

BRCS070P03SC

Rev.A May.-2024



DATA SHEET

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P-Channel Enhancement Mode Field Effect Transistor in a SOP-8 Plastic Package.

$V_{DS} (V) = -30V \quad I_D = -16A (V_{GS} = \pm 20V)$

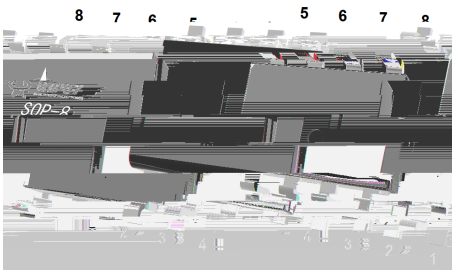
$R_{DS(ON)} @ -10V \approx 8.0m \Omega (Typ. 7.0m \Omega)$

$R_{DS(ON)} @ -4.5V \approx 15m \Omega (Typ. 10.3m \Omega)$

—) í D } ož HF Product.

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Power Management in Notebook computer, Portable Equipment and Battery powered systems.



PIN 1 y S PIN 2 y S PIN 3 y S PIN 4 y G
PIN 5 y

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@ f Parameter	... Z Symbol	f › Rating	% y Unit
Drain-Source Voltage	V _{DS}	-30	V
Drain Current - Continuous	I _D	-16	A
Drain Current – Pulsed	I _{DM}	-65	A
Gate-Source Voltage	V _{GS}	±20	V
Power Dissipation	P _D	3	W
Single Pulse Avalanche Energy(L=0.5mH)	E _{AS}	360	mJ
Avalanche Current(L=0.5mH)	I _{AS}	-30	A
Junction and Storage Temperature Range	T _j , T _{stg}	-55 to 150	-
Thermal resistance, junction - ambient	t 0 10s	R _{JA}	41.7
	Steady-State		75

@ f Parameter	... Z Symbol	y Ú ^ Test Conditions	Â 4 › Min	Á ° › Typ	Â Ý › Max	% y Unit
Drain-Source Breakdown Voltage	BV _{DSS}	I _D =-250 A V _{GS} =0V	-30	-35		V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =-30V V _{GS} =0V			-1	µA
Gate-Body leakage current	I _{GSS}	V _{DS} =0V, V _{GS} = ±20V			± 100	nA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} I _D =-250 A	-1	-1.5	-2.5	V
Static Drain-Source On-Resistance	R _{DS(ON)}	V _{GS} =-10V, I _D =-10A		7.0	8	m S
		V _{GS} =-4.5V, I _D =-8A		10.3	15	
Diode Forward Voltage	V _{SD}	I _S =-1A, V _{GS} =0V			-1.2	V
Input Capacitance	C _{iss}	V _{DS} =-25V V _{GS} =0V f=1.0MHz		3260		pF
Output Capacitance	C _{oss}			335		

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Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	$t_{d(on)}$	$V_{GS}=-10V$ $V_{DS}=-15V$ $R_L=0.75\Omega$ $R_{GEN}=3\Omega$		12.5		ns
Turn-On Rise Time	t_r			19		
Turn-Off Delay Time	$t_{d(off)}$			125		
Turn-Off Fall Time	t_f			67		

