

BRCS030N03BD

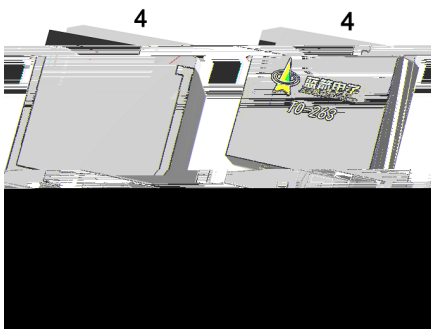
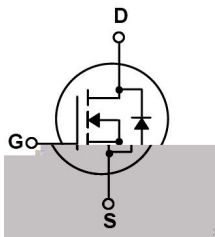
Rev.A Apr.-2023

TO-263 N

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

Ultra Low On-Resistance,fast switching, HF Product.

These devices are well suited for high efficient switched mode power supplies, electronic lamp ballast based on half bridge topology.



PIN1 G PIN 2 4 D PIN 3 S

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蓝箭电子
 BLUE ROCKET ELECTRONICS
DATA SHEET

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V _{DS}	30	V
Drain Current		I _D (T _C =25°C)	167	A
Pulsed Drain Current		I _{DM}	530	A
Gate-Source Voltage		V _{GS}	±20	V
Single Pulsed Avalanche Energy L=0.5mH		E _{AS}	590	mJ
Avalanche Current		I _{AS}	33.5	A
Total Power Dissipation		P _D (T _C =25°C)	140	W
Junction and Storage Temperature Range		T _J ,T _{STG}	-55 to 150	
Thermal Resistance-Junction to Ambient	t ≤ 10s	R _{θJA}	15	/W
	Steady-State		60	
Thermal Resistance-Junction to Case	Steady-State	R _{θJC}	d6.05()-40410998T55.62 515.42 .47.94 147998 .4799836.46 496.94 .4	

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Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Gate resistance	R_g	$f=1\text{MHz}$		1.5		Ω
Total Gate Charge	$Q_g(10\text{V})$	$V_{GS}=10\text{V}$ $V_{DS}=20\text{V}$ $I_D=20\text{A}$		67		nC
Total Gate Charge	$Q_g(4.5\text{V})$			29		
Gate Source Charge	Q_{gs}			16.7		
Gate Drain Charge	Q_{gd}			4.8		
Turn-On Delay Time	$t_{d(on)}$	$V_{GS}=10\text{V}$ $V_{DS}=20\text{V}$ $R_L=1\Omega$ $R_{GEN}=3\Omega$		12.7		ns
Turn-On Rise Time	t_r			9.5		
Turn-Off Delay Time	$t_{d(off)}$			58		

