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BRCS850N10SDPQ

Rev.A Aug.-2022

DATA SHEET

/ Descriptions

TO-252 n o o p q r MOS s t @ u k

N-CHANNEL MOSFET in a TO-252 Plastic Package.

/ Features

v w x Z y z { b | Z J K L M N O P Q R S Z } ~ E F k

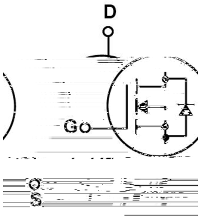
Low On-Resistance, fast switching, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

/ Applications

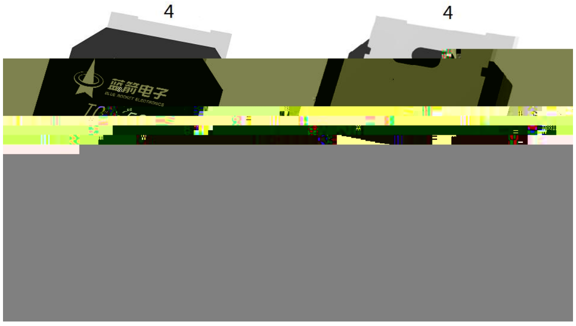
¡ ¢ £ % ¤ ¥ u ¦ k § ¨ © ª ¡ ¢ « ¬ - ® Z U V C D @ A % W X R S k

Power Management in DC/DC Converter.For LED Backlight DC-DC Boost Converter Solution, Meet the stringent requirements of automotive applications.

/ Equivalent Circuit



/ Pinning



PIN1 j G PIN 2 j D PIN 3 j S PIN 4 j D

/ Marking

¯ [\ ° ± k

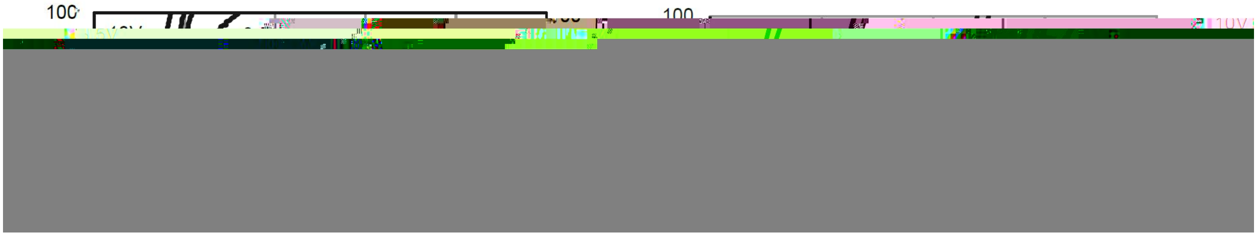
See Marking Instructions.

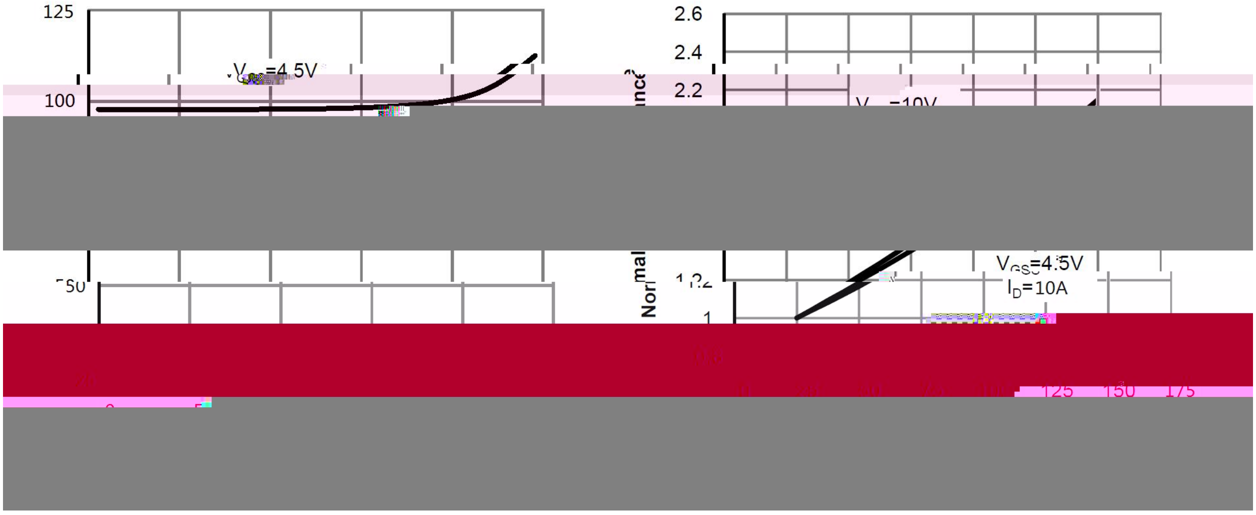
Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	100	V
Drain Current		I_D(Tc=25℃)	12	A
Drain Current - Pulsed		I_{DM}	28	A
Gate-Source Voltage		V_{GS}	±20	V
Single Pulsed Avalanche Energy		E_{AS}	35	mJ
Avalanche Current		I_{AS}	2.1	A
Power Dissipation		P_D(Tc=25℃)	21.5	W
Operating and Storage Temperature Range		T_J,T_{stg}	-55 to 150	℃
Junction-to-Ambient	t⩽10	$R_{\theta JA}$	20	℃/W
Junction-to-Ambient	Steady-State		50	
Junction-to-Case	Steady-State	$R_{\theta JC}$	5.8	

