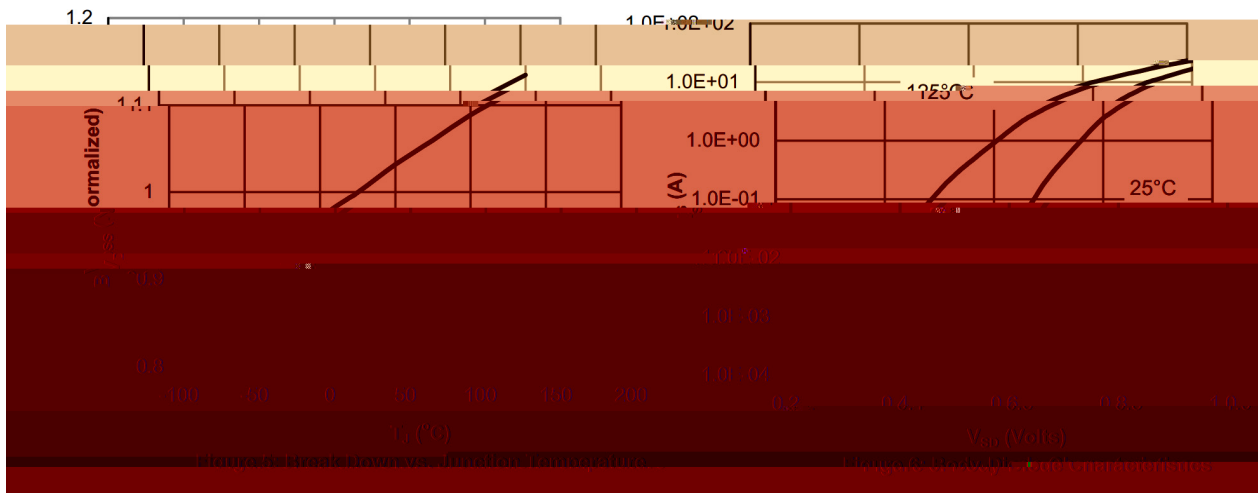
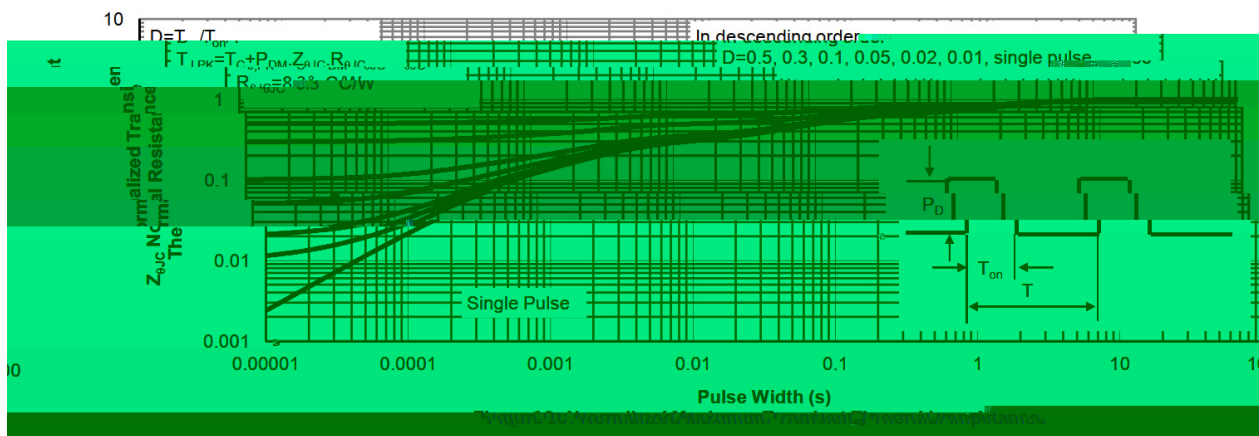
