SOP-8 N

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

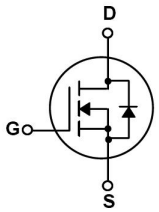
$V_{DS}$ = 40V $I_D$ =15A ($V_{GS}$ = ± 20V)

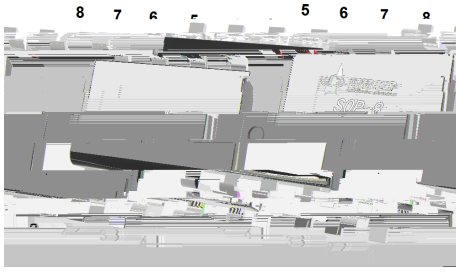
$R_{DS(ON)}$@10V ≤ 8mq(Typ. 6.4mq)

$R_{DS(ON)}$@4.5V ≤ 13mq(Typ. 10mq)

HF Product.

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



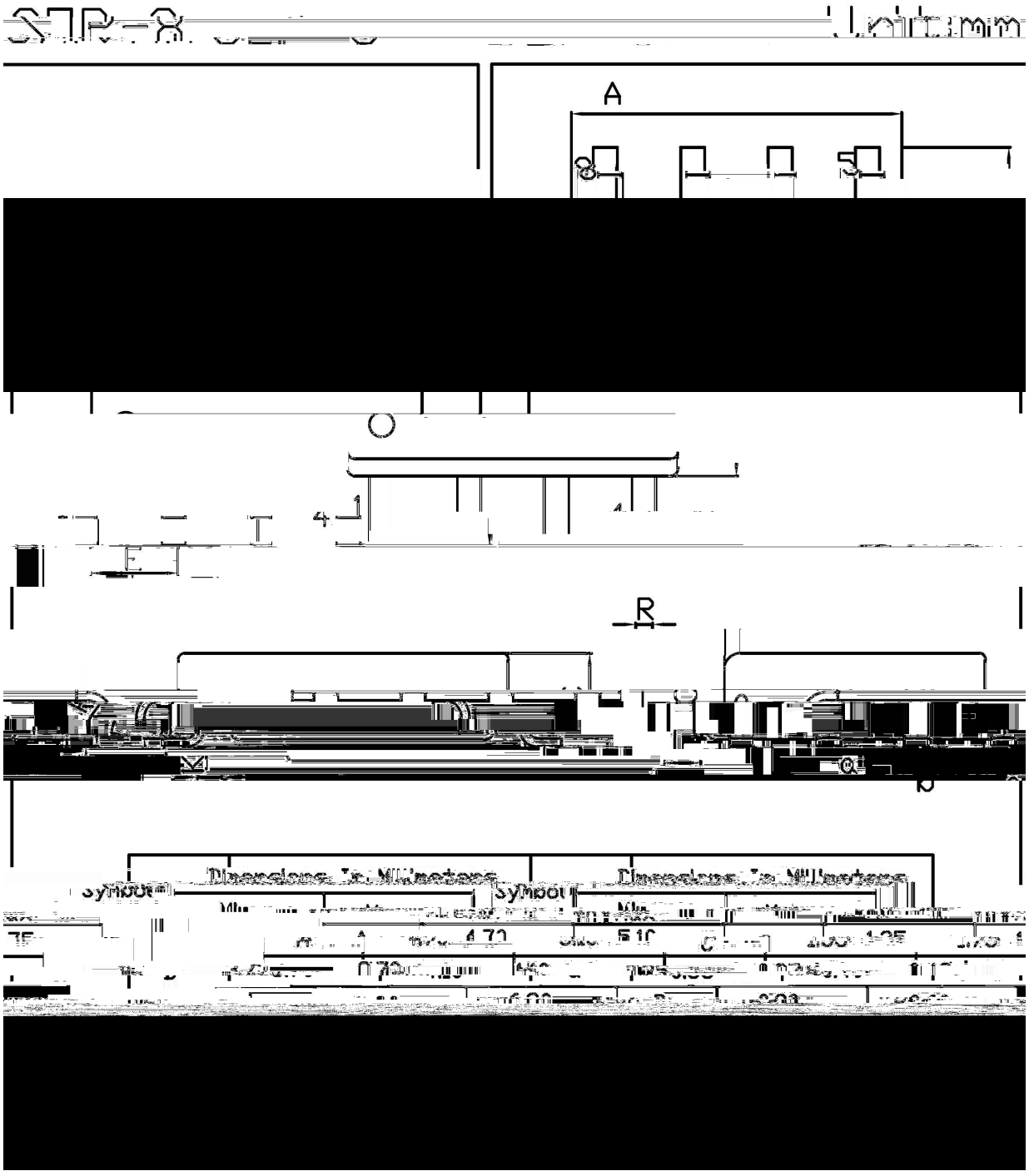



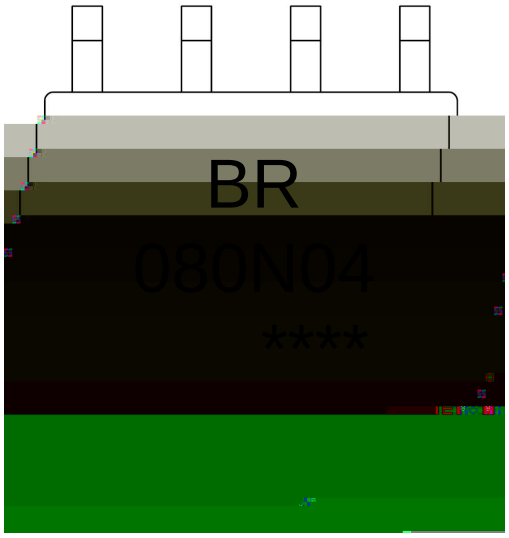

PIN1 S PIN 2 S PIN 3 S PIN 4 G

PIN 5 D PIN 6 D PIN 7 D PIN 8 D

See Marking Instructions.

| 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 |


A
R
Dimensions In Millimeters
Dimensions In Millimeters




BR

080N04

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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. |

| | | | |
|---|---|---|---|
| 260±5 | 10±1 sec. | Temp.:260±5 | Time:10±1 sec |

/ REEL

| Package Type | Units | Dimension | (unit mm³) |
|---|---|---|---|