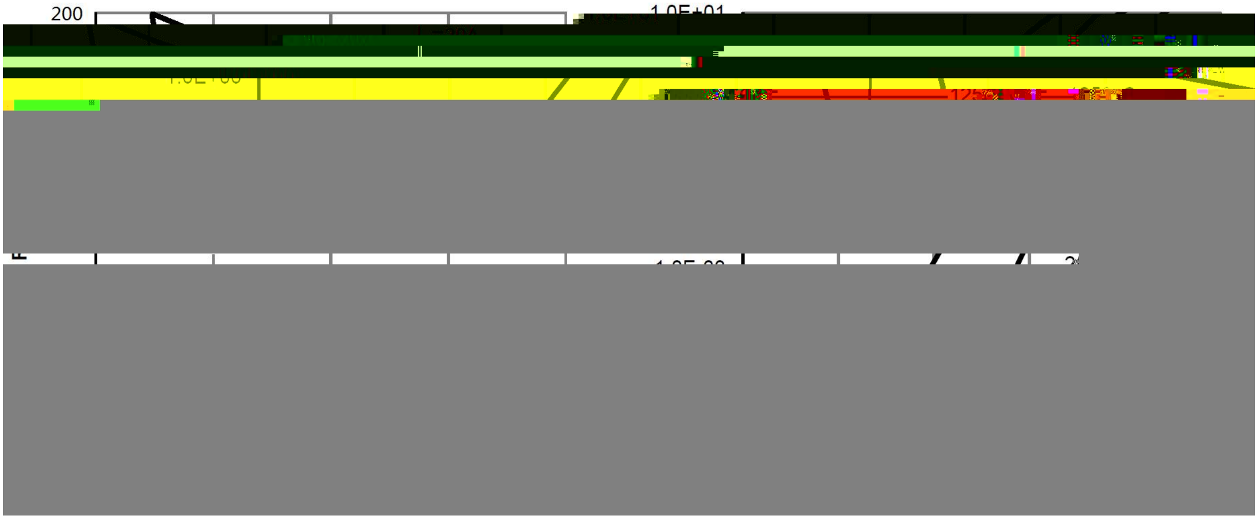
Parameter	Symbol	Test Conditions		Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}=0V	I_D=250μA	100	106		V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=100V	V_{GS}=0V			1	μA
Gate-Body Leakage Current Forward	I_{GSS}	V_{GS}=±20V	V_{DS}=0V			±0.1	μA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS}	I_D=250μA	1.0	1.8	3.0	V

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Total Gate Charge	$Q_{g(}$	g(				