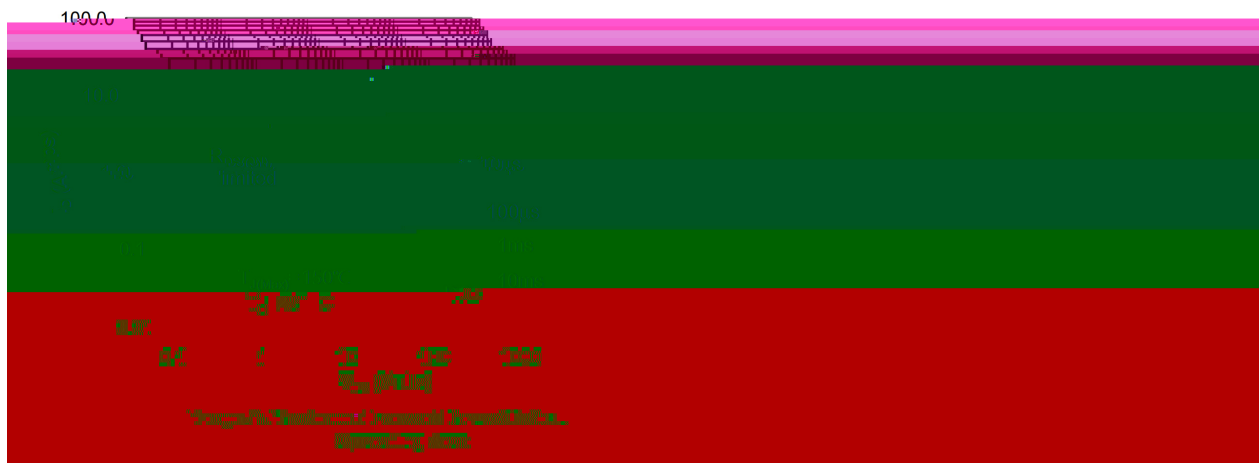
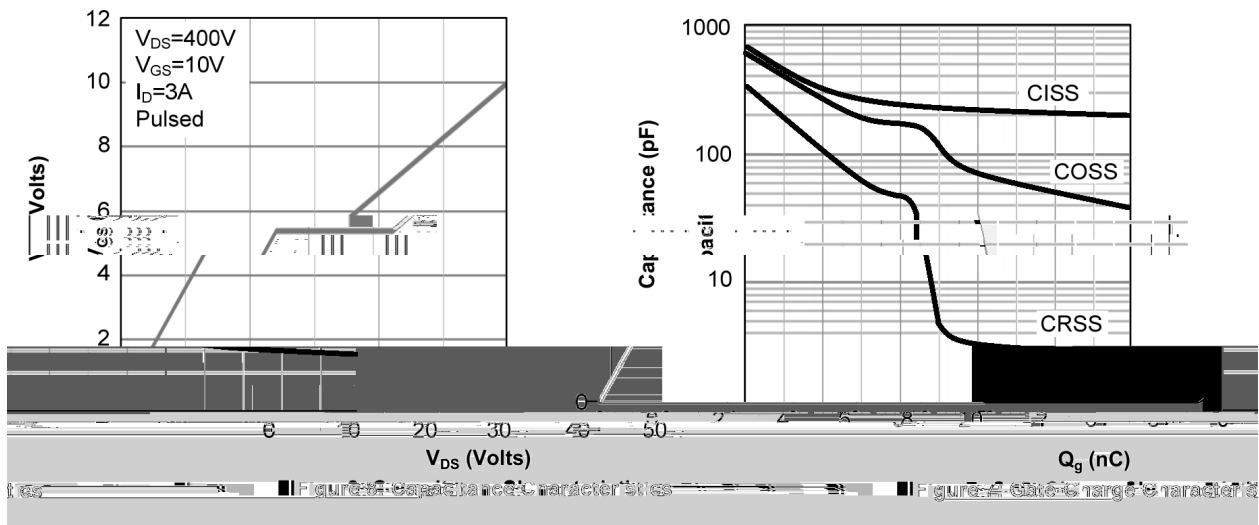


