

/ Descriptions

SOP-8 N

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

/ Features

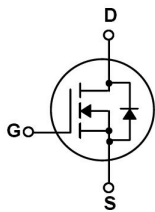
 $V_{DS} = 40V$ $I_D = 15A$ ($V_{GS} = \pm 20V$) $R_{DS(ON)}@10V \leq 8m\Omega$ (Typ. $6.4m\Omega$) $R_{DS(ON)}@4.5V \leq 13m\Omega$ (Typ. $10m\Omega$)

HF Product.

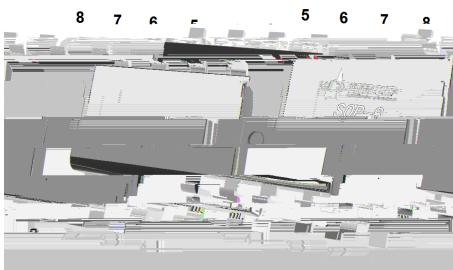
/ Applications

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

/ Equivalent Circuit



/ Pinning



PIN1 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.



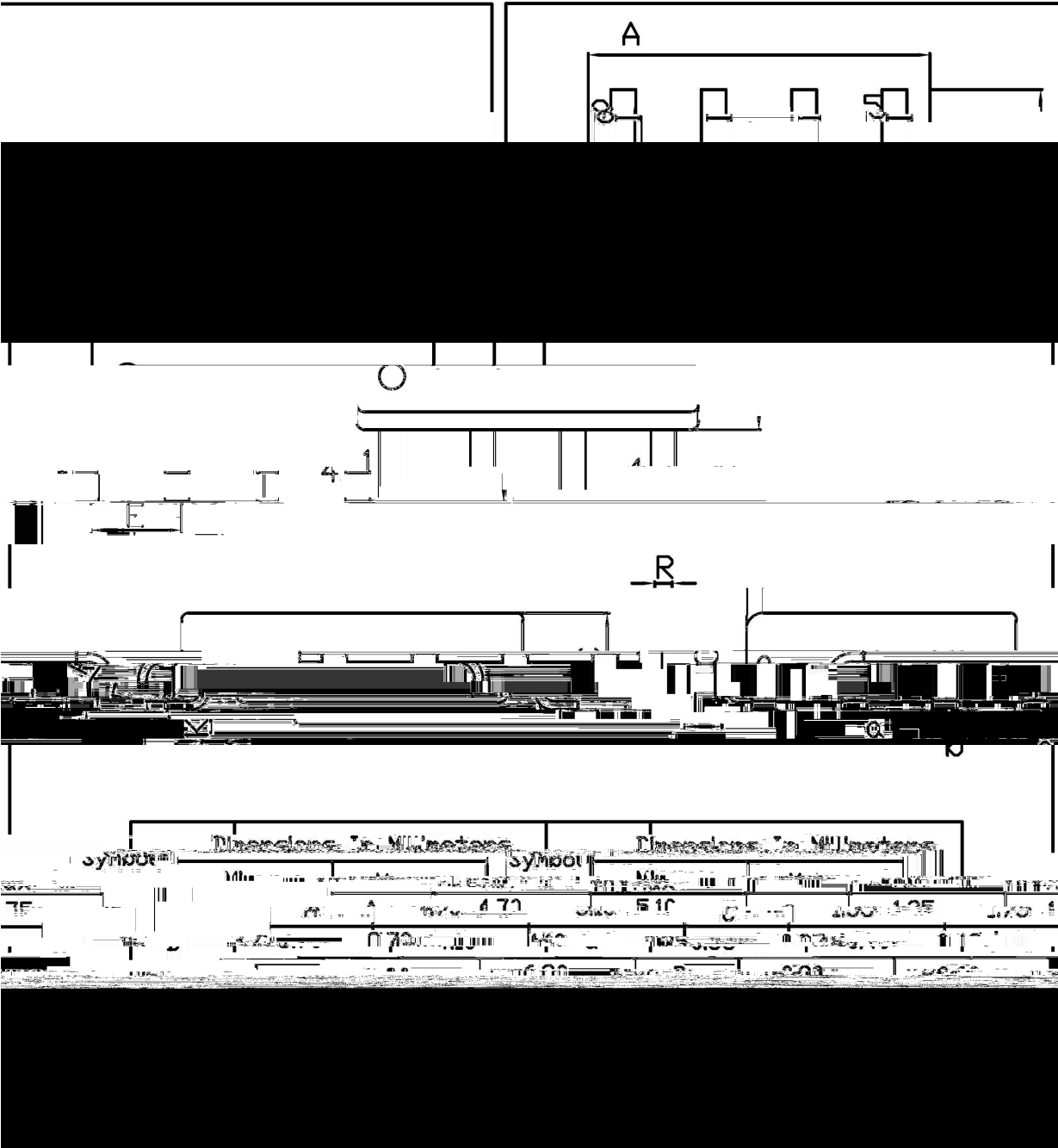
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V$ $I_D=250\mu A$	40	47		V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=40V$ $V_{GS}=0V$			1	μA
Gate-Body Leakage Current Forward	I_{GSS}	$V_{GS}=\pm 20V$ $V_{DS}=0V$			± 0.1	μA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=250\mu A$	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 Ω
		$V_{GS}=4.5V$ $I_D=10A$		10	13	m Ω
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		Ω
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	$t_{d(on)}$	$V_{GS}=10V$ $V_{DS}=20V$ $R_L=1.18\Omega$ $R_{GEN}=3.0\Omega$		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

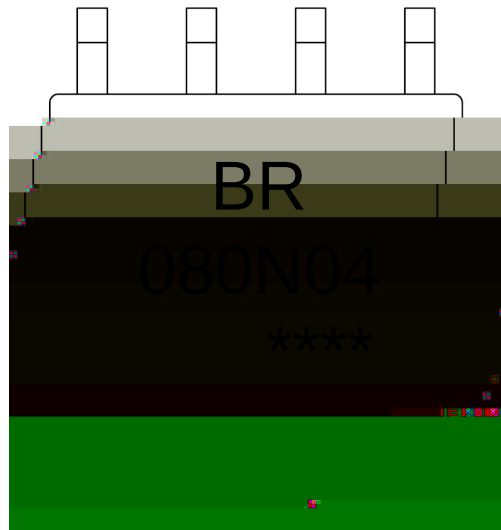


/ Package Dimensions

Unit:mm



/ 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;

2

245±5

5±0.5sec;

3

2 10 /sec.
- 1.Preheating:150~180 , Time:60~90sec.

2.Peak Temp.:245±5 , Duration:5±0.5sec.

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)
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