## / Revised record

| | | | | | |
|---|---|---|---|---|---|
| A | 2020.09.16 | | AOS-AO4453<br>BRCS120N02ZJ ID,PD, | | |
| B | 2021-12-1 | 8 | 3000 4000 | | |
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## / Descriptions

DFN 2*2B-6L P ! " MOS # $ % & '
P-Channel Enhancement Mode Field Effect Transistor in a DFN 2*2B-6L Plastic Package.

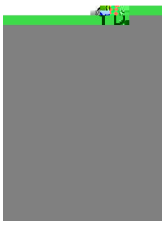
## / Features

$V_{DS}$ (V) = -12V
$I_D$ = -8 A ($V_{GS}$ = ±10V)
( ) * + 。HF Product.

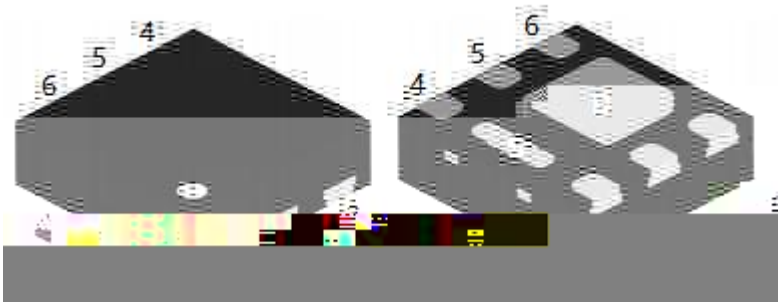
## / Applications

, - . / & 0 1 2 3 4 5 6 7 . 8 9 . : ; '
Power Management in Notebook computer, Portable Equipment and Battery powered systems.

## / Equivalent Circuit



## / Pinning




| 出脚 | 定义 |
|---|---|
| Pin1 | D |
| Pin2 | D |
| Pin3 | G |
| Pin4 | S |
| Pin5 | D |
| Pin6 | D |

## / Marking

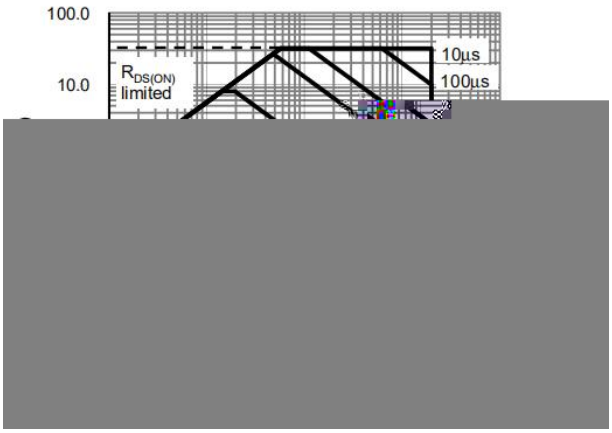
< = > ? @ See Marking Instructions.

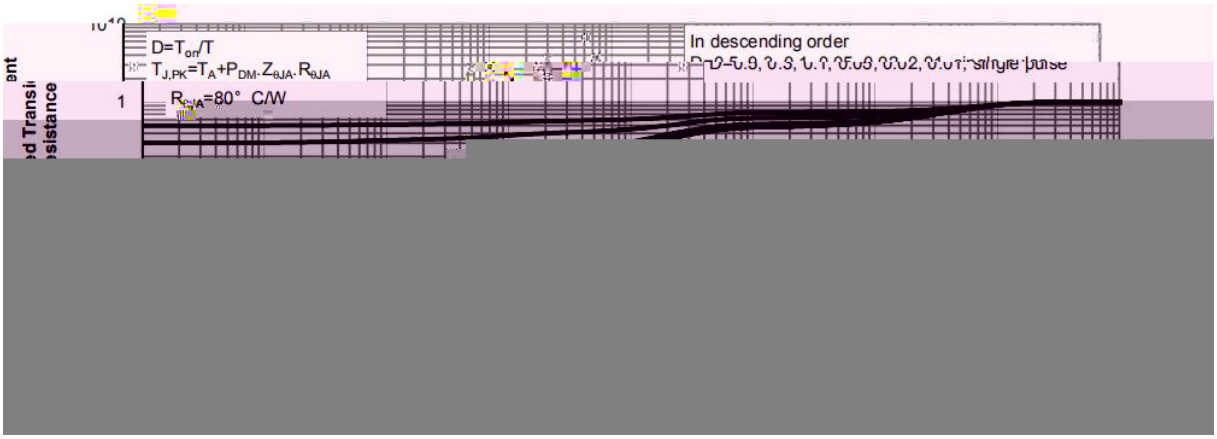
| Parameter | Symbol | Rating | Unit |
|---|---|---|---|
| d Drain-Source Voltage | $V_{DSS}$ | -12 | V |
| Gate-Source Voltage | $V_{GSS}$ | ±10 | V |
| Continuous Drain Current | $I_D$ ($T_a$=25°C) | -8 | A |
| Continuous Drain Current | $I_D$ ($T_a$=70°C) | -6 | A |
| Pulsed Drain Current | $I_{DM}$ | -32 | A |
| Avalanche Current | $I_{AS}$ | | |