/ Electrical Characteristic Curve

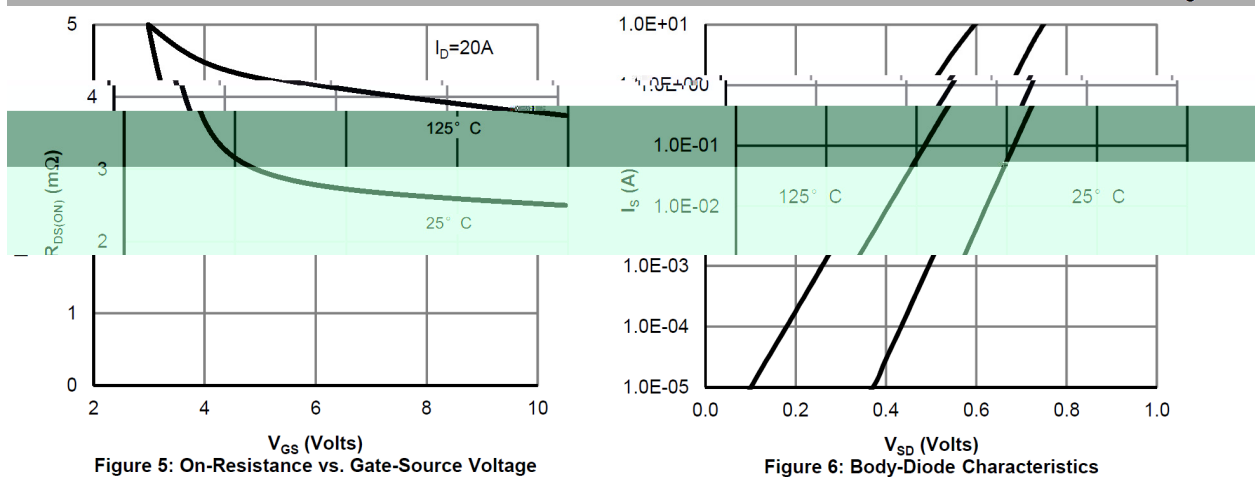
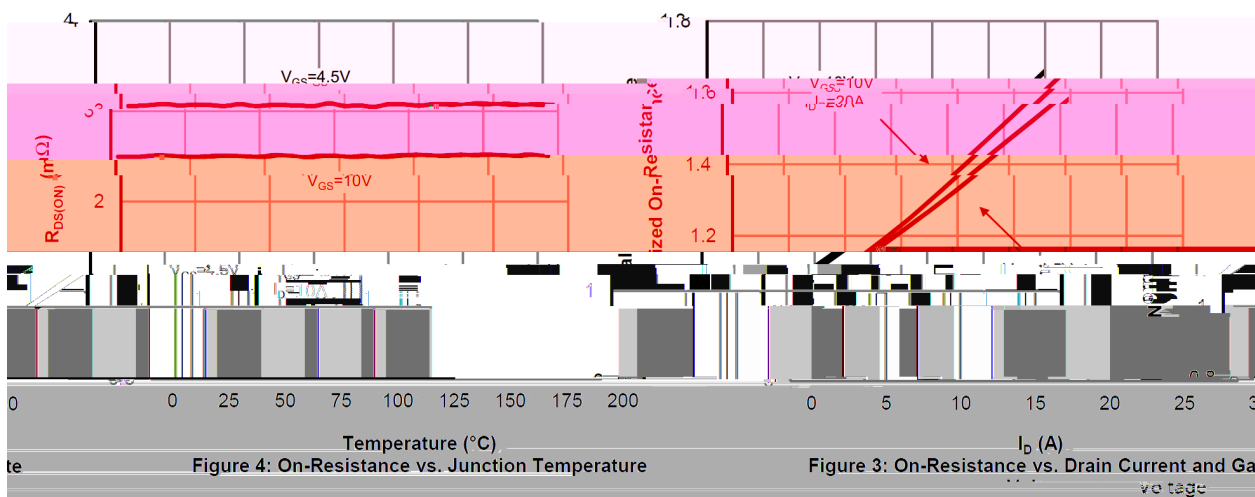
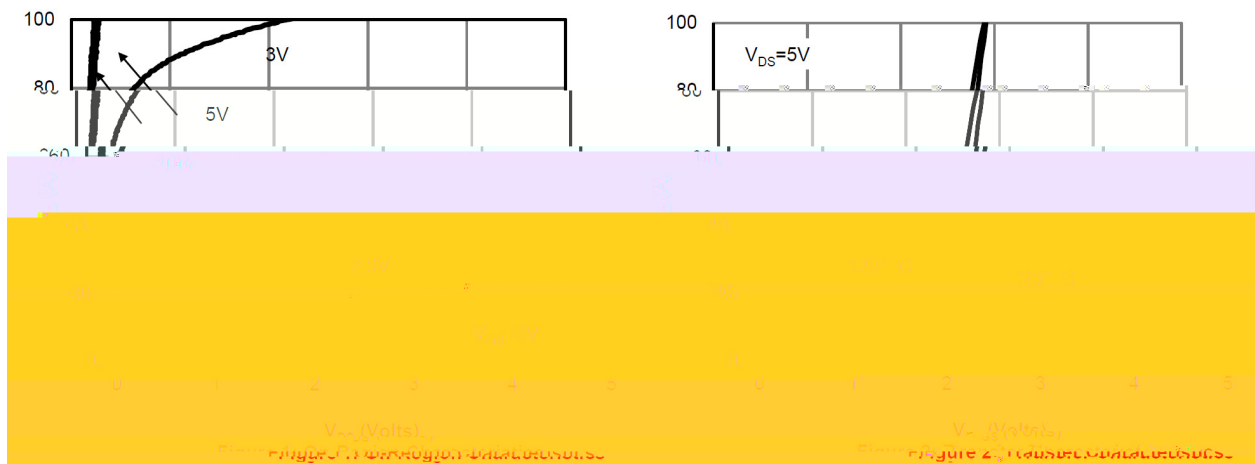
