/ 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} = ± 20V)

$R_{DS(ON)}$@10V ≤ 8mq(Typ. 6.4mq)

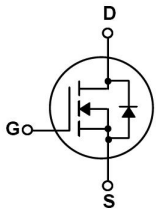
$R_{DS(ON)}$@4.5V ≤ 13mq(Typ. 10mq)

HF Product.

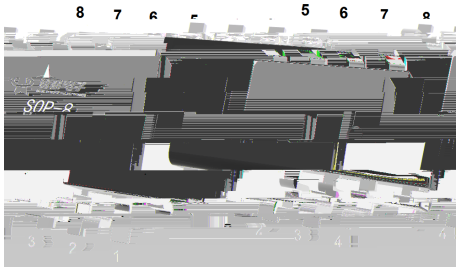
/ Applications

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

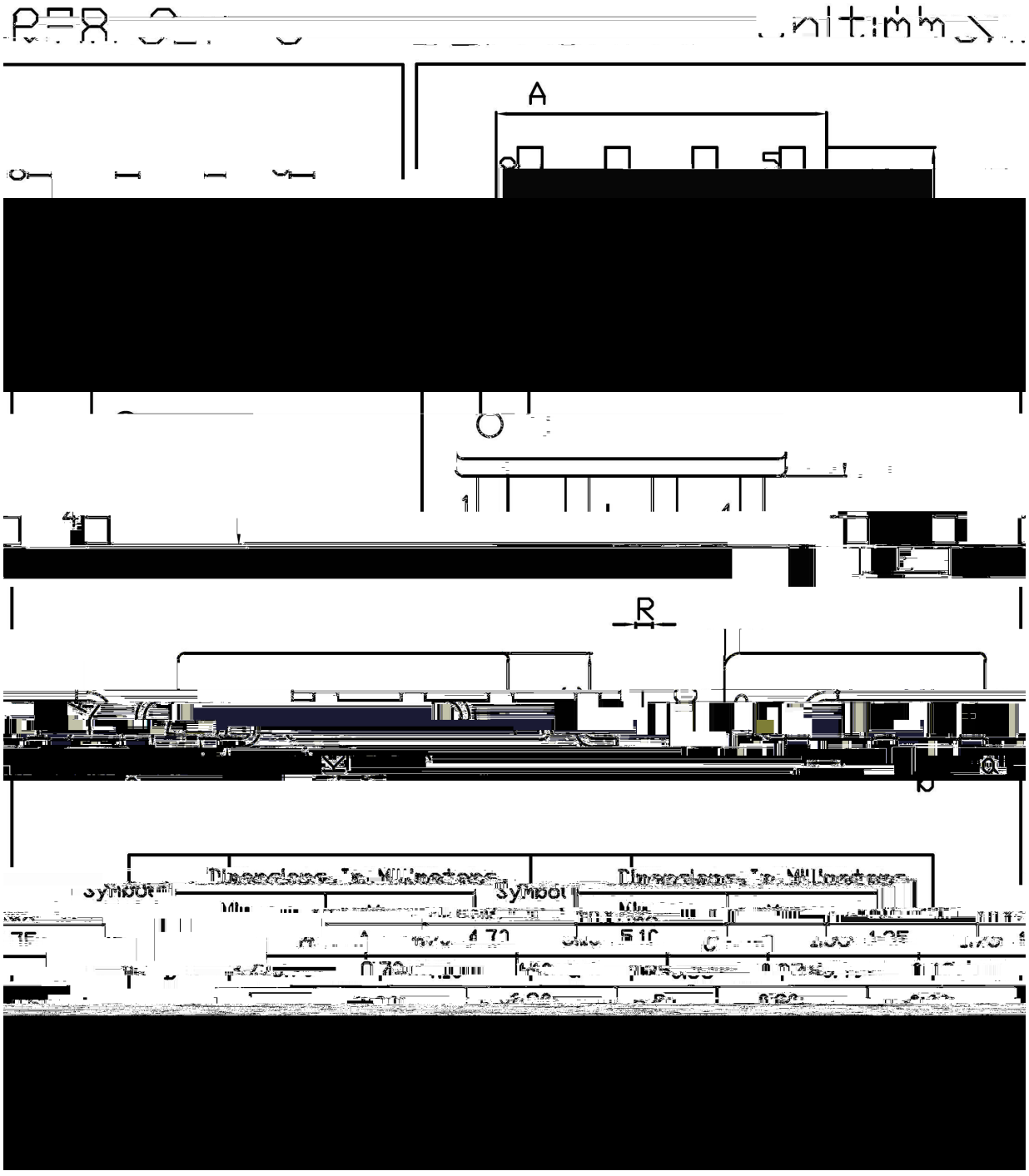
/ Marking

See Marking Instructions.

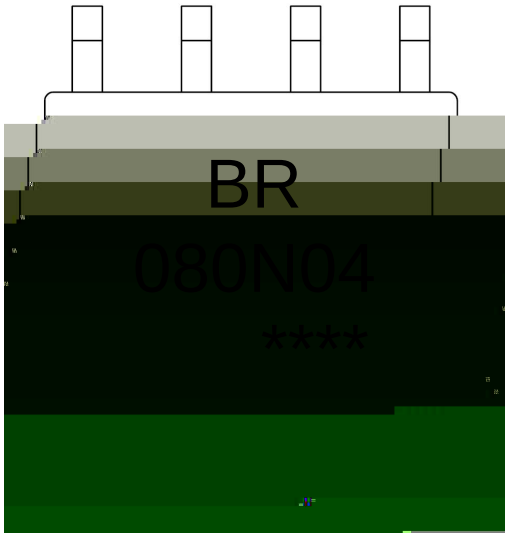
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}=0V I_D=250εA	40	47		V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=40V V_{GS}=0V			1	εA
Gate-Body Leakage Current Forward	I_{GSS}	V_{GS}=±20V V_{DS}=0V			±0.1	εA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS} I_D=250εA	1.0	1.6	2.5	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	V_{GS}=10V I_D=20A		6.4	8	mq
		V_{GS}=4.5V I_D=10A		10	13	mq
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		q
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=1.18q R_{GEN}=3.0q		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



/ 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

/ Packaging SPEC.

/ REEL

Package Type	Units	Dimension	(unit mm³)