Figure 4: On-Resistance vs. Temperature

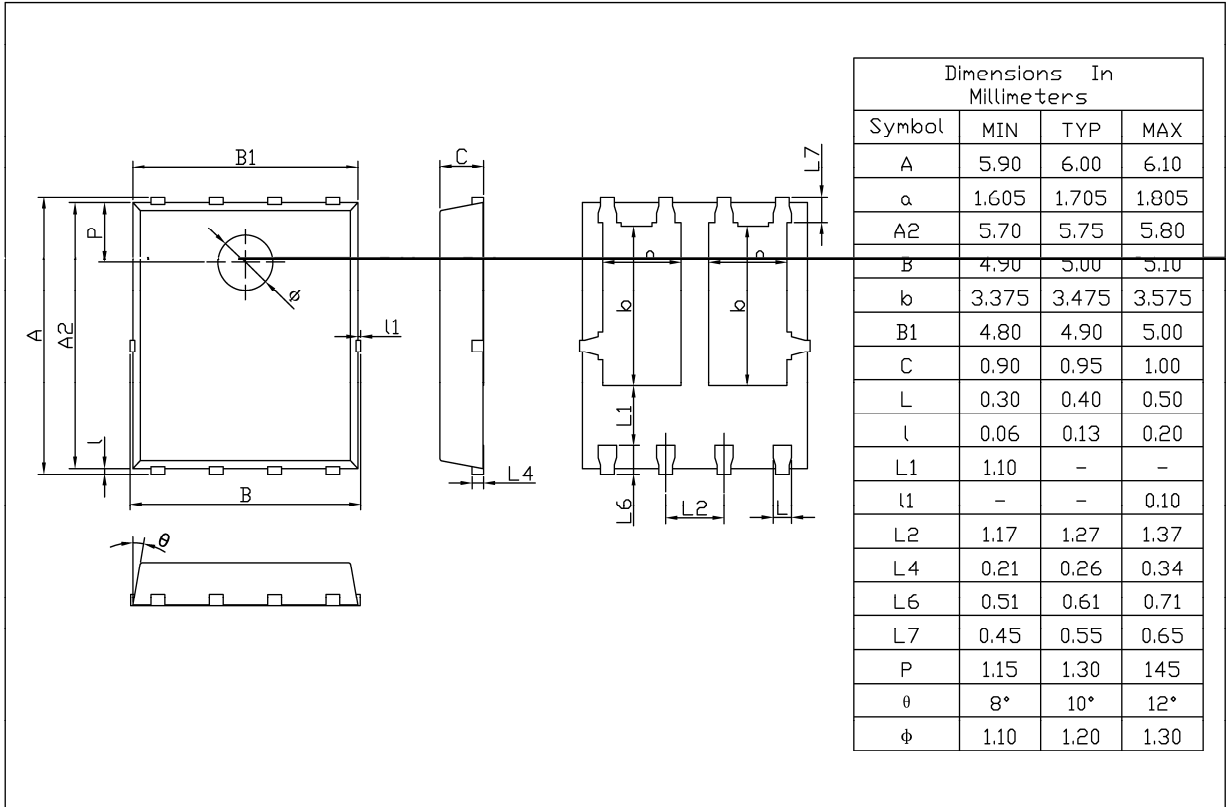
Figure 3: On-Resistance vs. Drain Current and Temperature



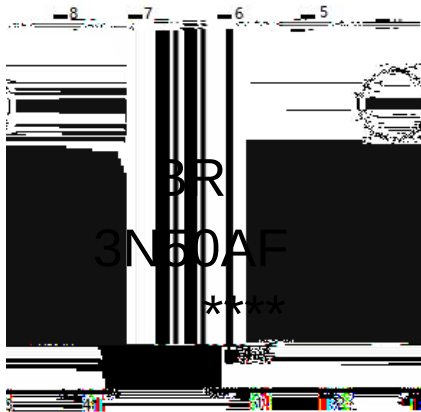


PDFN5 X6A

Unit:mm



Rev.01 202209



3N50AF

Note

BR	Company Code
3N50AF	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.

260 5

10 1 sec.

Temp.:260±5

Time:10±1 sec

/ REEL

Package Type	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	Units/Reel	Reels/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Reel	Inner Box	Outer Box
PDFN5×6A	5,000	2	10,000	6	60,000	13"×12	360×360×50	380×335×366