

BRCS070N06SHDP

Rev.A Jul.-2024

/ Descriptions

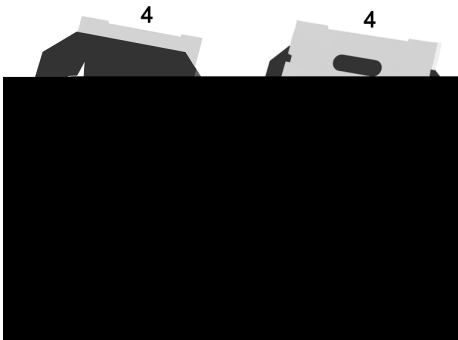
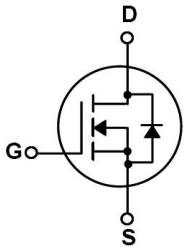
TO-252 N
N-CHANNEL MOSFET in a TO-252 Plastic Package.

/ Features

$V_{DS}=60V$ $I_D=78A$
 $R_{DS(on)}@10V$ 7m (Type. 5.7m)
 $R_{DS(on)}@6V$ 12m (Type. 6.2m)
HF Product.

/ Applications

; : & :
DC/DC Converter, Ideal for high-frequency switching and synchronous rectification.



PIN1 G PIN 2 D PIN 3 S PIN 4 D

/ Marking

See Marking Instructions.

