## / Descriptions

PDFN5×6 N

N-Channel MOSFET in a PDFN5×6 Plastic Package.

## / Features

$V_{DS}$(V)=30 V $I_D$=124A

$R_{DS(ON)}$@10V≤2.5mΩ(Typ.1.4mR)

$R_{DS(ON)}$@4.5V≤4.0mΩ(Typ.2.5mR)

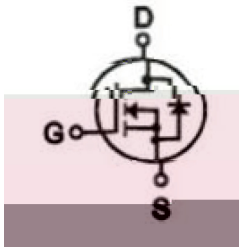
HF Product.

## / Applications

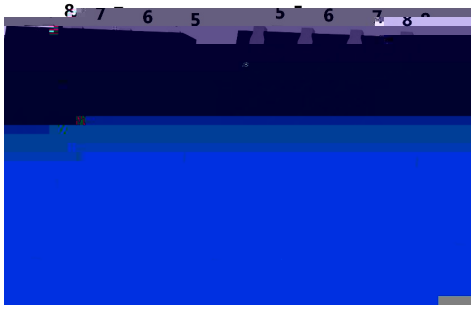
MB/NB/UMPC/VGA Buck -

Battery Management,High Frequency Point-of-Load Synchronous Buck Conventer for MB/NB/UMPC/VGA,Networking DC-DC Power System,Load Switch.

## / Equivalent Circuit




## / Pinning



PIN1 2 3 S PIN4 G PIN5 6 7 8 D

## / Marking

See Marking Instructions.

| Parameter | Symbol | Rating | Unit |
|---|---|---|---|
| Drain-Source Voltage | $V_{DS}$ | 30 | V |
| Continuous Drain Current | $I_D$($T_c$=25 ) | 124 | A |
| Pulsed Drain Current | $I_{DM}$ | 248 | A |
| Gate-Source Voltage | $V_{GS}$ | ± 20 | V |
| Power Dissipation | $P_D$($T_c$=25 ) | 65 | W |
| Avalanche energy(L=0.5mH) | $E_{AS}$ | 810 | mJ |
| Avalanche Current(L=0.5mH) | $I_{AS}$ | 46.5 | A |
| Junction and Storage Temperature Range | $T_j$, $T_{stg}$ | -55 to 150 | |
| Maximum Junction-to-Ambient | $R_{\theta JA}$ | 50 | / W |
| Maximum Junction-to-Case | $R_{\theta JC}$ | 1.92 | / W |

