BRYM3N50AF

/ Absolute Maximum Ratings(Ta=25)

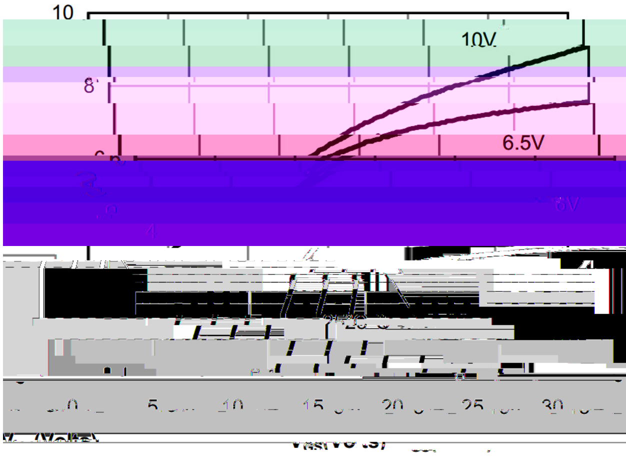
Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DSS}	500	V
Drain Current	I_D(Tc=25)	1.4	A
Drain Current - Pulsed	I_{DM}	4.3	A
Gate-Source Voltage	V_{GS}	±30	V
Single Pulsed Avalanche Energy	E_{AS}	112.5	mJ
Avalanche Current	I_{AS}	4.5	A
Power Dissipation	P_D(Tc=25)	25	W
Operating and Storage Temperature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

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}=0V I_D=250εA	500			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=500V V_{GS}=0V			1	εA
Gate-Body Leakage Current Forward	I_{GSS}	V_{GS}=±30V V_{DS}=0V			±100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS} I_D=250εA	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	q
Drain-Source Diode Forward Voltage	V_{SD}	V_{GS} = 0 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

/ Electrical Characteristic Curve



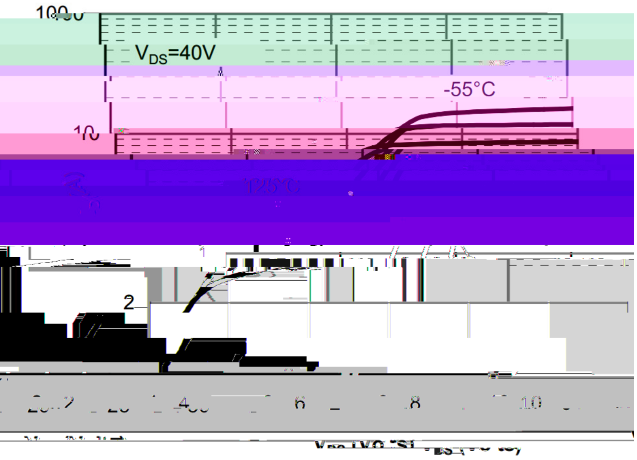
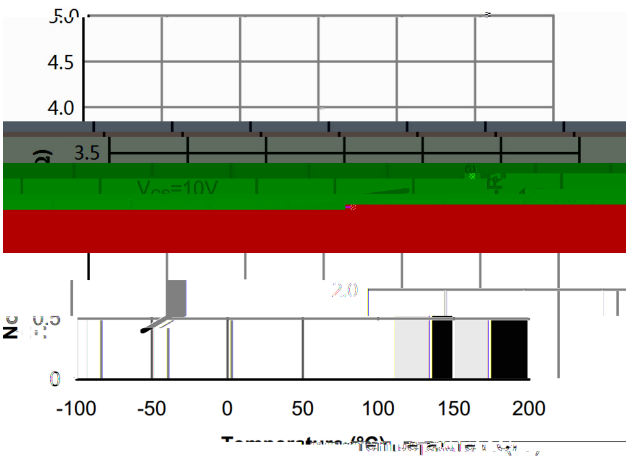