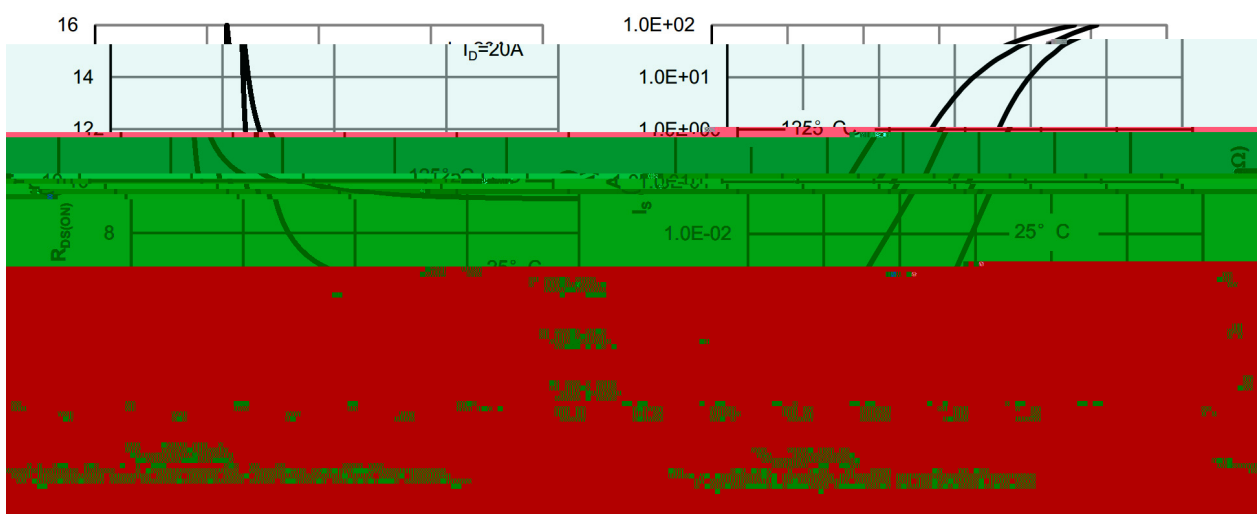
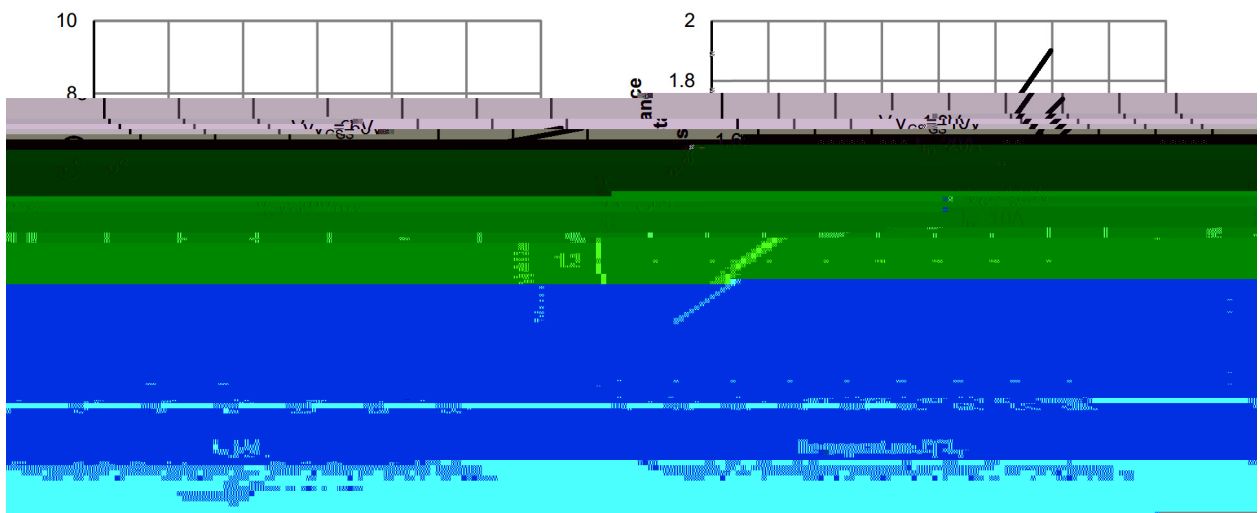
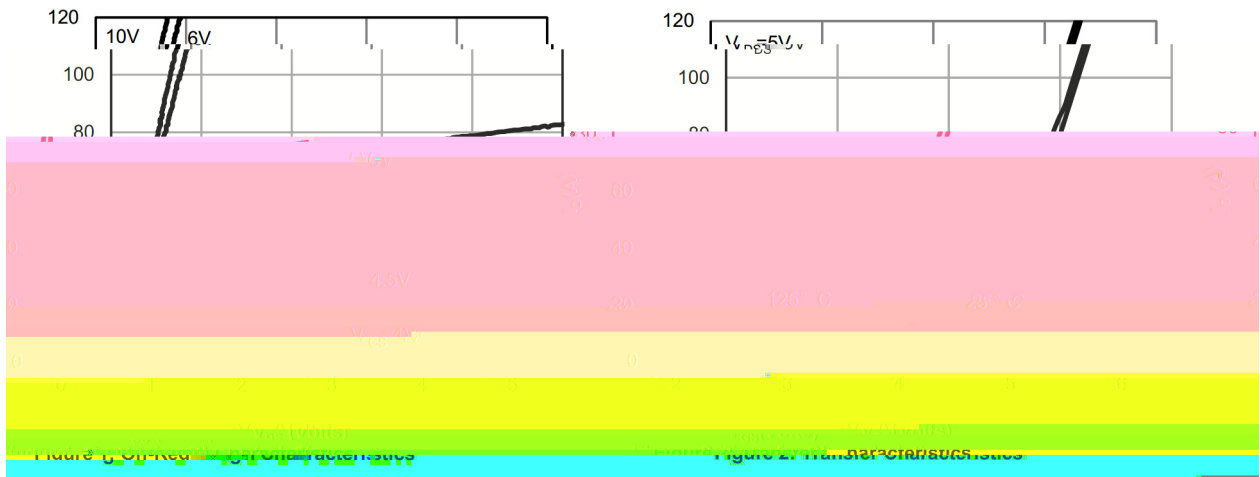
| Parameter | | Symbol | Rating | Unit |
|---|--------------|-----------------------|------------|------|
| Drain-Source Voltage | | V_{DSS} | 60 | V |
| Drain Current | | $I_D(T_C=25^\circ C)$ | 78 | A |
| Pulsed Drain Current | | I_{DM} | 274 | A |
| Gate-Source Voltage | | V_{GS} | w 20 | V |
| Single Pulsed Avalanche Energy(L=0.5mH) | | E_{AS} | 720 | mJ |
| Avalanche Current | | I_{AS} | 41 | A |
| Total Power Dissipation | | $P_D(T_C=25^\circ C)$ | 150 | W |
| Junction and Storage Temperature Range | | T_J, T_{STG} | -55 to 150 | |
| Thermal Resistance-Junction to Ambient | Steady-State | R_{JA} | 62.5 | /W |
| Thermal Resistance-Junction to Case | Steady-State | R_{JC} | 1.56 | |

