蓝箭电子
BLUE ROCKET ELECTRONICS

BRCS080N02ZB

Rev.D May.-2025

DATA SHEET

/ Descriptions

GIQ6Ö6D0;0 ṂṂƖ Q ཅ PRV ʆ ῶ Ẕ ᑋ

N-Channel Enhancement Mode Field Effect Transistor in a DFN3Ö3A-8L Plastic Package.

/ Features

V_{DS} (V) = 20V I_D = 43A (V_{GS} = ± 12V)

$R_{DS(ON)}$@10V ≤ 10mƑ(Typ.8.0mƑ)

$R_{DS(ON)}$@4.5V ≤ 11mƑ(Typ.9.5mƑ)

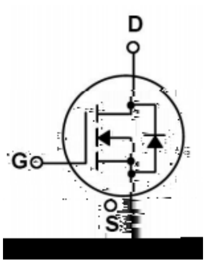
$R_{DS(ON)}$@2.5V ≤ 16mƑ(Typ.14mƑ)

ṇ̀ ғ ᵝ HF Product.

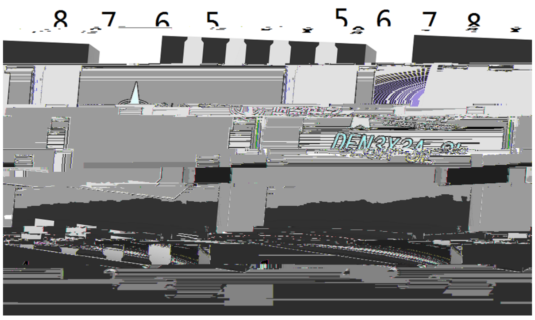
/ Applications

Suited for low voltage applications such as automotive, DC/DC Converters, and high efficiency switching for power management in portable and battery operated products.

/ Equivalent Circuit



/ Pinning



出脚	定义
Pin1	S
Pin2	S
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

/ Marking

See Marking Instructions.

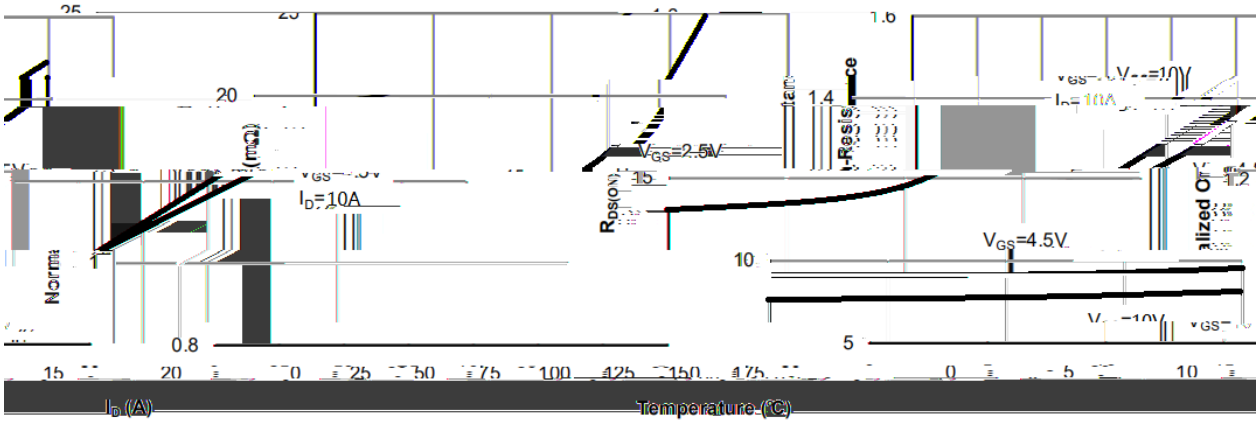
v ῼ Sdudphwhu		ÿ N V|pero	ῼ Ö Udwlqj	D ɥ Xqlw
GudlqOVrxufh Yrowdjh		YGVV	53	Y
Gudlq Fxuuhqw		LG+Wf@58 ł,	76	D
Gudlq Fxuuhqw 0 Sxovhg		LGP	43:	D
JdwhOVrxufh Yrowdjh		YJV	°45	Y
Dydodqfkh Fxuuhqw		LDV	4518	D
Vlqjoh Sxovhg Dydodqfkh Hqhuj|		HDV	444	pM
Srzhu Glvvlsdwlrq		SG+Wf@58 ł,	5;	Z
Mxqfwlrq Whpshudwxuh Udqjh		Wm	483	ł
Vwrudjh Whpshudwxuh Udqjh		Vwj	088 Ḱ 483	ł
Pd{lpxp Mxqfwlrq0wr0Dpelhqw	w∨43v	UÒMD	83	ł2Z
	Vwhdg|0Vwdwh		:3	
Pd{lpxp Mxqfwlrq0wr0Fdvh	Vwhdg|0Vwdwh	UÒMF	718	ł2Z

v ῼ Parameter	ÿ N Symbol	╜ ꞉ᛧ Ţ Test Conditions	ῳ ņ Ö Min	Ɛ ʒ Ö Typ	ῳ ᶻ Ö Max	D ɥ Unit
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}=0V I_D=250μ				

