

/ Descriptions

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

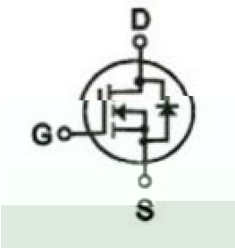
/ Features

Low $R_{DS(ON)}$ to minimize conductive loss;low Gate Charge for fast switching;Low Thermal resistance;HF Product.

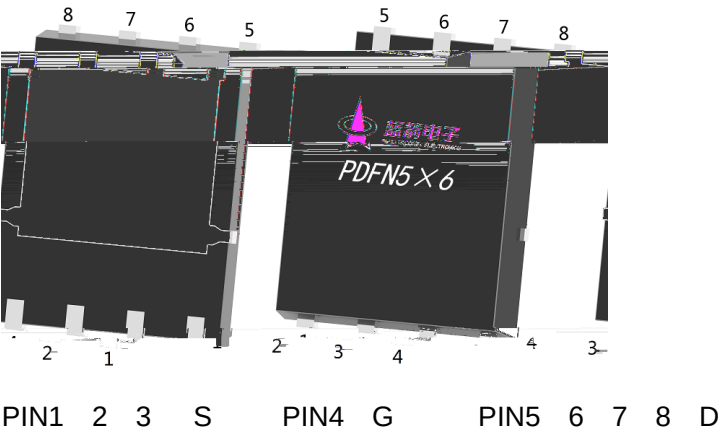
/ Applications

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

/ Equivalent Circuit



/ Pinning



Pin	极性
1	S
2	S
3	S
4	G
5	D
6	D
7	D
8	D

/ Marking

See Marking Instructions.

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	60	V
Continuous Drain Current		I_D	111	A
Pulsed Drain Current		I_{DM}	227	A
Gate-Source Voltage		V_{GS}	20	V
Power Dissipation		$P_D(T_c=25^\circ\text{C})$	78	W
Avalanche energy($L=0.5\text{mH}$)		E_{AS}	2000	mJ
Avalanche Current($L=0.5\text{mH}$)		I_{AS}	47	A
Junction and Storage Temperature Range		T_j, T_{stg}	-55 to 150	
Maximum Junction-to-Ambient	$t \leq 10\text{s}$	R_{JA}	17	/ W
	Steady-State		55	
Maximum Junction-to-Case	Steady-State	R_{JC}	1.6	

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$I_D=250\mu\text{A}, V_{GS}=0\text{V}$	60	69		V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=60\text{V}, V_{GS}=0\text{V}$			1.0	μA
Gate-Body leakage current	I_{GSS}	$V_{DS}=0\text{V}, V_{GS}=\pm 20\text{V}$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu\text{A}$	1	1.7	2.5	V

Static Drain-Source On-Resistance $R_{DS(on)}$ $V_{GS}=10\text{V}, I_D=1\text{A}$

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	$t_{d(on)}$	$V_{GS}=10V$ $V_{DS}=30V$ $R_L=1.5$ $R_{GEN}=3$		13		ns
Turn-On Rise Time	t_r			4		
Turn-Off Delay Time	$t_{d(off)}$			47		
Turn-Off Fall Time	t_f			6.5		