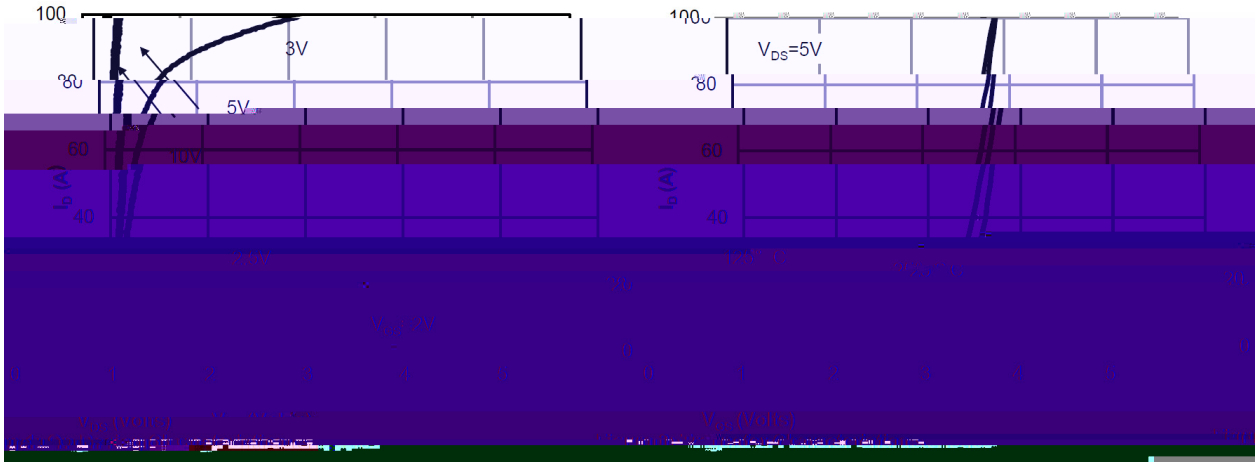
i z

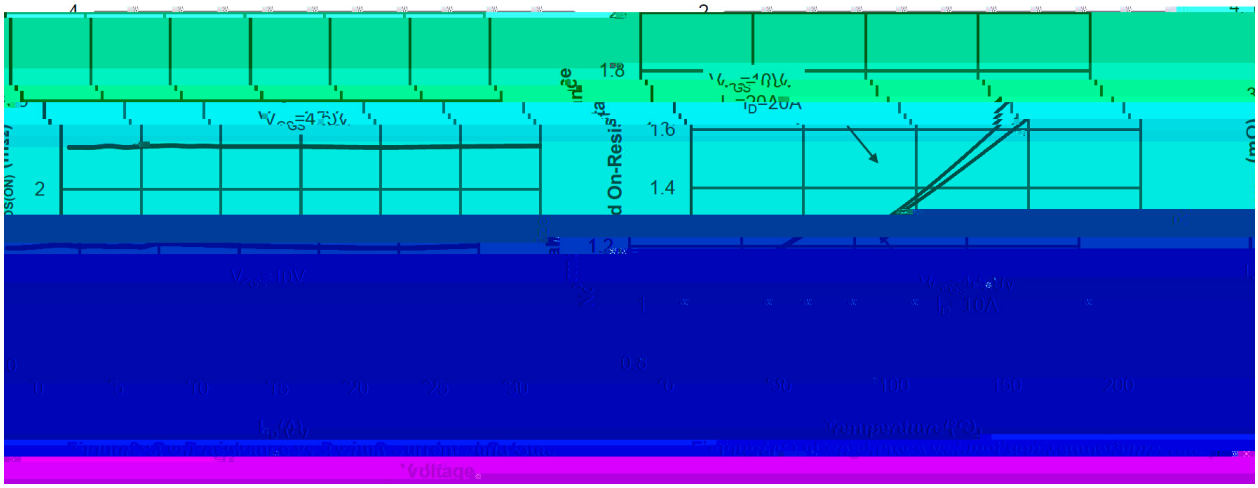
Parameter Symbol Test Conditions Min Unit AS

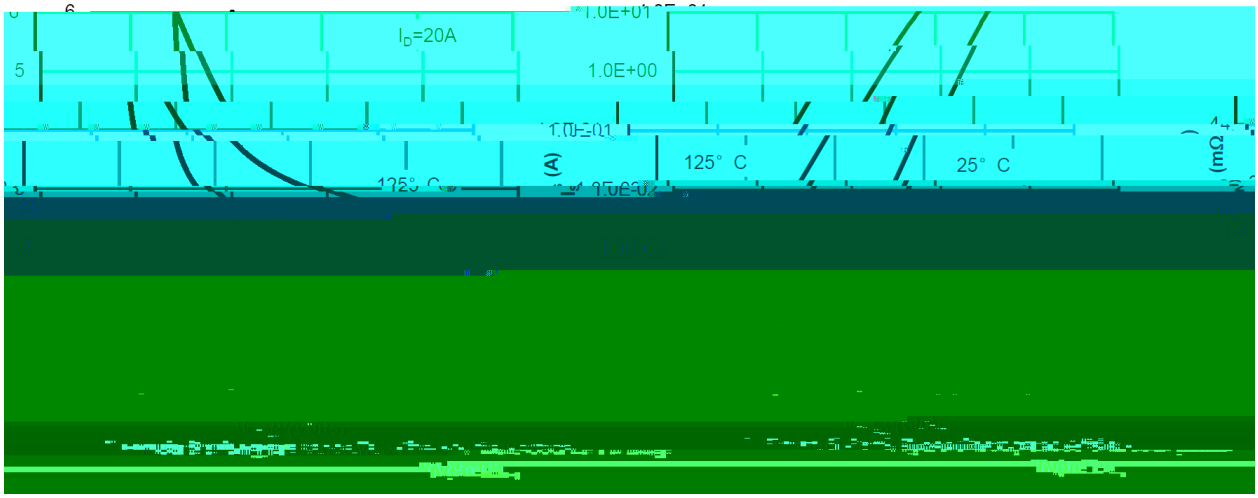
## / Electrical Characteristics(Ta=25 )