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Drain-Source Breakdown Voltage | $BV_{DSS}$ | $I_D$=-250μA $V_{GS}$=0V | -12 | -17 | | V |
| Zero Gate Voltage Drain Current | $I_{DSS}$ | $V_{DS}$=-12V $V_{GS}$=0V | | | -1.0 | μA |
| | | $V_{DS}$=-9.6V $V_{GS}$=0V $T_J$=55°C | | | -5.0 | |
| Gate-Body leakage current | $I_{GSS}$ | $V_{DS}$=0V $V_{GS}$=±10V | | | ±100 | nA |
| Gate Threshold Voltage | $V_{GS(th)}$ | $V_{DS}$=VGS $I_D$=-250μA | -0.4 | -0.7 | -1.0 | V |
| Static Drain-Source On-Resistance | $R_{DS(ON)}$ | $V_{GS}$=-10V $I_D$=-10A | | 10 | 12 | mΩ |
| | | $V_{GS}$=-4.5V $I_D$=-8A | | 11.5 | 14 | |
| | | $V_{GS}$=-2.5V $I_D$=-5A | | 15.8 | 18 | |
| Diode Forward Voltage | $V_{SD}$ | $I_S$=-1A $V_{GS}$=0V | | -0.74 | -1.0 | V |
| Gate Resistance | $R_g$ | $V_{GS}$=0V $V_{DS}$=0V f=1MHz | | 6.7 | | Ω |
| Input Capacitance | $C_{iss}$ | $V_{DS}$=-15V $V_{GS}$=0V f=1.0MHz | | 2110 | | pF |
| Output Capacitance | $C_{oss}$ | | | 550 | | |
| Reverse Transfer Capacitance | $C_{rss}$ | | | 385 | | |
| Total Gate Charge | $Q_g$ | $V_{GS}$=-4.5V $V_{DS}$=-6V $I_D$=-10A | | 12.7 | | nC |
| Gate-Source Charge | $Q_{gs}$ | | | 1.7 | | |
| Gate-Drain Charge | $Q_{gd}$ | | | 3.4 | | |
| Turn-on Delay Time | $t_{d(ON)}$ | $V_{GS}$=-4.5V $V_{DS}$=-6V $R_L$=0.67Ω $R_{GEN}$=3Ω | | 11 | | ns |
| Turn-on Rise Time | $t_r$ | | | 25 | | |
| Turn-off Delay Time | $t_{d(OFF)}$ | | | 70 | | |
| Turn-off Fall Time | $t_f$ | | | 41.5 | | |