/ Electrical Characteristic Curve

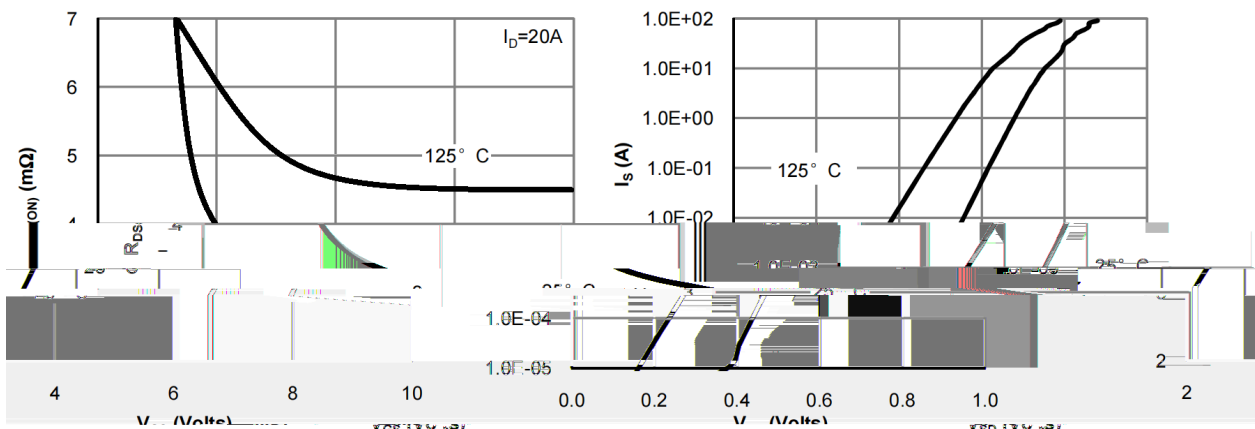
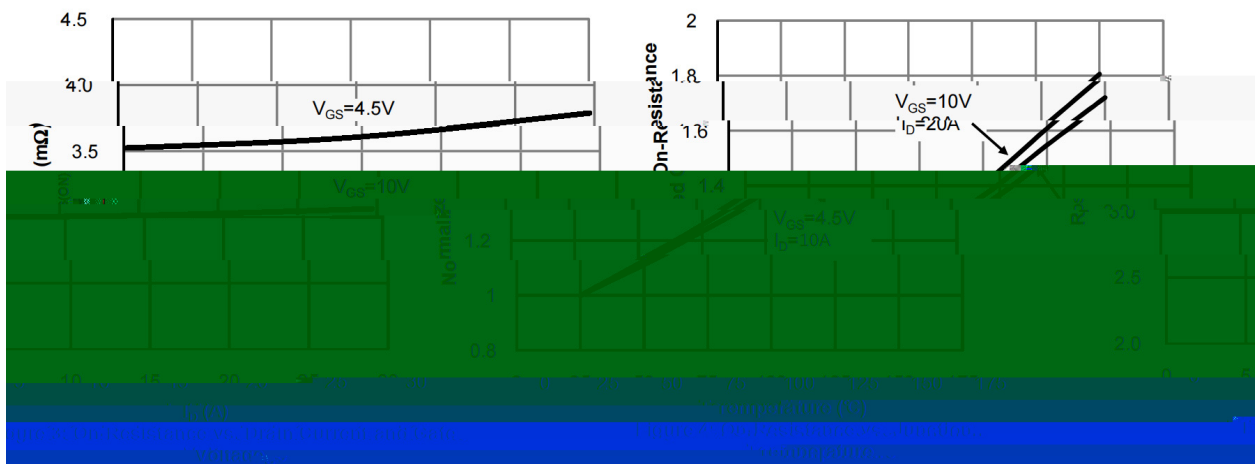
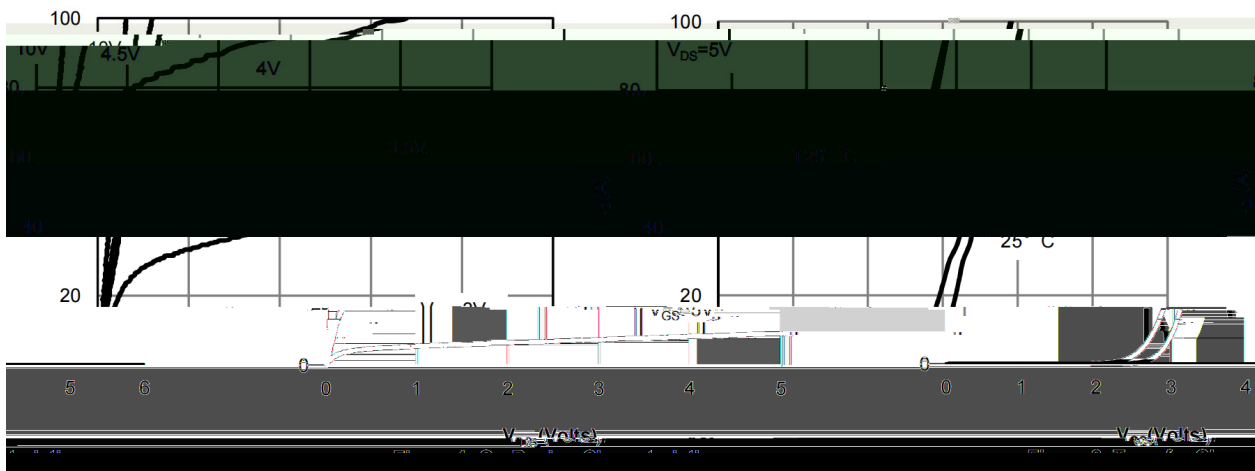