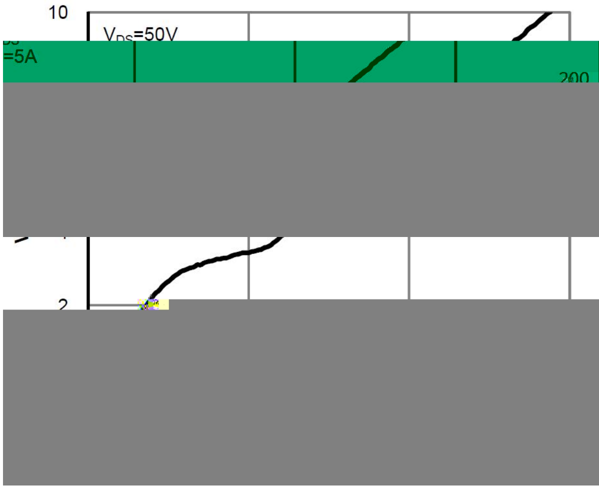
/ Electrical Characteristic Curve

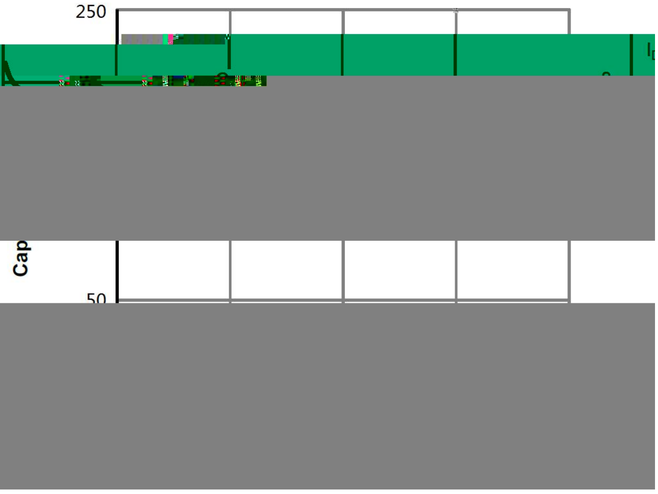


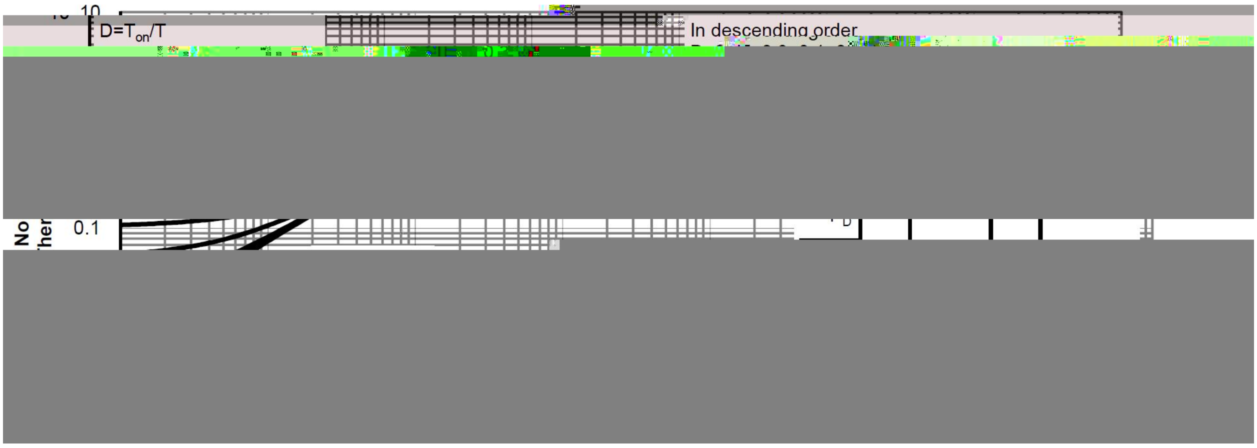




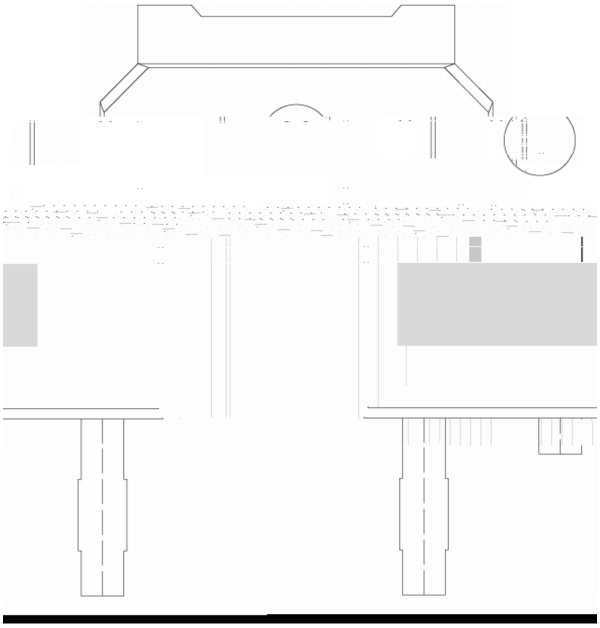
/ Electrical Characteristic Curve







/ Marking Instructa lʼ



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

Note:

1 150 200 60 120sec; 1.Preheating:150~200 , Time:60~120sec.

2 255±5 5±0.5sec; 2.Peak Temp.:255±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 封装形式	Units 包装数量 s n					包装尺寸 (unit: mm³)		
	Units/Reel 只/卷盘	Reels/Inner Box 卷盘/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Reel	Inner Box 盒	Outer Box 箱
TO-252	2,500	2	5,000	6	30,000	13″ ×16	360×360×50	380×335×366