Electrical Characteristics

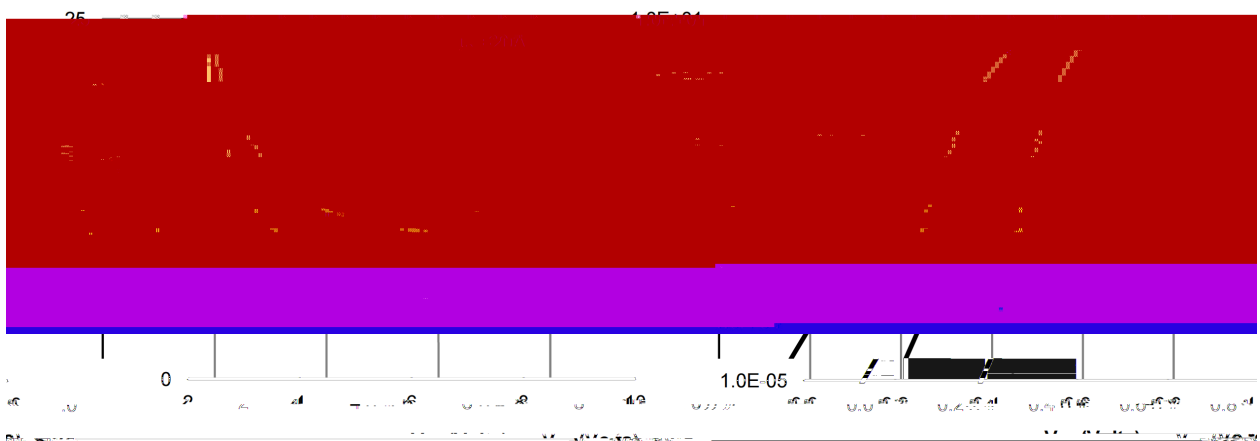
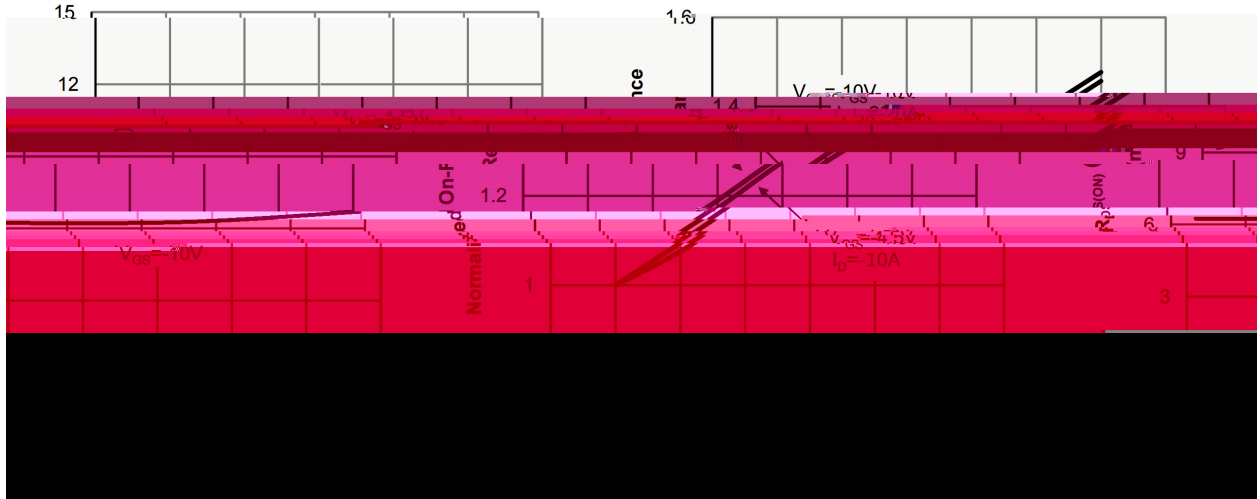
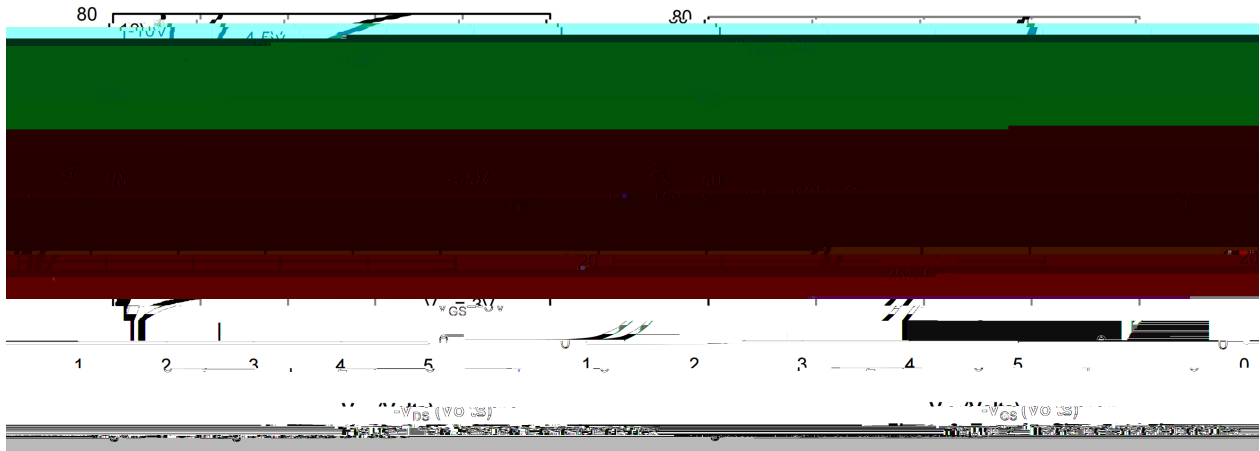