Figure 5: On-Resistance vs. Gate-Source Voltage

Figure 6: Body-Diode Characteristics

/ Electrical Characteristic Curve

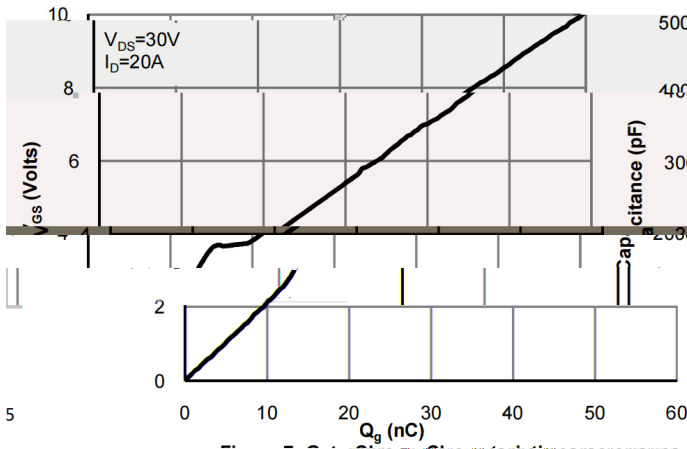


Figure 7: Gate-Charge Characteristics

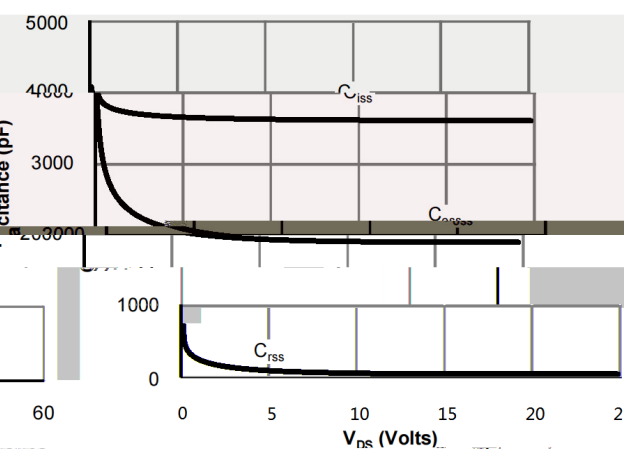