/ Electrical Characteristics(Ta=25)

ν ῼ Parameter	ɏ ᴺ Symbol	╜ ׃ᶵ Ţ Test Conditions	ῳ ṇ Ӫ Min	Ɛ ʒ Ӫ Typ	ῳ ᶎ Ӫ Max	ᴅ Ᵹ Unit
Turn-On Delay Time	$t_{d(on)}$	V_{DS}=10V V_{GS}=10V R_L=1.0Ω R_{GEN}=3.0Ω		2.5		ns
Turn-On Rise Time	t_r			7.2		
Turn-Off Delay Time	$t_{d(off)}$			49		
Turn-Off Fall Time	t_f			10.8		
Total Gate Charge	$Q_{g(4.5V)}$	V_{DS}=10V V_{GS}=4.5V I_D=12.0A		17.9		nC
Gate-Source Charge	Q_{gs}			1.5		
Gate-Drain Charge	Q_{gd}			4.7		

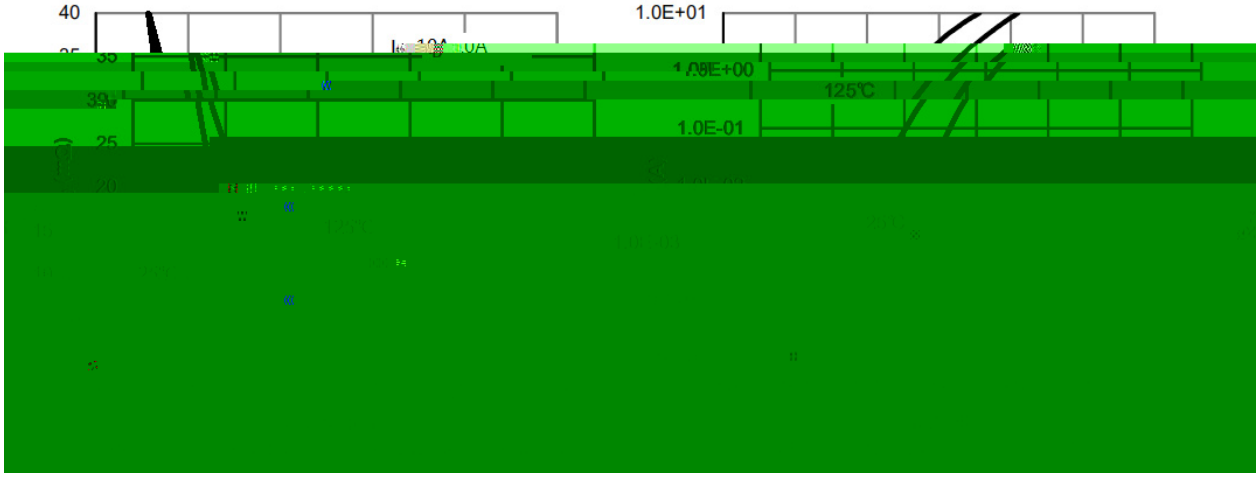
/ Electrical Characteristic Curve



On-Resistance vs. Drain Current and Gate Voltage

Figure 4: On-Resistance vs. Junction Temperature

Figure 3:



