/ Descriptions

PDFN5 6 N

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

/ Features

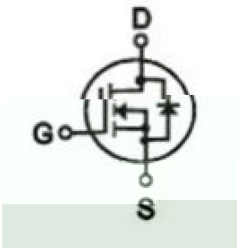
Low $R_{DS(ON)}$ to minimize conductive loss;low Gate Charge for fast switching;Low Thermal resistance;HF Product.

/ Applications

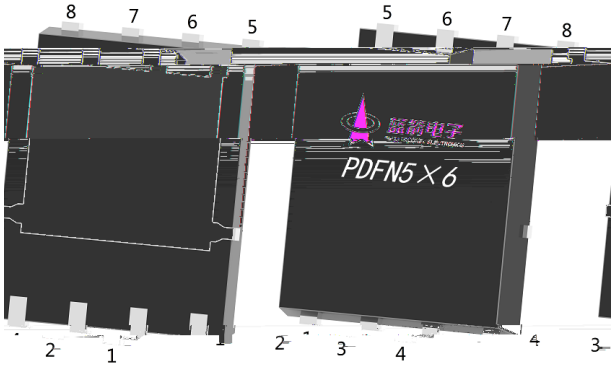
MB/NB/UMPC/VGA Buck -

Battery Management,High Frequency Point-of-Load Synchronous Buck 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

Pin	极性
1	S
2	S
3	S
4	G
5	D
6	D

/ Marking

See Marking Instructions.

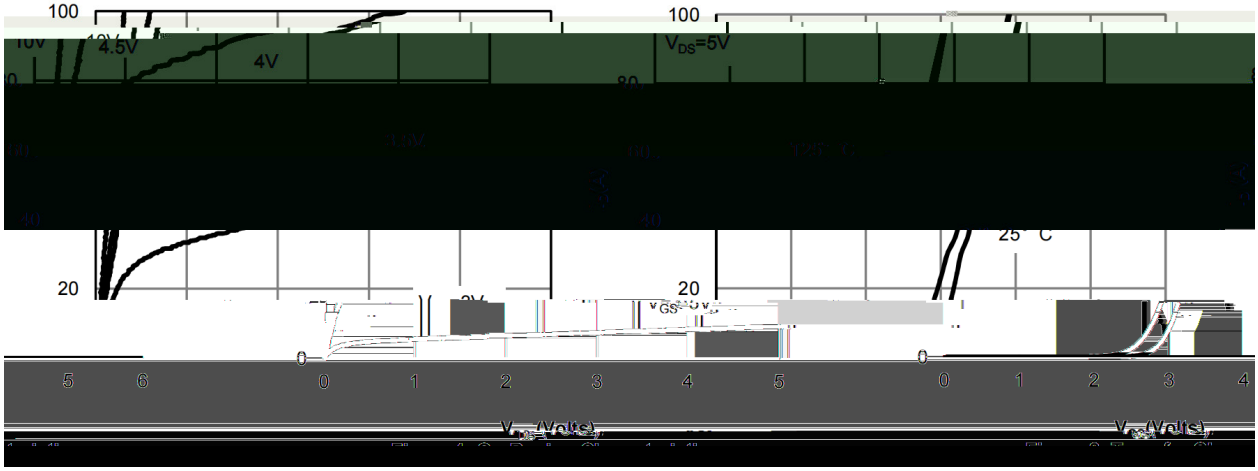
Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	60	V
Continuous Drain Current		I_D	111	A
Pulsed Drain Current		I_{DM}	227	A
Gate-Source Voltage		V_{GS}	20	V
Power Dissipation		$P_D(T_c=25\ \ )$	78	W
Avalanche energy(L=0.5mH)		E_{AS}	2000	mJ
Avalanche Current(L=0.5mH)		I_{AS}	47	A
Junction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