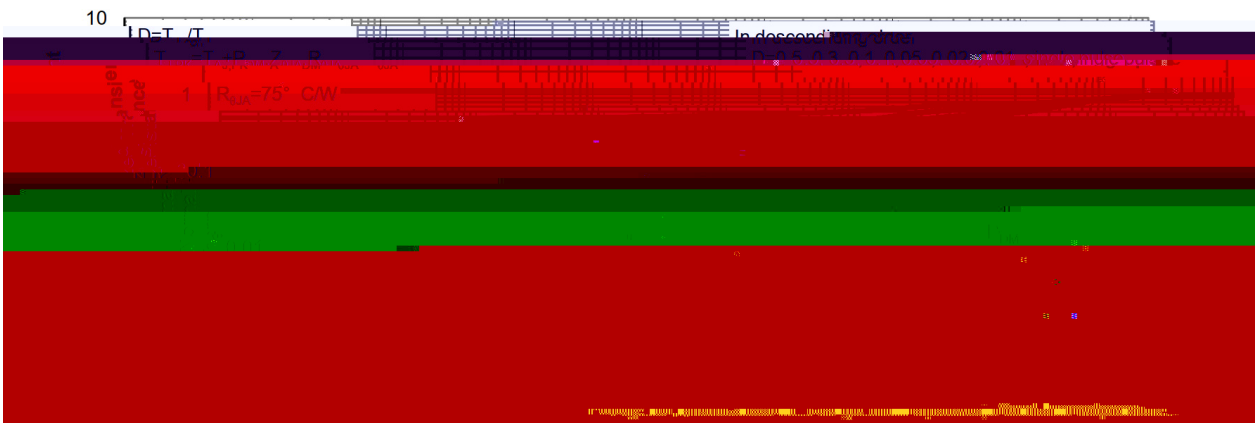
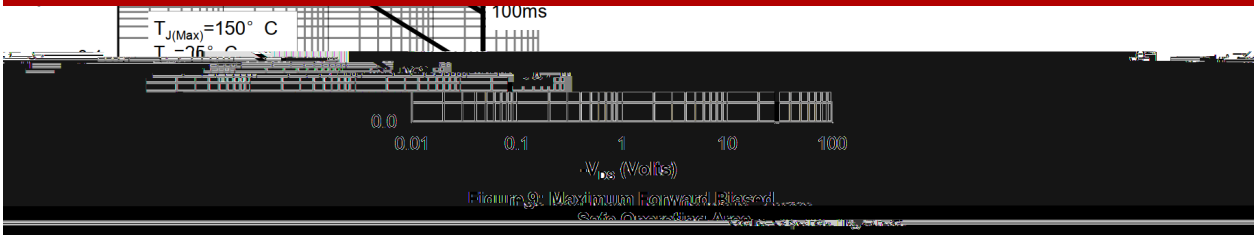
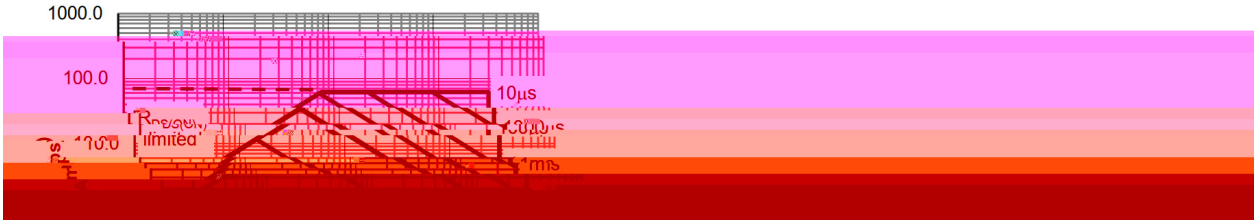
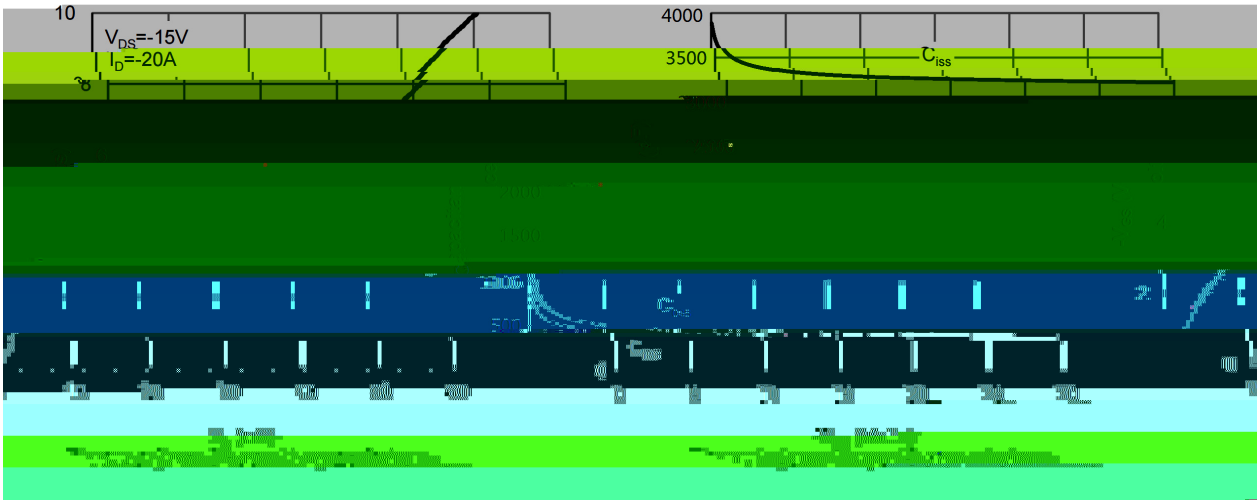