/ Electrical Characteristic Curve

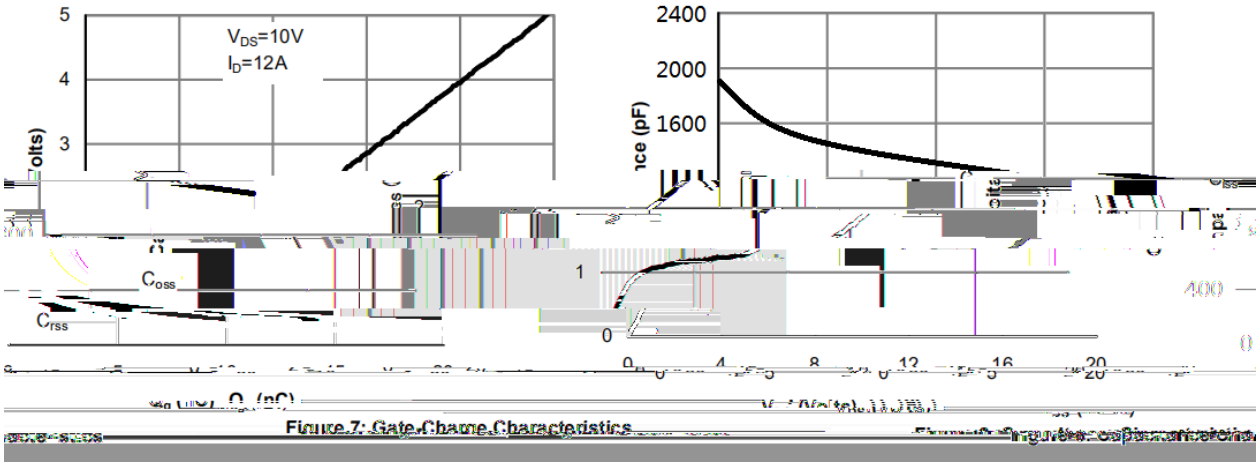
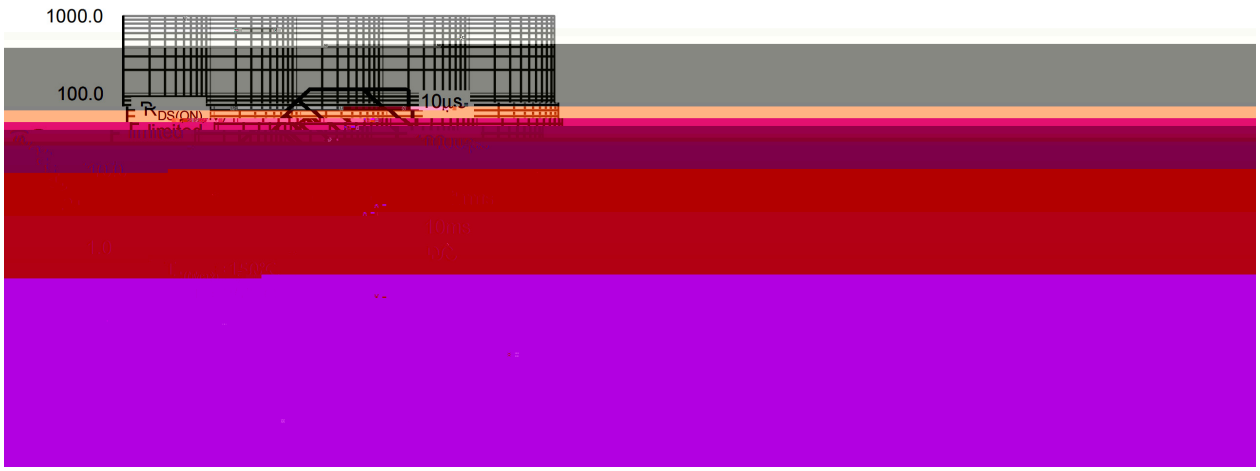
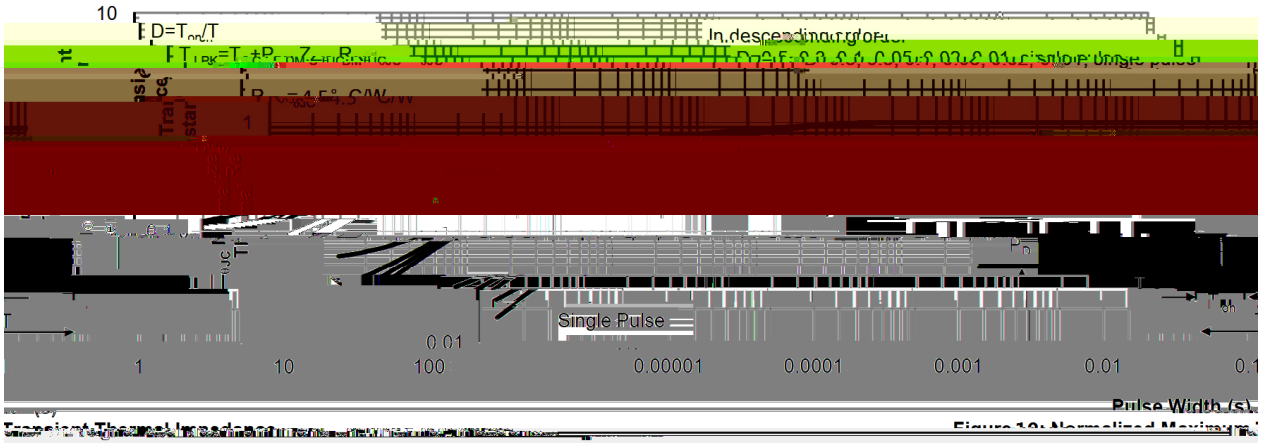
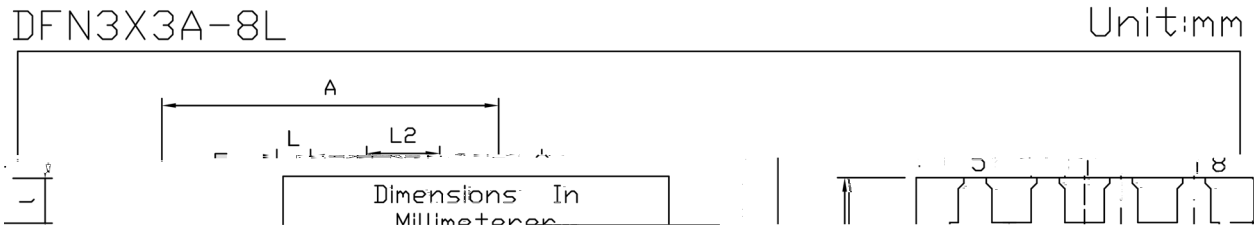