Figure 8: Capacitance Characteristics

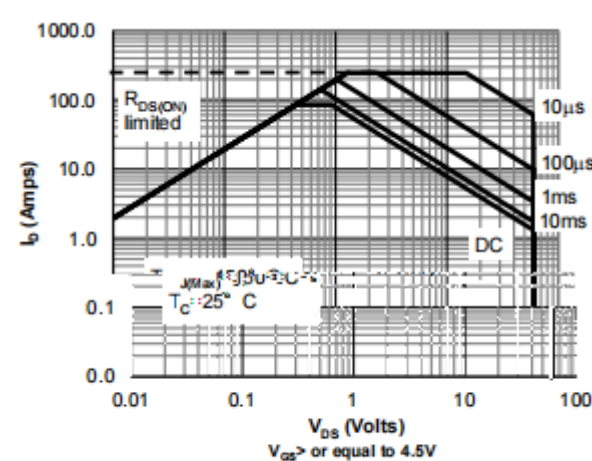


Figure 9: Maximum Forward Biased Safe Operating Area

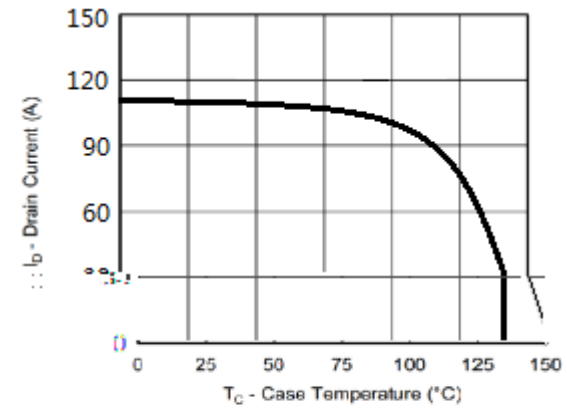
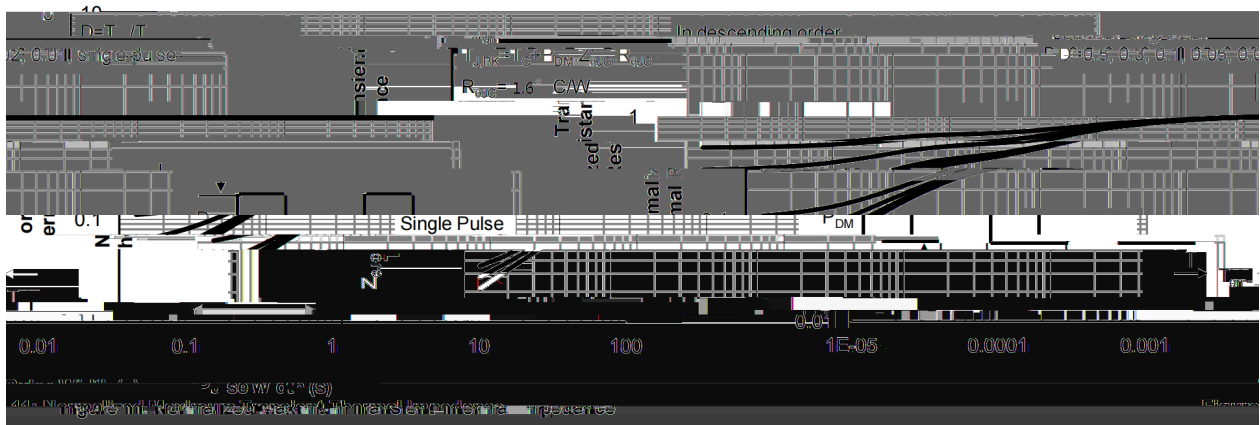
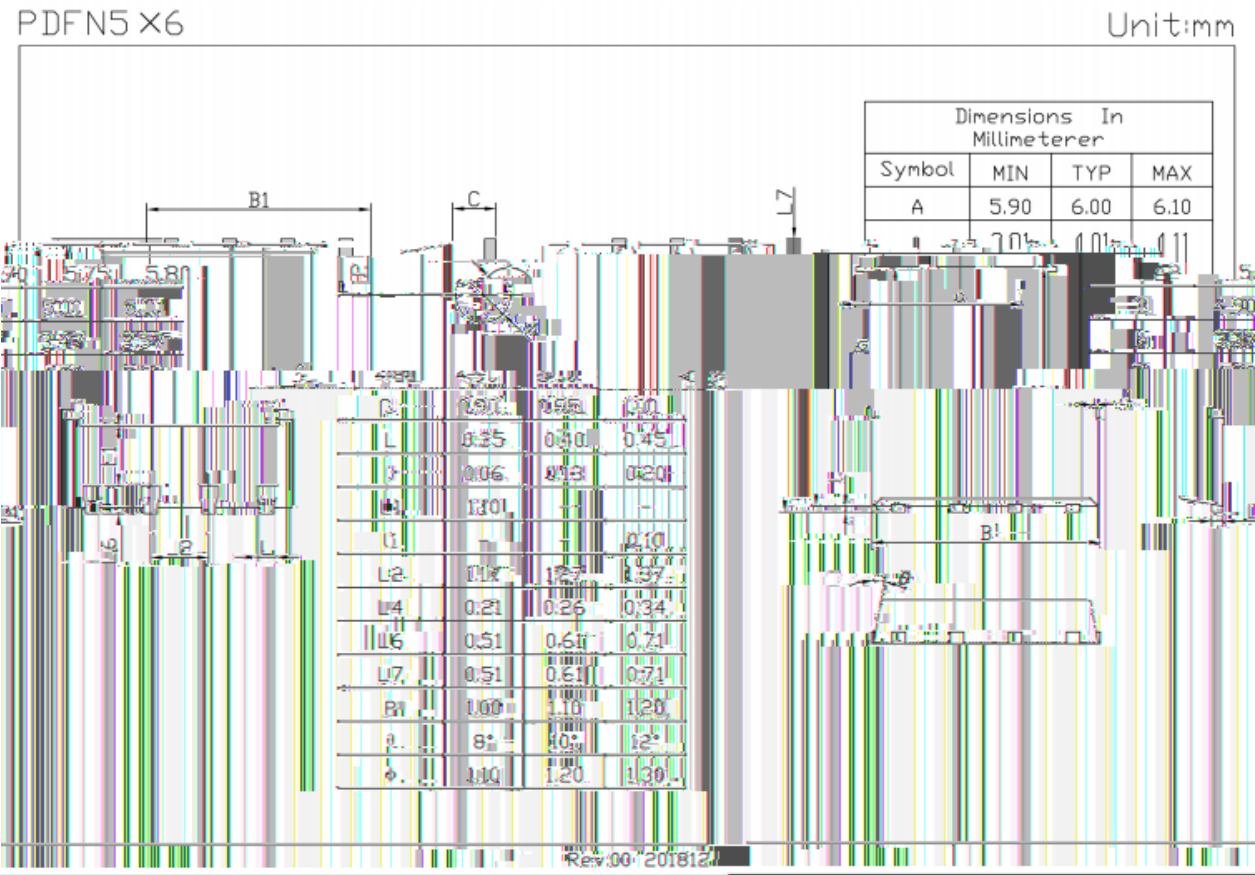