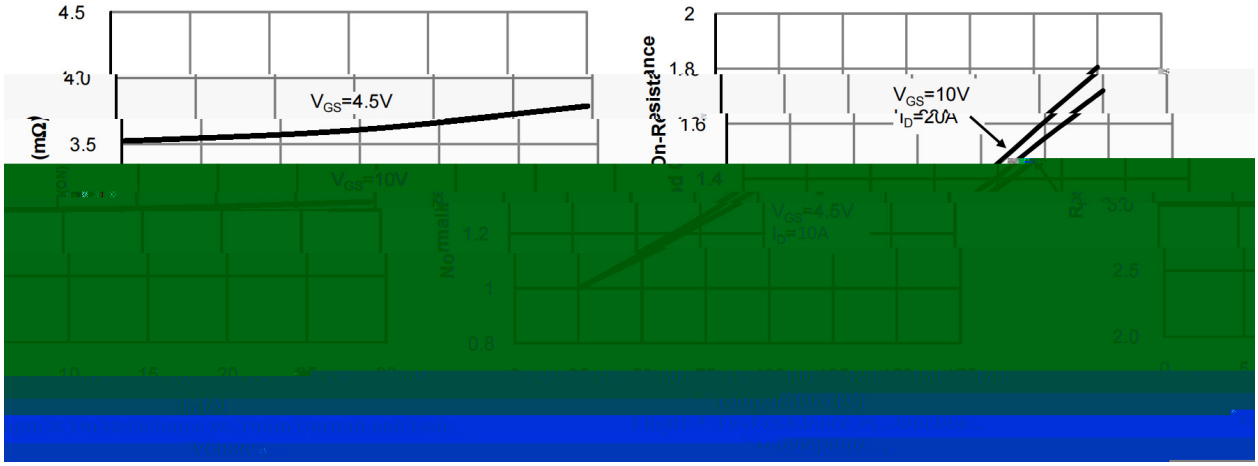
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	I_D=250uA, V_{GS}=0V	60	69		V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=60V, V_{GS}=0V			1.0	uA
Gate-Body leakage current	I_{GSS}	V_{DS}=0V, V_{GS}= ±20V			±100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS}, I_D=250uA	1	1.7	2.5	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	V_{GS}=10V, I				

