

BRCS900N10SYM

Rev.C Feb.-2023

/ Descriptions

PDFN5×6A N

Dual N-CHANNEL MOSFET in a PDFN5×6A Plastic Package.

/ Features

Dual N-Ch

$V_{DS}(V)=100V$

$I_D=13.7A$

$R_{DS(ON)}<90m$ ($V_{GS}=10V$)

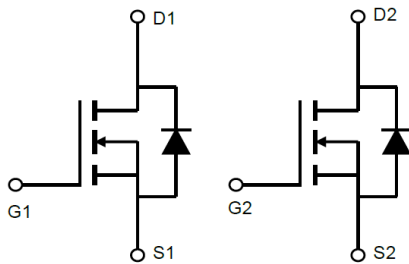
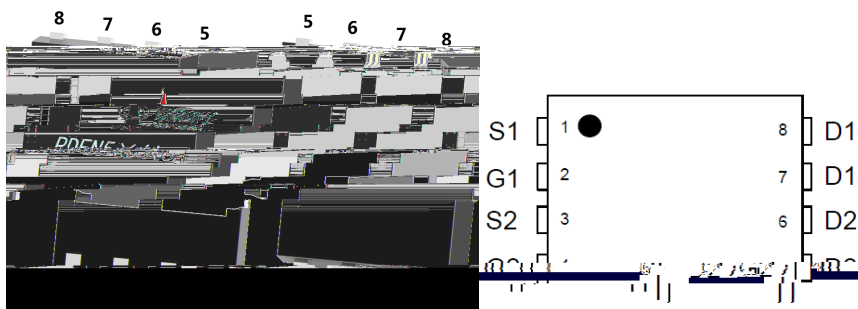
$R_{DS(ON)}<130m$ ($V_{GS}=4.5V$)

HF Product.

/ Applications

PWM LED

PWM Application, Load Switch, Power Management, Dimming LED.



/ Marking

See Marking Instructions.

/ Absolute Maximum Ratings($T_a=25^\circ\text{C}$)

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V _{DS}	100	V
Continuous Drain Current		I _D	13.7	A
Pulsed Drain Current		I _{DM}	48	A
Gate-Source Voltage		V _{GS}	± 20	V
Power Dissipation		P _D (T _c =25 °C)	35.7	W
Avalanche energy(L=0.5mH)		E _{AS}	2.7	mJ
Avalanche Current(L=0.5mH)		I _{AS}	3.3	A
Junction and Storage Temperature Range		T _j , T _{stg}	-55 to 150	
Maximum Junction-to-Ambient	t ≤ 10s	R _{θJA}	32	/ W
	Steady-State		62.5	
Maximum Junction-to-Case	Steady-State	R _{θJC}	3.5	