Figure 6: Body-Diode Characteristics

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

Electrical Characteristics



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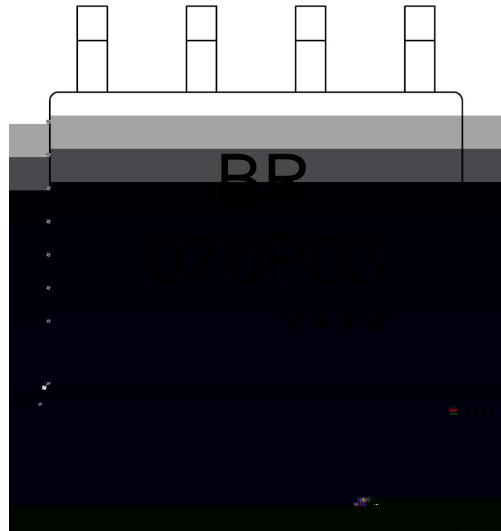
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蓝箭电子
BLUE ROCKET ELECTRONICS

DATA SHEET

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Note:

BR: Company Code

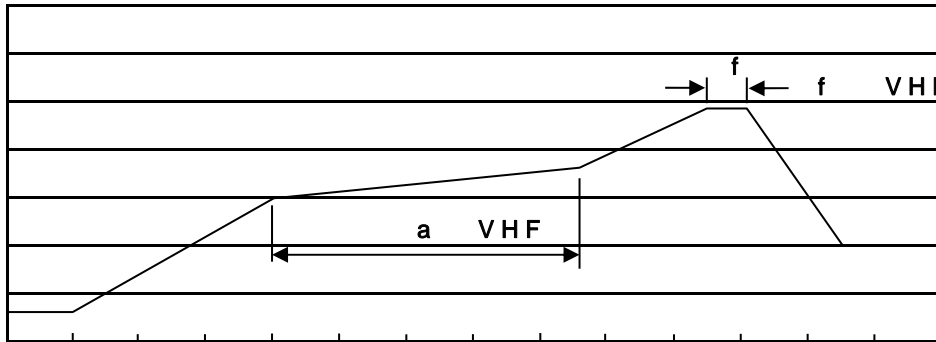
070P03: Product Type Code

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



šWD t...•Žϕ (x/) / :KSVKXGZ[XK 6XULORK LUX /8 8KLRU] 9URJKXOTM 6

7HPSHUDWXUH



7LPH VHF

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1o• Ä ½ “ † 150 ½180 - k ž • 60 ½90sec;

2o• Q › “ † 245 r5 - k ž • 4 Ò 5 r0.5sec;

3o•D N ò i Ò 0 , † 2 ½10 - /sec.

Note:

1.Preheating:150~180 - , Time:60~90sec.

2.Peak Temp.:245 r5 - , Duration:5 r0.5sec.

3. Cooling Speed: 2~10 - /sec.

ÂD /Cã p ~ »] / Reissence b Soldering HeatTetCconditons

“ † y 260 r5 -

ž • y 10 r1 sec.

Temp.:260±5

Time:10±1 sec

G P á / Packaging SPEC.

2 & x / REEL

Package Type 7>û ~ E	Units ;>û !H					Dimension ;>û p . (unit Åmm³)		
	Units/Reel /--	Reels/Inner Box -- /-	Units/Inner Box /-	Inner Boxes/Outer Box - /!ç	Units/Outer Box /!ç	Reel	Inner Box	Outer Boxç
SOP/ESOP-8	4,000	2	8,000	6	48,000	13 s ×12	360×360×50	380×335×366

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