/ 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





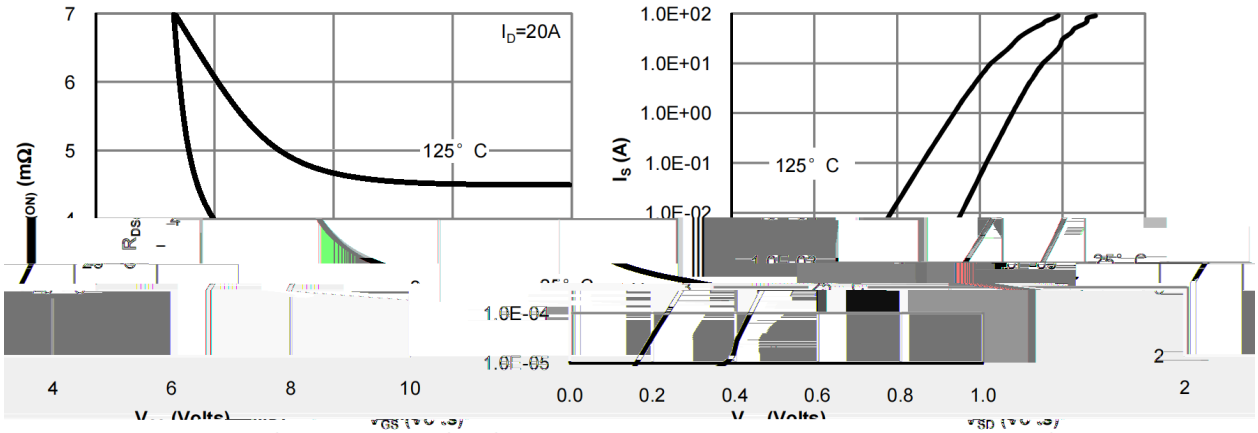


Figure 5: On-Resistance vs. Gate-Source Voltage

Figure 6: Body-Diode Characteristics

/ Electrical Characteristic Curve

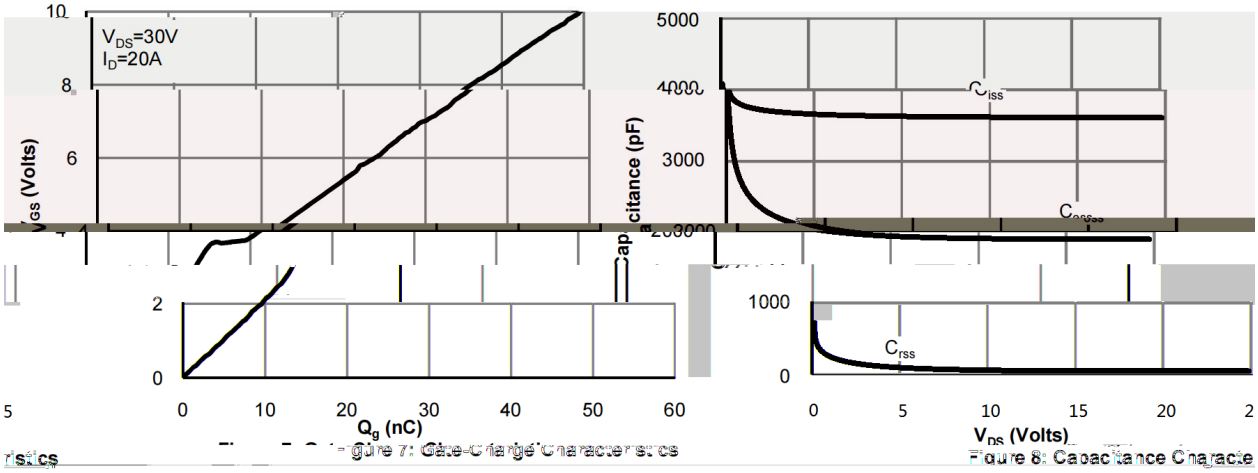
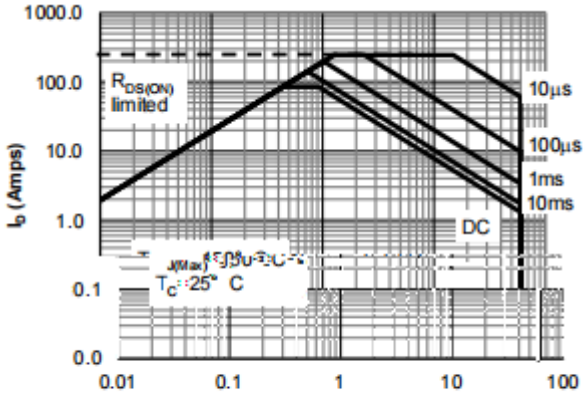