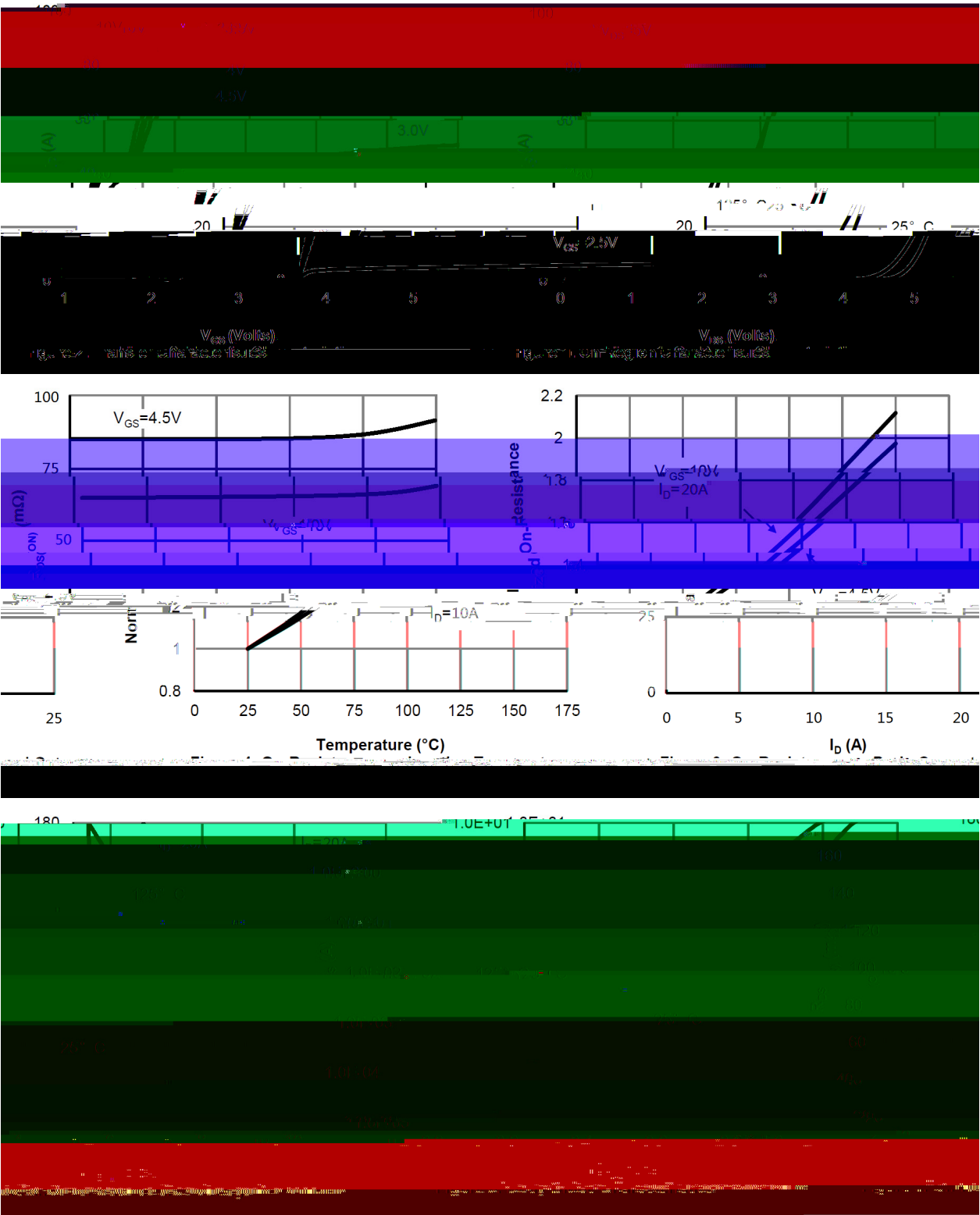
/ Electrical Characteristics($T_a=25^\circ\text{C}$)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$I_D=250\mu\text{A}, V_{GS}=0\text{V}$	100			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=100, V_{GS}=0\text{V}$			1.0	μA
Gate-Body leakage current	I_{GSS}	$V_{DS}=0\text{V}, V_{GS}=\pm 20\text{V}$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu\text{A}$	1	1.4	2.5	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10\text{V}, I_D=20\text{A}$		68	90	m Ω
		$V_{GS}=4.5\text{V}, I_D=10\text{A}$		84	130	
Diode Forward Voltage	V_{SD}	$I_S=1\text{A}, V_{GS}=0\text{V}$			1.2	V
Input Capacitance	C_{iss}	$V_{DS}=25\text{V}, V_{GS}=0\text{V}$ $f=1.0\text{MHz}$		180		pF
Output Capacitance	C_{oss}			105		
Reverse Transfer Capacitance	C_{rss}			15		
Gate resistance	R_g	$V_{GS}=0\text{V}, V_{DS}=0\text{V}$ $f=1\text{MHz}$		1.5		
Total Gate Charge	$Q_{g(10V)}$	$V_{GS}=10\text{V}, V_{DS}=50\text{V},$ $I_D=5\text{A}$		6.5		nC
Total Gate Charge	$Q_{g(4.5V)}$			3		
Gate Source Charge	Q_{gs}			1.5		
Gate Drain Charge	Q_{gd}			1.5		