Figure 7: Gate Charge Characteristics





/ Package Dimensions



/ Marking Instructions

BR	
080N02	
****	

Note:

BR:	Company Code
080N02:	Product Type Code
****:	Lot No. Code, code change with Lot No

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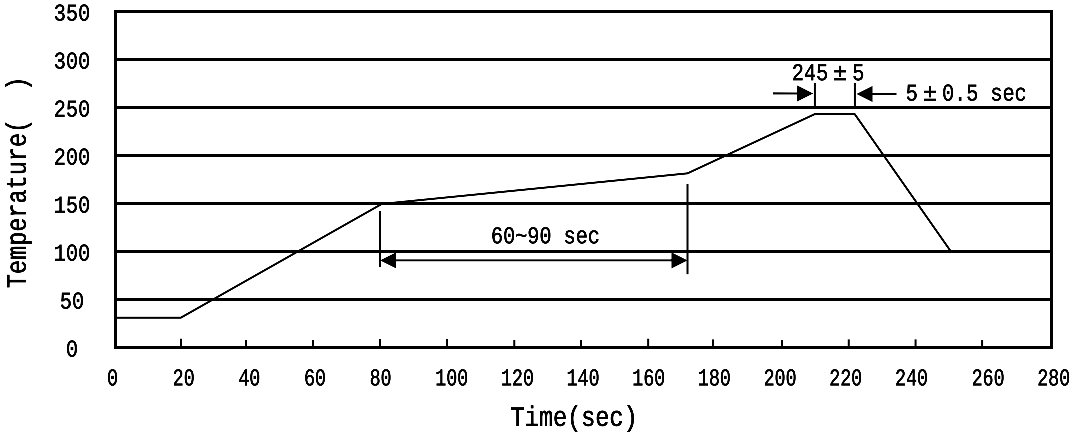

ب ˝ χ
1 ɩ ♬ □ ŷ 150 Ķ 180 ɫ ı `H ڗ 60 Ķ 90sec;
2 Ś Ɵ □ ŷ 245 ° 5 ɫ ı `H ڗ `Y ᛋ ᴕ 5 ° 0.5sec;
3 ì ˙ ˥ ˛ ɔ ه ŷ ᴕ 2 Ķ 10 ɫ /sec.

Note:
1.Preheating:150~180 ɫ , Time:60~90sec.
2.Peak Temp.:245 ° 5 ɫ , Duration:5 ° 0.5sec.
3. Cooling Speed: 2~10 ɫ /sec.

/ Resistance to Soldering Heat Test Conditions

□ ŷ χ 260 ° 5 ɫ `H ڗ χ 10 ° 1 sec.

Temp.:260±5 Time:10±1 sec

/ Packaging SPEC.

ɲ ` ɣ ŀ / REEL

Package Type	Units					Dimension (unit mm³)		
	Units/Reel /	Reels/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Reel	Inner Box	Outer Box
DFN3×3A-8L	5,000	2	10,000	6	60,000	13 ×12	360×360×50	380×335×366

/ Notices