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|-----------------------------------|--------------|-------------------------------|-----|-----|-----------|---------|
| Drain-Source Breakdown Voltage | BV_{DSS} | $I_D=250\mu A, V_{GS}=0V$ | 60 | 70 | | V |
| Zero Gate Voltage Drain Current | I_{DSS} | $V_{DS}=60V, V_{GS}=0V$ | | | 1.0 | μA |
| Gate-Body leakage current | I_{GSS} | $V_{DS}=0V, V_{GS}=\pm 20V$ | | | ± 100 | nA |
| Gate Threshold Voltage | $V_{GS(th)}$ | $V_{DS}=V_{GS}, I_D=250\mu A$ | 2.0 | 2.9 | 4.0 | V |
| Static Drain-Source On-Resistance | $R_{DS(on)}$ | $V_{GS}=10V, I_D=20A$ | | 5.7 | 7 | |

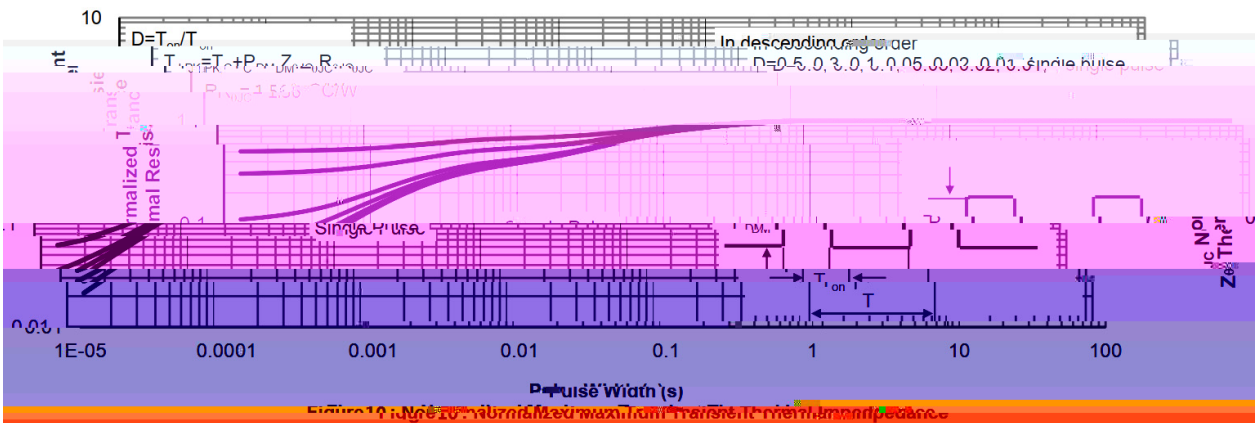
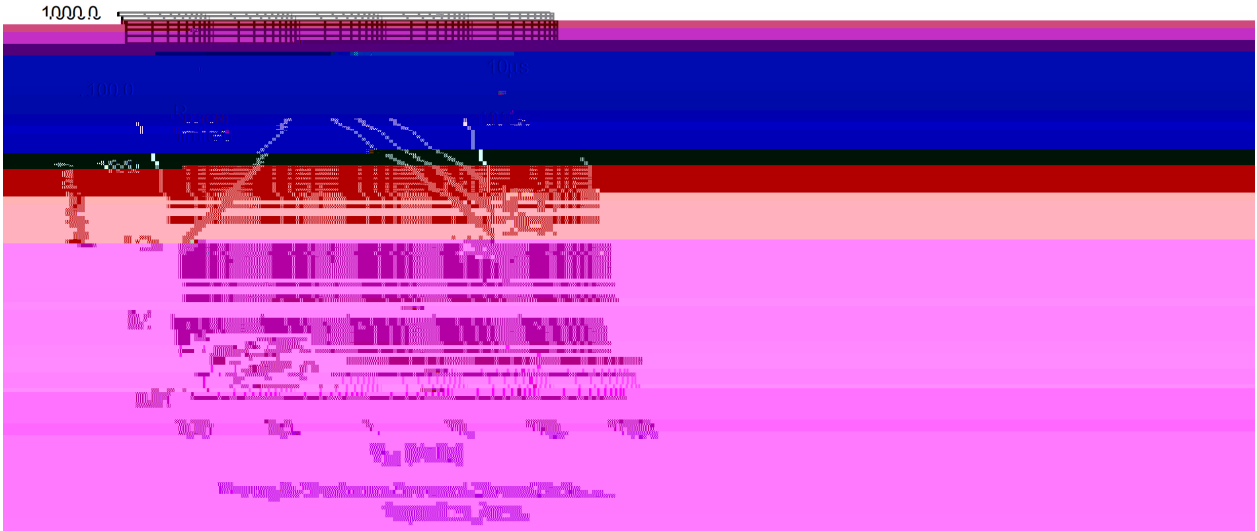
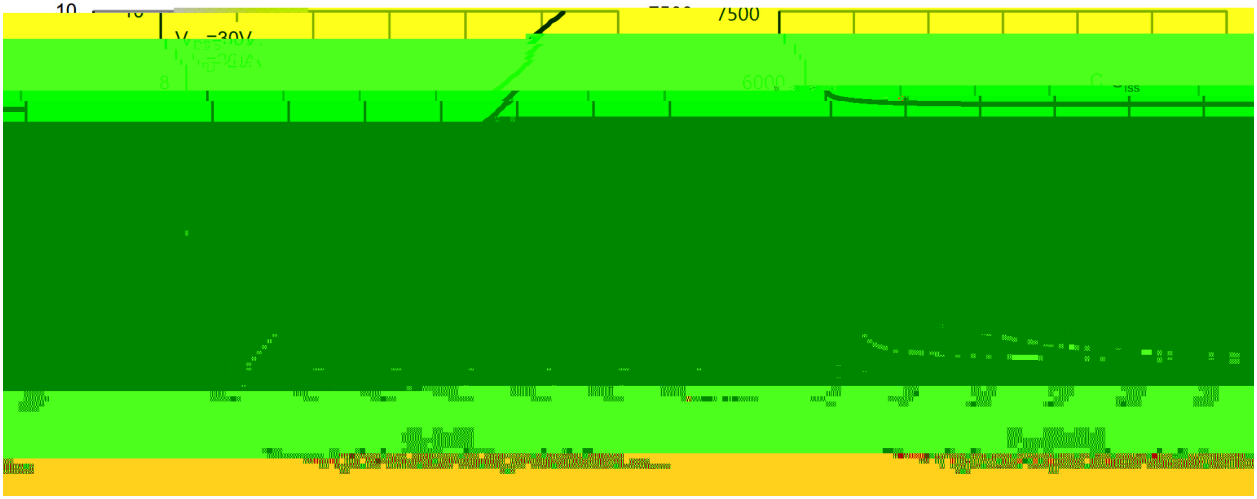
/ Electrical Characteristics(Ta=25)