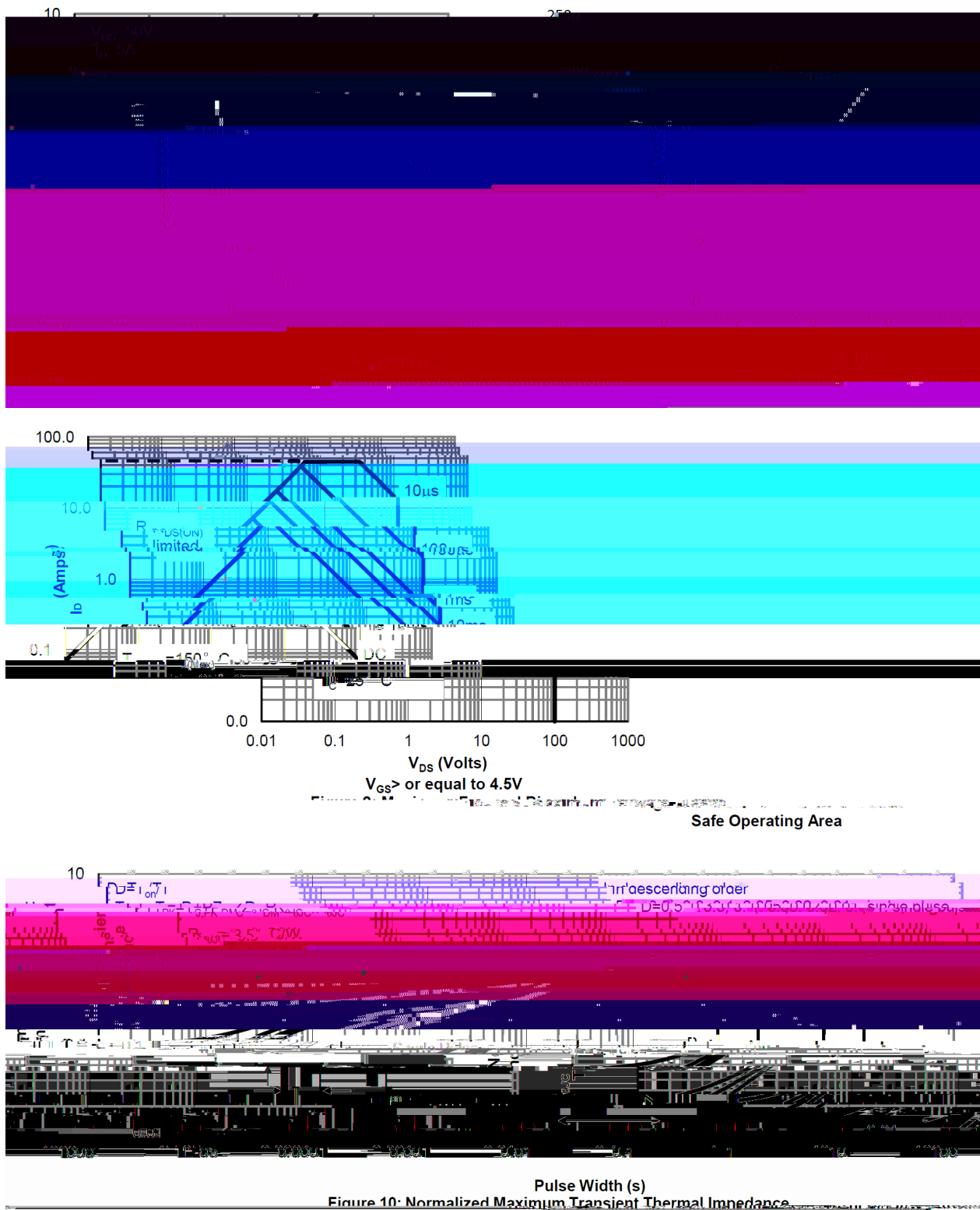

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	$t_{d(on)}$	$V_{GS}=10V$ $V_{DS}=50V$ $R_L=10\Omega$ $R_{GEN}=3\Omega$		4		ns
Turn-On Rise Time	t_r			2		
Turn-Off Delay Time	$t_{d(off)}$			15		
Turn-Off Fall Time	t_f			2		

/ Electrical Characteristic Curve



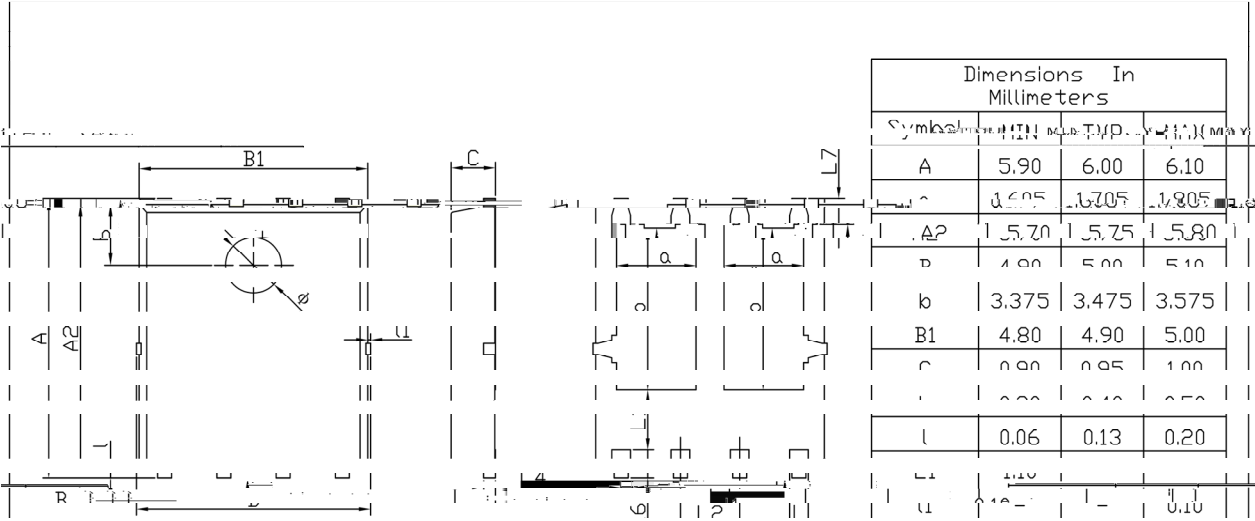
/ Electrical Characteristic Curve



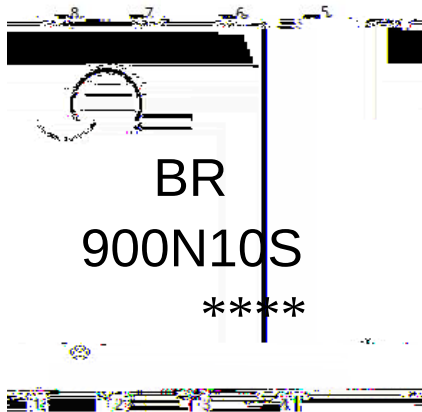
/ Package Dimensions

PDFN5 X6A

Unit:mm



/ Marking Instructions



BR	
900N10S	

Note	
BR	Company Code
900N10S	Product Type
****:	Lot No. Code, code change with Lot No

() / Temperature Profile for IR Reflow Soldering(Pb-Free)

- 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