Figure 7: Gate-Charge Characteristics

Figure 8: Capacitance Characte



V_{GS}> or equal to 4.5V

Figure 9: Maximum Forward Biased Safe Operating Area

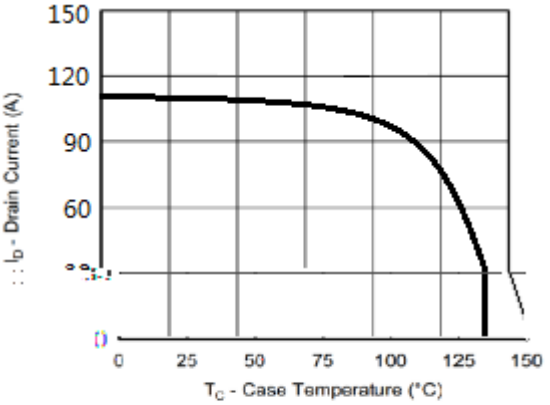


Figure10. Maximum Continuous Drain Current vs Case Temperature

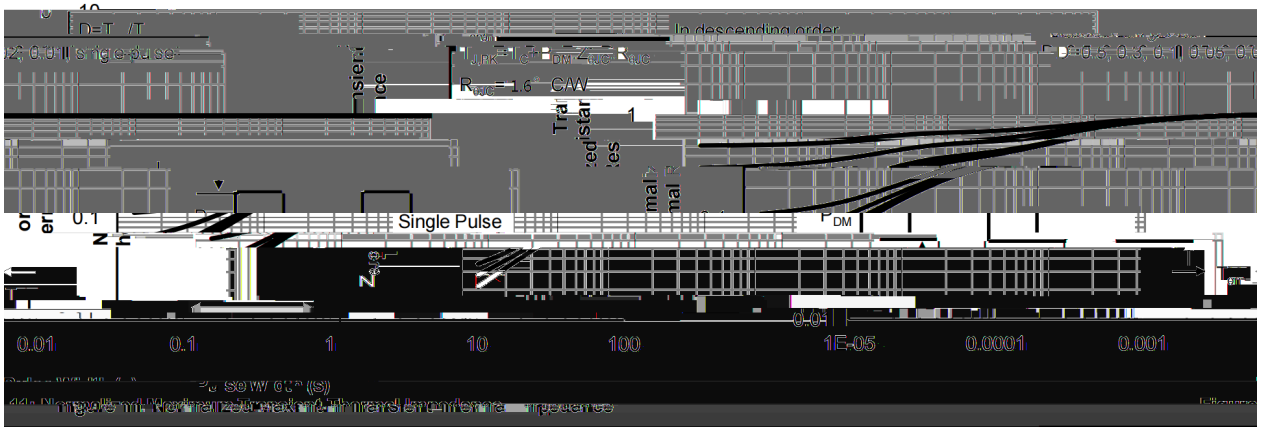
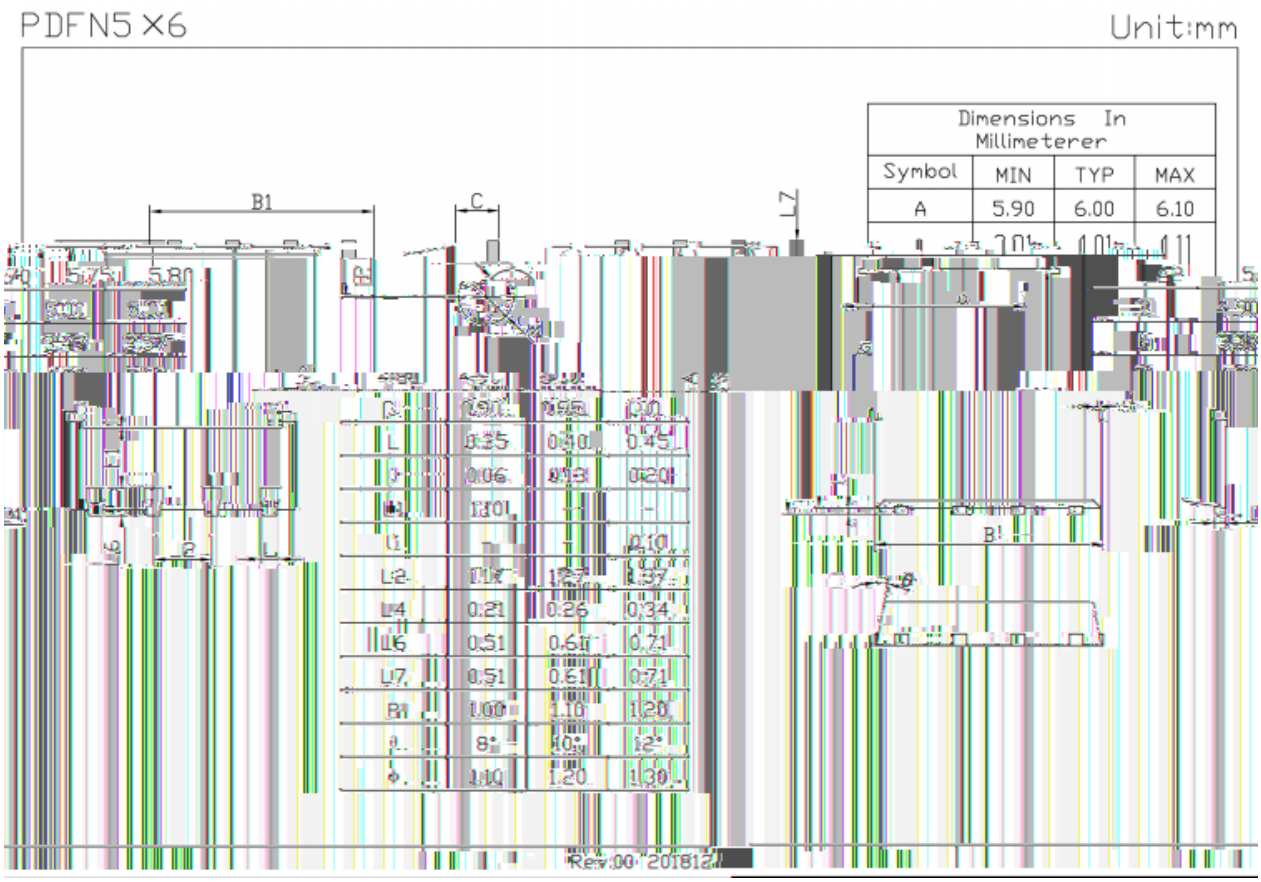