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|---------------------|--------------|--|-----|-----|-----|------|
| Turn-On Delay Time | $t_{d(on)}$ | $V_{GS}=10V$ $V_{DS}=30V$ $R_L=1.5\Omega$ $R_{GEN}=3\Omega$ | | 21 | | ns |
| Turn-On Rise Time | t_r | | | 23 | | |
| Turn-Off Delay Time | $t_{d(off)}$ | | | 35 | | |
| Turn-Off Fall Time | t_f | | | 4.2 | | |

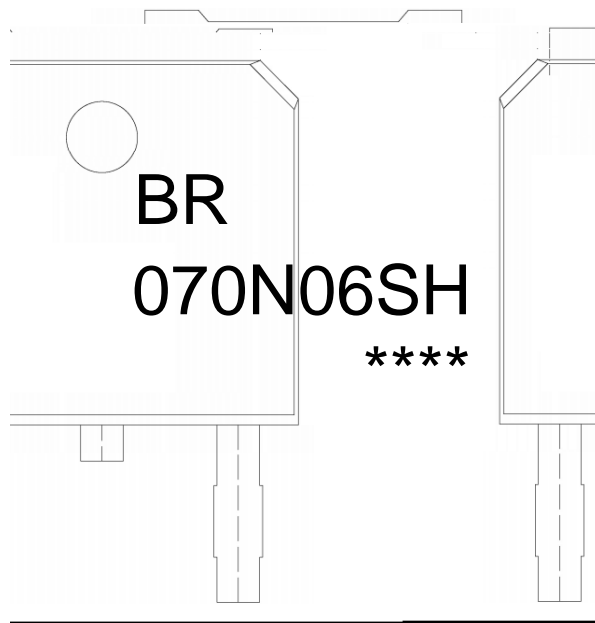
/ Electrical Characteristic Curve



/ Electrical Characteristic Curve



/ Marking Instructions



BR

070N06SH

Note:

BR: Company Code

070N06SH: Product Type Code

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

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