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Total Gate Charge | $Q_{g(10V)}$ | $V_{GS}$=10V $V_{DS}$=15V $I_D$=20A | | 115.2 | | nC |
| Total Gate Charge | $Q_{g(4.5V)}$ | | | 55.3 | | |
| Gate Source Charge | $Q_{gs}$ | | | 11.0 | | |
| Gate Drain Charge | $Q_{gd}$ | | | 23.6 | | |
| Turn-On Delay Time | $t_{d(on)}$ | $V_{GS}$=10V $V_{DS}$=15V $I_D$=20A $R_G$=3Ω | | 17.2 | | ns |
| Turn-On Rise Time | $t_r$ | | | 53.3 | | |
| Turn-Off Delay Time | $t_{d(off)}$ | | | 80.9 | | |
| Turn-Off Fall Time | $t_f$ | | | 35.3 | | |

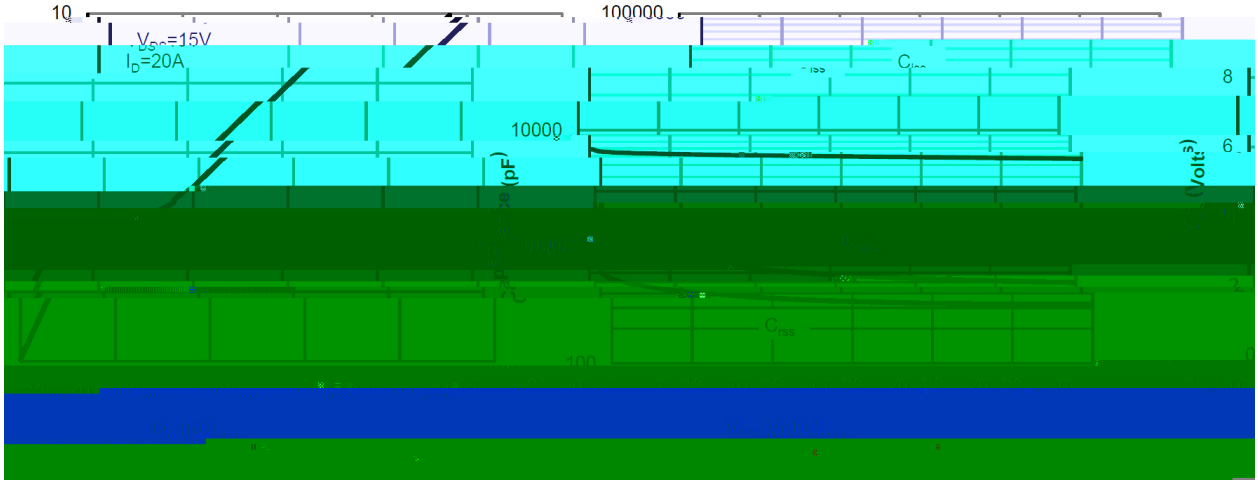
## / Electrical Characteristic Curve

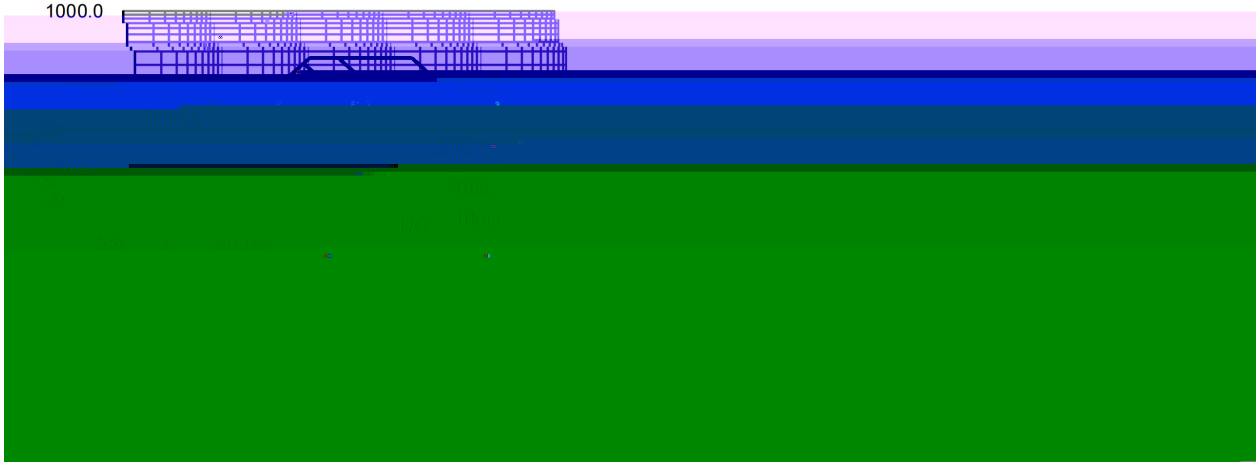