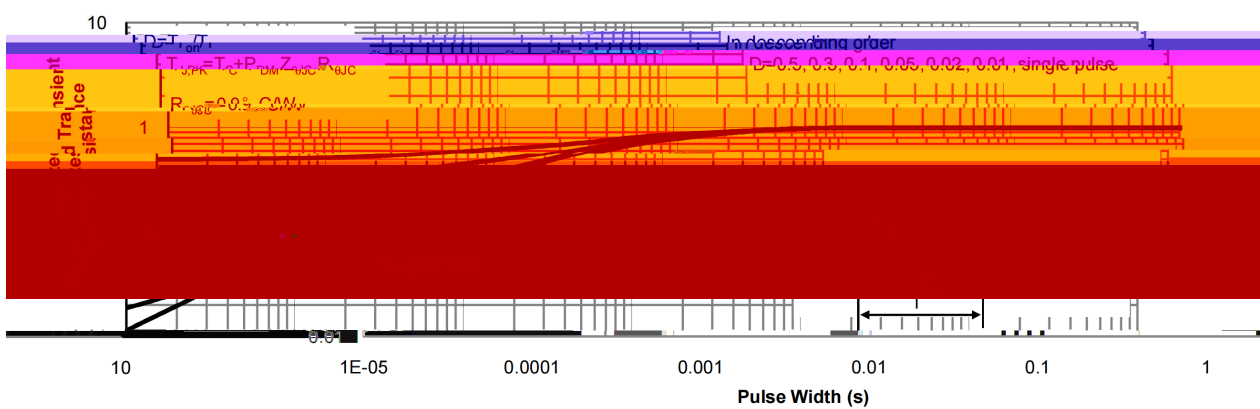
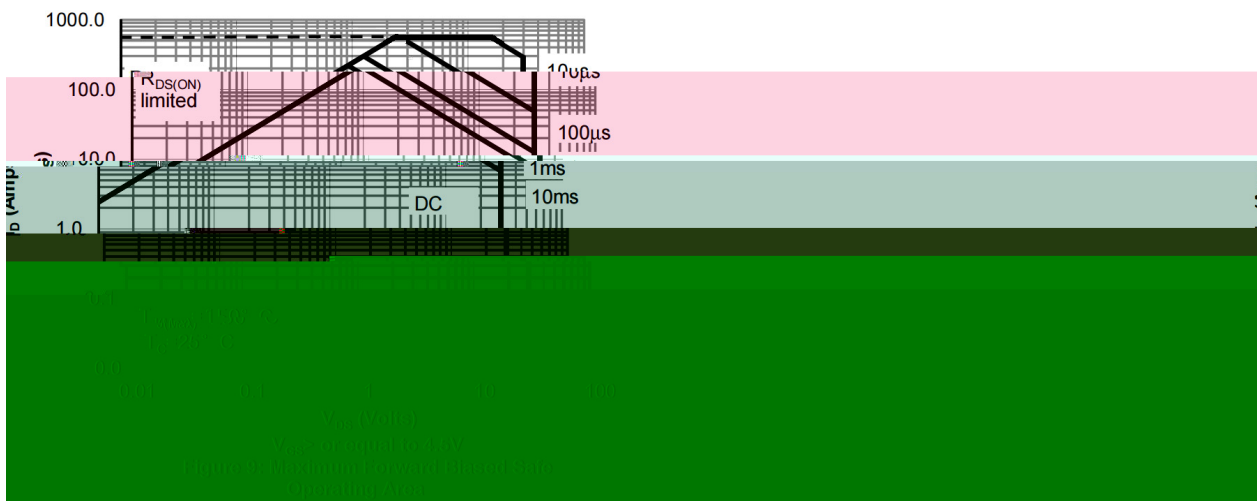
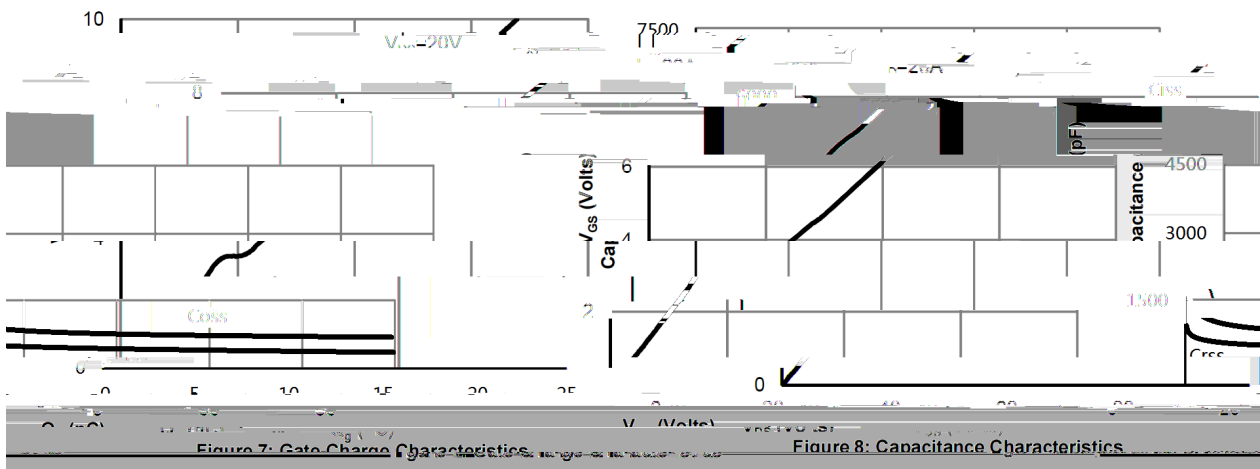