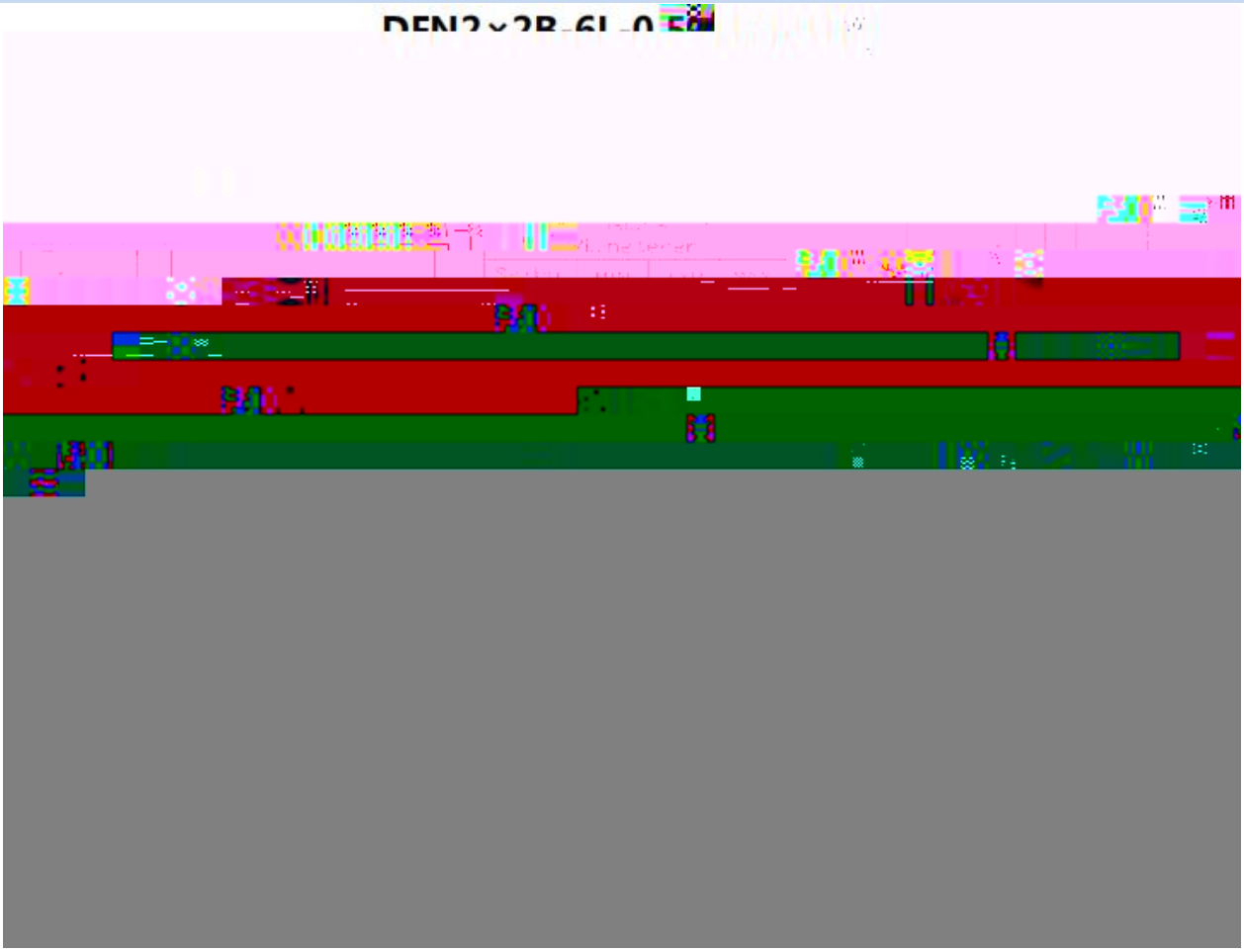
## / Electrical Characteristic Curve



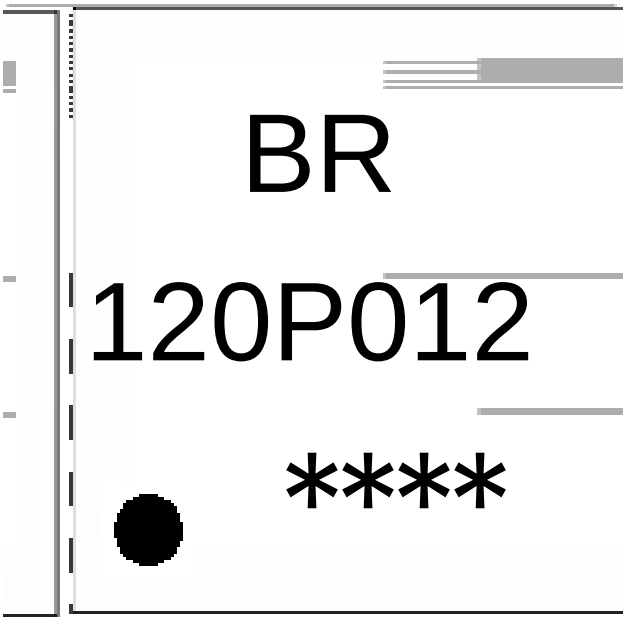



## / Package Dimensions



## / Marking Instructions




BR
120P012
****

Note:

| | |
|---|---|
| BR: | Company Code. |
| 120P012: | Product Type |
| ****: | Lot No. Code, code change with Lot No. |