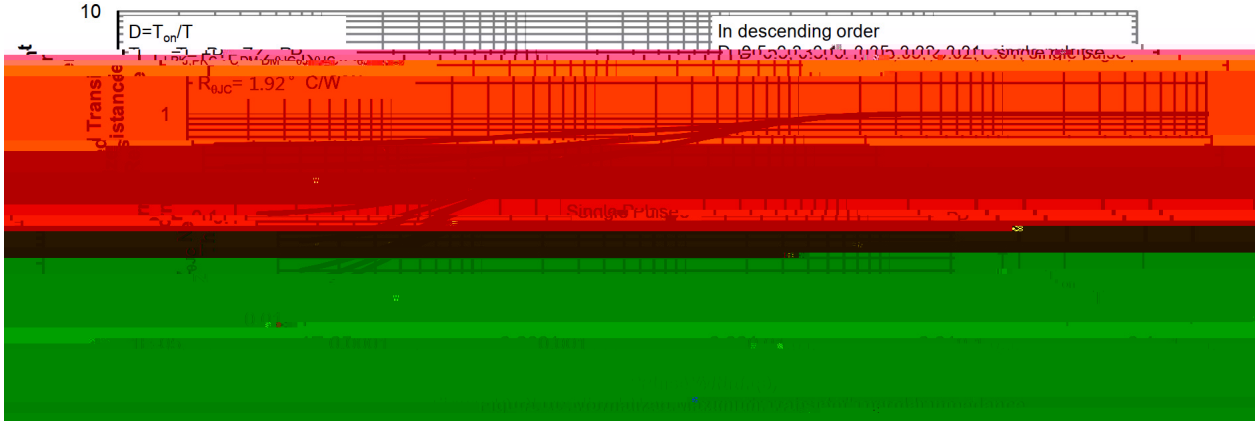



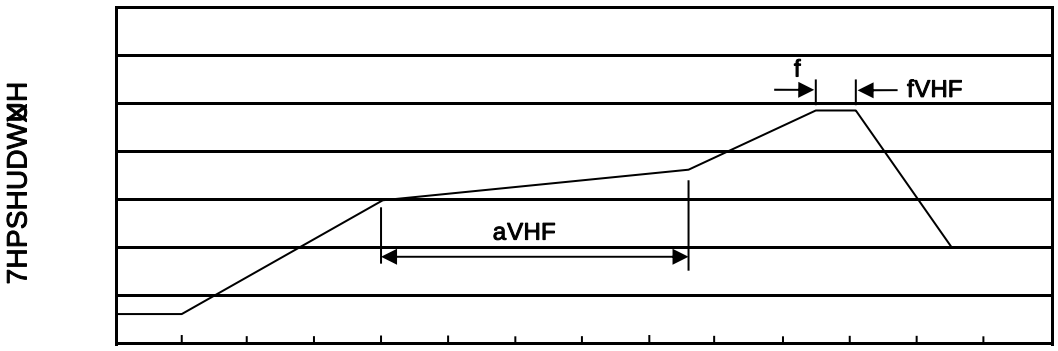
## / Electrical Characteristic Curve



## ( ) / Temperature Profile for IR Reflow Soldering(Pb-Free)




7LPHVHF

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 ;>û ¦H | | | | | Dimension ;>û p . (unit ÆEmm³) | | |
|---|---|---|---|---|---|---|---|---|
| | Units/Reel / | Reels/Inner Box / | Units/Inner Box / | Inner Boxes/Outer Box / | Units/Outer Box / | Reel | Inner Box | Outer Box |
| PDFN5×6 | 5,000 | 2 | 10,000 | 6 | 60,000 | 13''×12 | 360×360×50 | 380×335×366 |

## / Notices

All information provided in this document is subject to legal disclaimers.