Figure 10: Maximum Continuous Drain Current vs Case Temperature

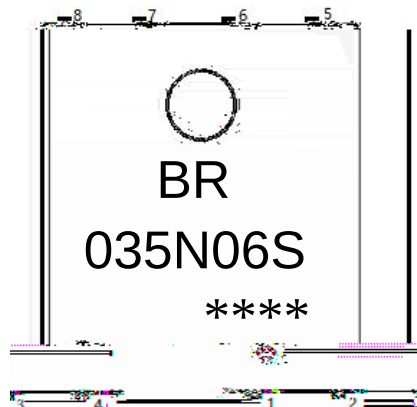


/ Package Dimensions

PDFN5×6 外形尺寸图



/ Marking Instructions



035N06S

Note

BR

Company Code

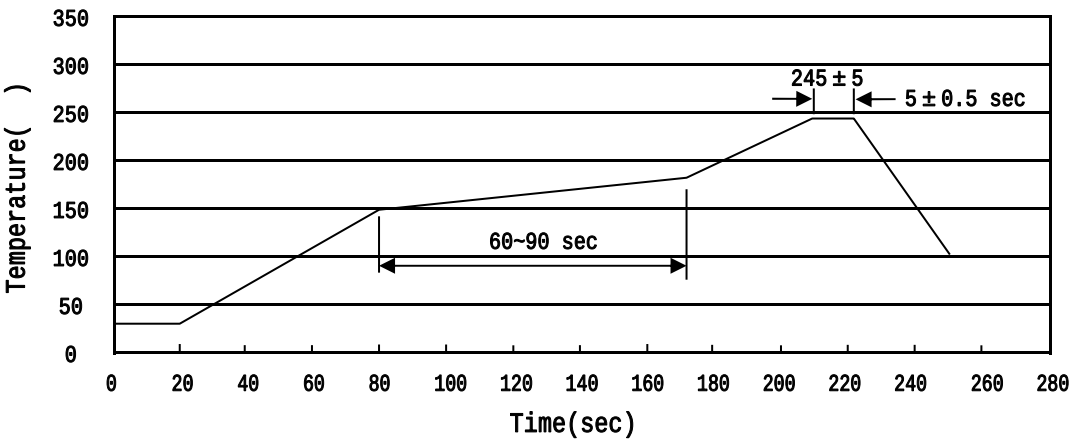
035N06S

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 mm ³)		
	Units/Reel	Reels/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Reel	Inner Box	Outer Box
PDFN5 × 6	5000	2	10000	6	60000	13" × 12	360 × 360 × 50	380 × 335 × 366

/ Notices