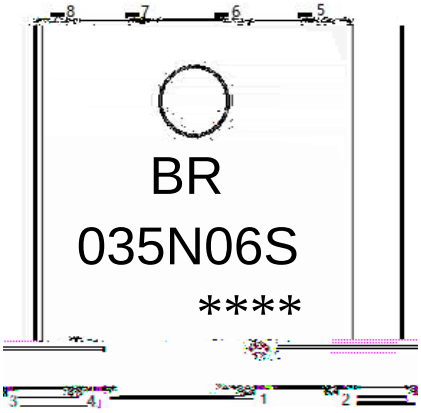
Figure 11. Normalized Transient Thermal Impedance

/ Package Dimensions

PDFN5×6 外形尺寸图



/ Marking Instructions

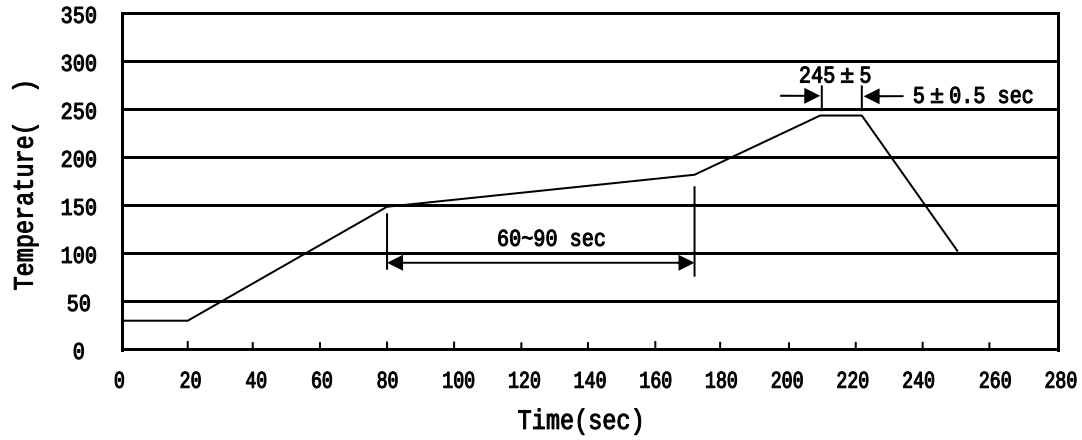


035N06S

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 mm³)
	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