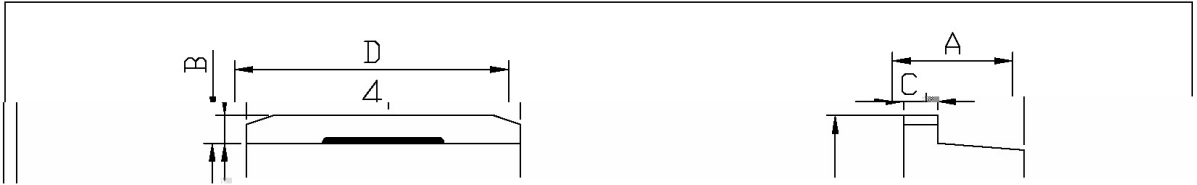
Figure 5: On-Resistance vs. Gate-Source Voltage

Figure 6: Body-Diode Characteristics

/ Electrical Characteristic Curve



/ Package Dimensions



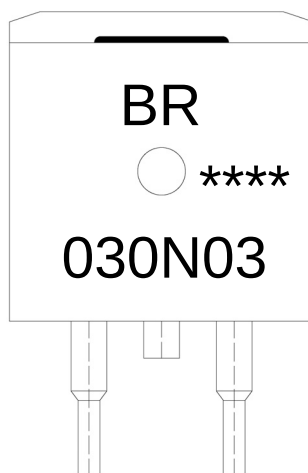
单位: mm

Dimensions in Millimeters			Dimensions in Millimeters		
Symbol	Min	Max	Symbol	Min	Max
A	4.30	4.70	EL	9.00	9.40
B	1.00	1.40	e1	2.34	2.74
b1	0.70	0.90	e2	4.88	5.28
b2	0.40	0.60	L1	15.00	16.00
C	1.20	1.40	L2	2.24	2.84
D	9.80	10.20	L3	1.20	1.60

TP-263



/ Marking Instructions



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030N03

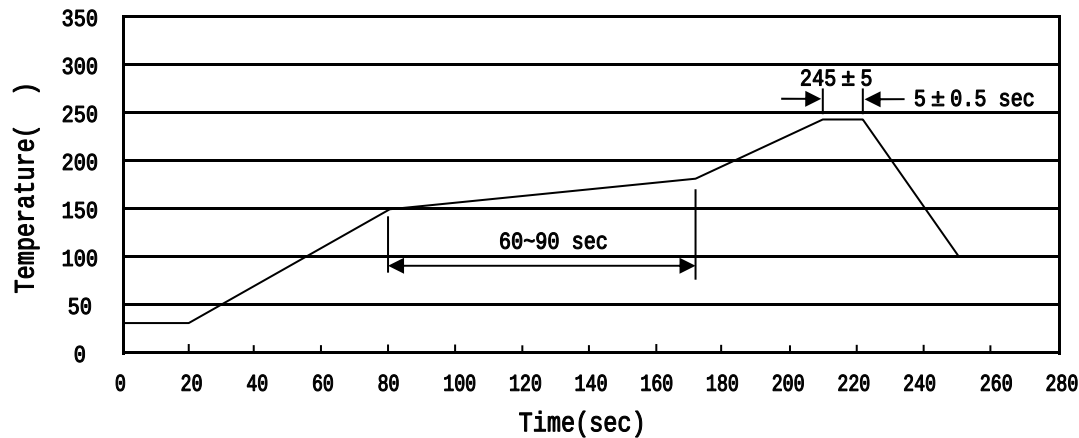
Note:

BR: Company Code

030N03: Product Type Code

****: Lot No. Code, code change with Lot No

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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. |

/ 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" ×24	360×360×50	380×335×366

/ 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	532×33×7.0	555×164×50	575×290×180

/ Notices