Figure 2: Transfer Characteristics

Figure 1: On-Region Characteristics



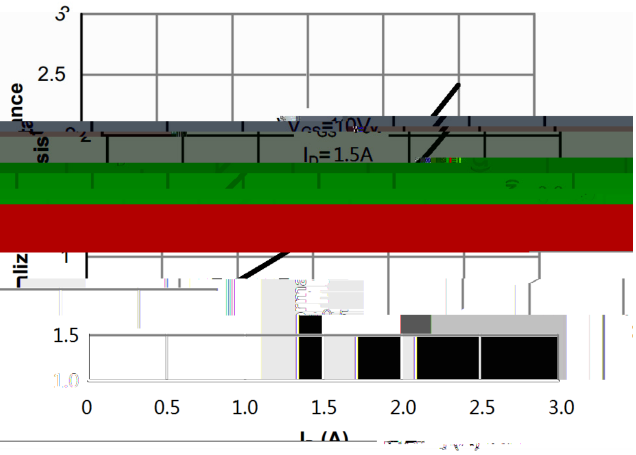
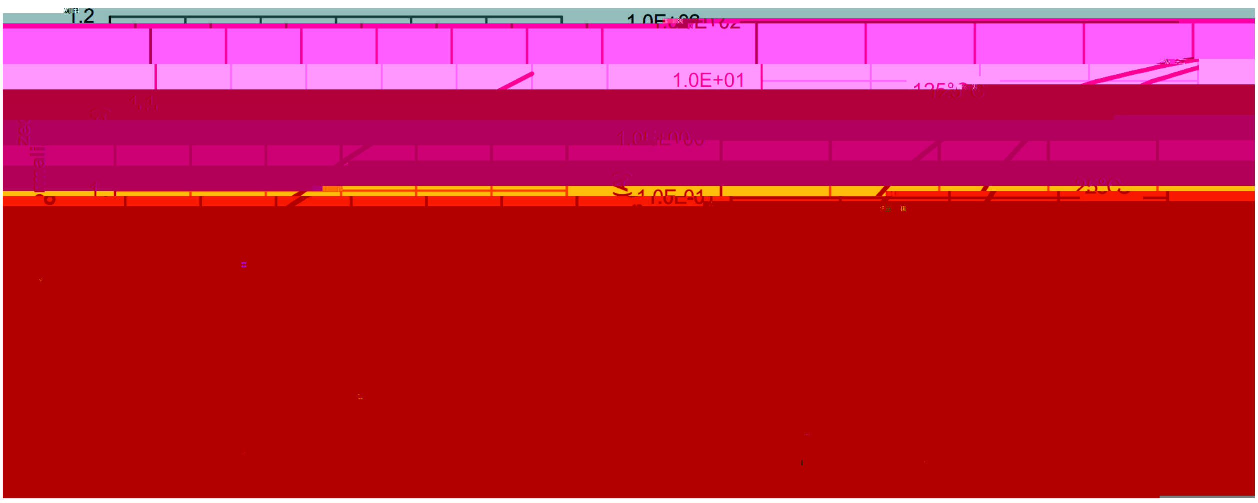


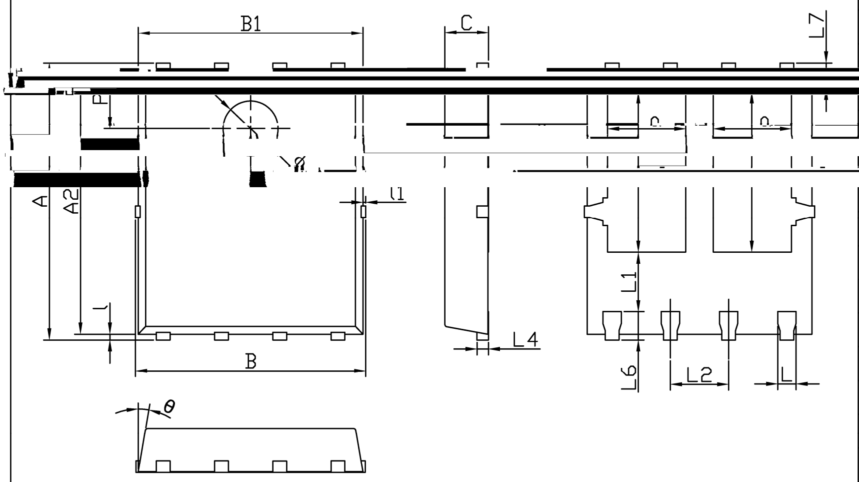
Figure 4: On-Resistance Variation vs Temperature

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



/ Package Dimensions

PDFN5X6-8L Unit:mm



Symbol	Dimensions In Millimeters MIN	TYP	MAX
A	5.90	6.00	6.10
e	1.605	1.705	1.805
A2	3.70	3.75	3.80
B	4.90	5.00	5.10
b	3.375	3.475	3.575
B1	4.80	4.90	5.00
C	0.90	0.95	1.00
L	0.30	0.40	0.50
l	0.06	0.13	0.20
L1	1.10	–	–
l1	–	–	0.10
L2	1.17	1.27	1.37
L4	0.21	0.26	0.34
L6	0.51	0.61	0.71
L7	0.45	0.55	0.65
P	1.15	1.30	145
θ	8°	10°	12°
Φ	1.10	1.20	1.30

Rev.01 202209

/ Marking Instructions

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)

1 150 180 60 90sec;
2 245 5 5 0.5sec;
3 2 10 /sec.

Note:
1.Preheating:150~180 , Time:60~90sec.
2.Peak Temp.:245 5 , Duration:5 0.5sec.
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