

BRCS030N06SHBDQ

Rev.A Dec.-2024

/ Descriptions

TO-263 N
N-CHANNEL MOSFET in a TO-263 Plastic Package.

/ Features

$V_{DS}=60V$ $I_D=182A$

$R_{DS(on)}@10V \leq 3.0m\Omega$ (Type.2.8m Ω)

$R_{DS(on)}@6V \leq 5.0m\Omega$ (Type.3.5m Ω)

$f_{sw} < 80kHz$ (

Qualified to AEC-Q101 Standards for High Reliability,

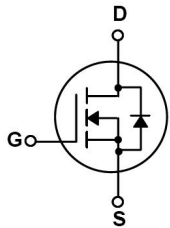
HF Product.

/ Applications

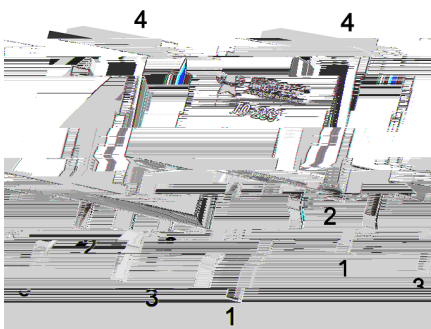
9D J

High frequency switching and synchronous rectification,BMS, Motor, Meet the stringent requirements of automotive applications.

/ Equivalent Circuit



/ Pinning



PIN 1 G

PIN 2 4 D

PIN 3 S

/ Marking

See Marking Instructions.

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DSS}	60	V
Drain Current	$I_D(T_c=25^\circ C)$	182	A
Pulsed Drain Current	I_{DM}	530	A
Gate-Source Voltage	V_{GS}	± 20	V

BRCS030N06SHBDQ

Rev.A Dec.-2024



DATA SHEET

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	$t_{d(on)}$			15.7		
Turn-On Rise Time	t_r	$V_{GS}=10V$ $R_L=1.5$ $V_{DS}=30V$ $R_{GEN}=3$		16.4		ns

/ Electrical Characteristic Curve

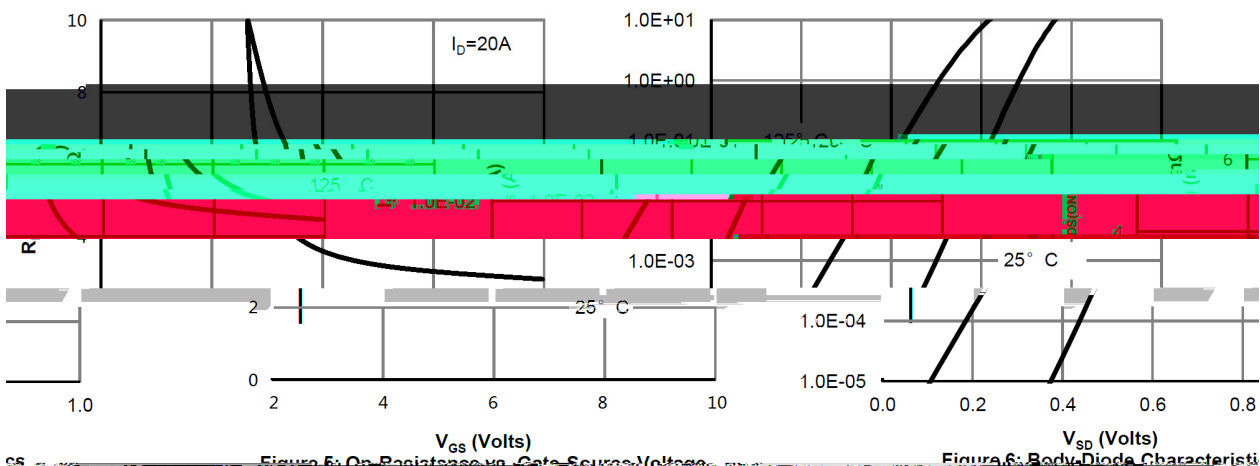
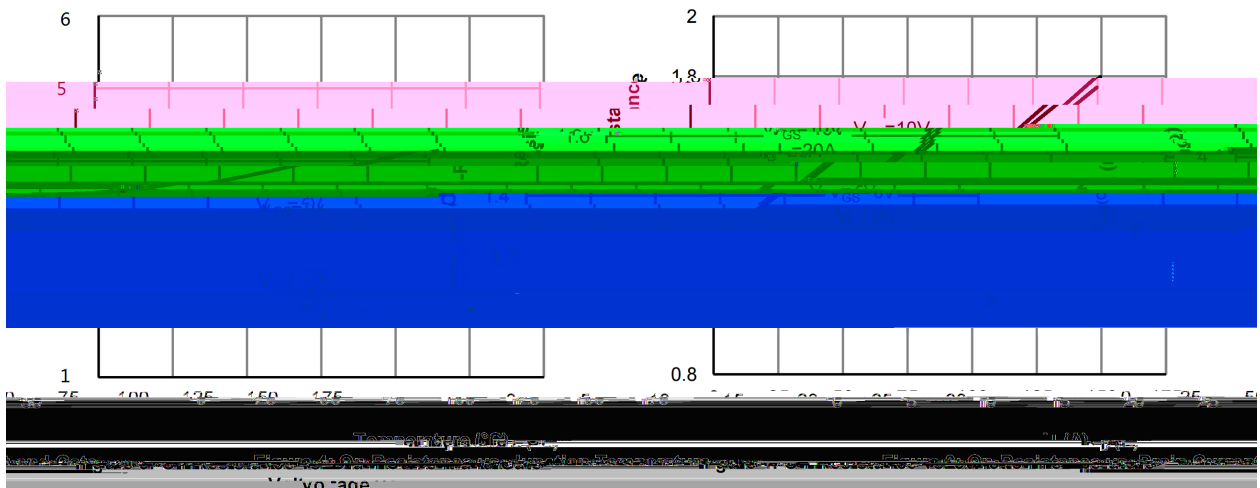
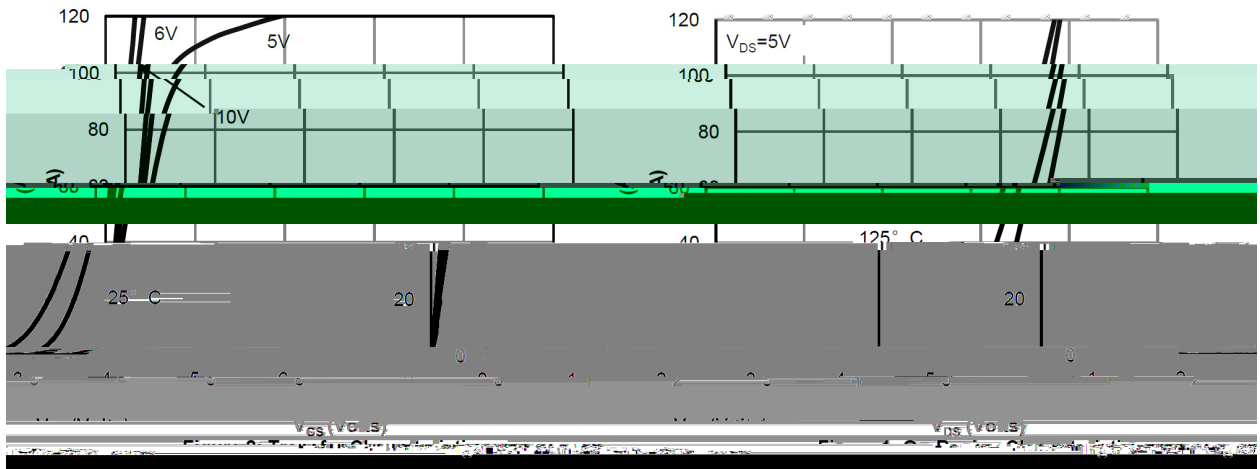


