

BRCS080N04SC

Rev.C Aug.-2025

/ Descriptions

SOP-8 N

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

/ Features

$V_{DS} = 40V$ $I_D = 15A$ ($V_{GS} = \pm 20V$)

$R_{DS(ON)}@10V$ 8m (Typ. 6.4m)

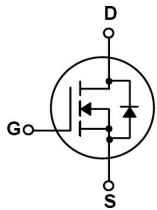
$R_{DS(ON)}@4.5V$ 13m (Typ. 10m)

HF Product.

/ Applications

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

/ Equivalent Circuit



/ Pinning



PIN 1	S	PIN 2	S	PIN 3	S	PIN 4	G
PIN 5	D	PIN 6	D	PIN 7	D	PIN 8	D

/ Marking

See Marking Instructions.

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V$ $I_D=250 A$	40	47		V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=40V$ $V_{GS}=0V$			1	A
Gate-Body Leakage Current Forward	I_{GSS}	$V_{GS}=\pm 20V$ $V_{DS}=0V$			± 0.1	A
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=250 A$	1.0	1.6	2.5	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V$ $I_D=20A$		6.4	8	m
		$V_{GS}=4.5V$ $I_D=10A$		10	13	m
Drain-Source Diode Forward Voltage	V_{SD}	$V_{GS}=0V$ $I_S=1A$			1.2	V
Input Capacitance	C_{iss}	$V_{DS}=25V$ $V_{GS}=0V$ $f=1.0MHz$		1890		pF
Output Capacitance	C_{oss}			135		
Reverse Transfer Capacitance	C_{rss}			120		
Gate resistance	R_g	$V_{GS}=0V$ $V_{DS}=0V$ $f=1MHz$		1.9		
Total Gate Charge	Q_g	$V_{GS}=10V$ $V_{DS}=20V$ $I_D=15A$		40.7		nC
Gate Source Charge	Q_{gs}			3.1		
Gate Drain Charge	Q_{gd}			4.5		
Turn-On Delay Time	$t_{d(on)}$	$V_{GS}=10V$ $V_{DS}=20V$ $R_L=1.18$ $R_{GEN}=3.0$		10		ns
Turn-On Rise Time	t_r			13.9		
Turn-Off Delay Time	$t_{d(off)}$			40.5		
Turn-Off Fall Time	t_f			9		
Body Diode Reverse Recovery Time	t_{rr}	$V_{DD}=20V$ $I_F=10A$ $di/dt=200A/ms$		16.3		ns
Body Diode Reverse Recovery Charge	Q_{rr}			17		nC

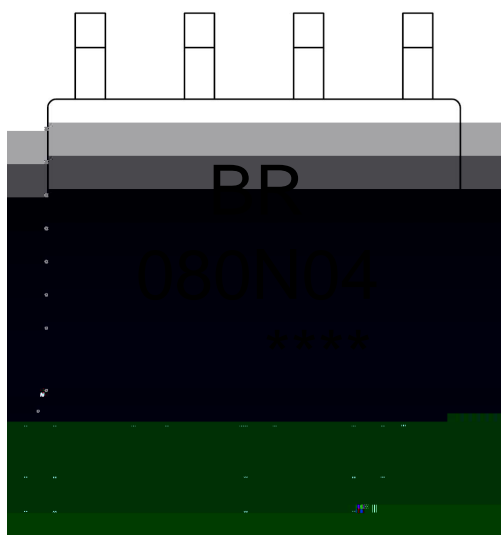
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DATA SHEET

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/ Marking Instructions



BR

080N04

Note:

BR: Company Code

080N04: Product Type Code

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

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

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
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/ Packaging SPEC.

/ REEL

Package Type	Units	Dimension	(unit mm ³)
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