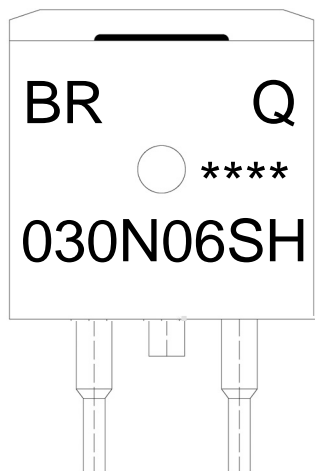
Figure 5: On-Resistance vs. Gate-Source Voltage Figure 6: Body Diode Characteristics

BRCS030N06SHBDQ

Rev.A Dec.-2024

DATA SHEET

/ Marking Instructions



9| 蓝箭电子

Q| 汽车无卤产品代码

'*' E' -J?| 环保代码

!!!!| 批次代码

Note:

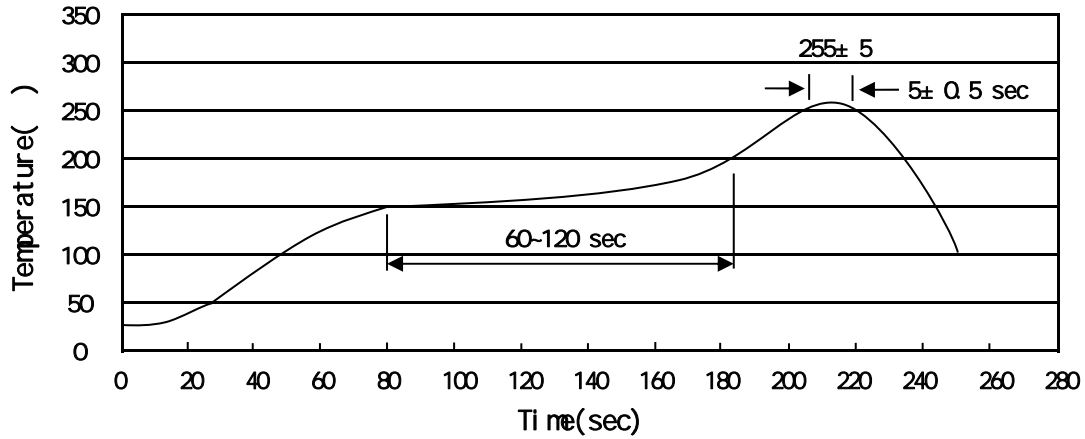
BR: 蓝箭电子 Company Code

Q: 汽车无卤产品代码 Automobile halogen-free product Code

030N06SH: 产品型号代码 Product Type Code

****: 批次代码 Lot No. Code, code change with Lot No

() / 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	Units					Dimension (unit mm ³)		
	Units/Reel	Reels/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Reel	Inner Box	Outer Box
TO-263	800	1	800	6	4,800	13 x24	360x360x50	380x335x366

/ TUBE

Package Type	Units					Dimension (unit mm ³)		
	Units/Tube	Tubes/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Tube	Inner Box	Outer Box
TO-263	50	20	1,000	5	5,000	532x33x7.0	555x164x50	575x290x180

/ Notices