/ Descriptions

PDFN5Ö6–Clip Ṃ Ḅ N ŏ ʃ ѽ Ẓ ᶘ

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

/ Features

V_{DS}(V)=40V I_D=200A

$R_{DS(ON)}$@10V≤0.8mΩ(Typ. 0.65mΩ)

$R_{DS(ON)}$@4.5V≤1.3mΩ(Typ.1.1mΩ)

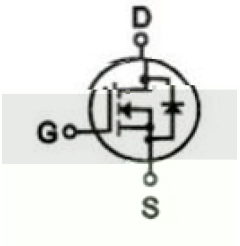
ḭ ғ β HF Product.

/ Applications

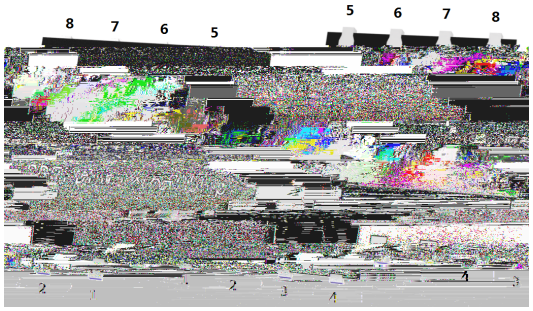
ɔ ɨ ʊ ʰ ɪ DC-DC ȩ ̈Ω ʰ

Motor drivers, DC-DC Converter.

/ Equivalent Circuit



/ Pinning



PIN1 2 3 S PIN4 G PIN5 6 7 8 D

/ Marking

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See Marking Instructions.

v ¨Ω Parameter	٩ N Symbol	¨Ω Ö Rating	D Ĥ Unit
Drain-Source Voltage	V_{DS}	40	V
Gate-Source Voltage	V_{GS}	±20	V
Drain Current : ˙ ˛	I_D(Tc=25 ł)	200	A
	I_D(Tc=100 ł)	200	A
Drain Current – Pulsed : ˙ ˛	I_{DM}(Tc=25 ł)	800	A
Power Dissipation :	P_D(Tc=25 ł)	150	W
Operating and Storage Temperature Range	T_J,T_{stg}	-55 to 175	ł
Diode Forward Current	I_S(Tc=25 ł)	200	A
Single Pulsed Avalanche Energy(L=1.0mH)	E_{AS}	1012	mJ
Thermal resistance, junction – ambient :	$R_{\theta JA}$	56	ł / W
Thermal resistance, junction – case :	$R_{\theta JC}$	1	

Note:

1. Surface Mounted on 1 in^2 pad area, t ≤ 10 sec
2. Pulse width ≤ 10 μs, duty cycle ≤ 1 %
3. limited by bonding wire

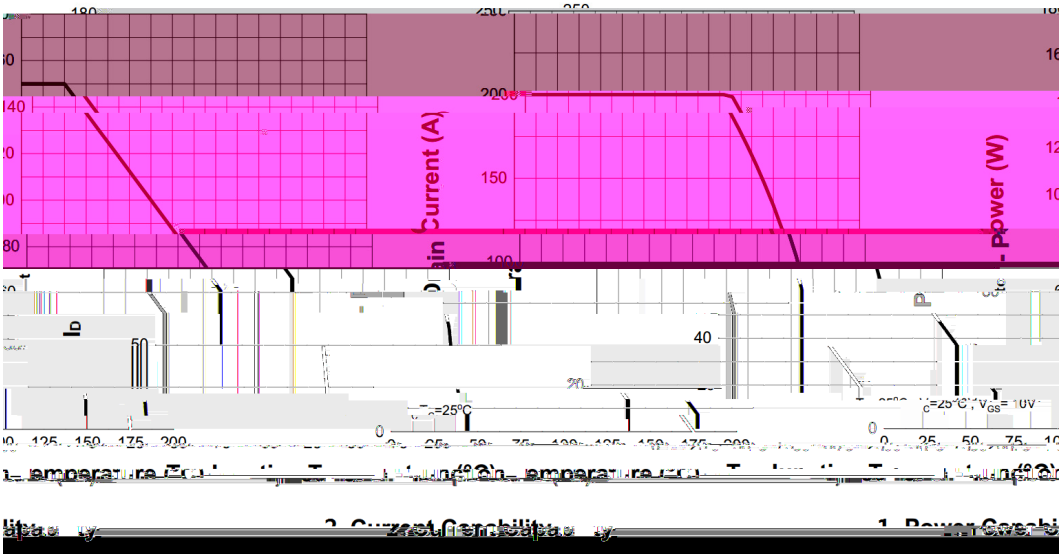
v ¨Ω Parameter	٩ N Symbol	˙ ˛ ˙ ţ Test Conditions		ώ ņ Ö Min	Ɛ ʒ Ö Typ	ώ ź Ö Max	D Ĥ Unit
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}=0V	I_D=250μA	40			V
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS}	I_D=250μA	1.0		2.5	V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=32V	V_{GS}=0V			1	μA
Gate-Body Leakage Current Forward	I_{GSS}	V_{GS}=±20V	V_{DS}=0V			±0.1	μA
Static Drain-Source On-Resistance	$R_{DS(on)}$	V_{GS}=10V	I_D=30A		0.65	0.8	mΩ
		V_{GS}=4.5V	I_D=20A		1.1	1.3	mΩ

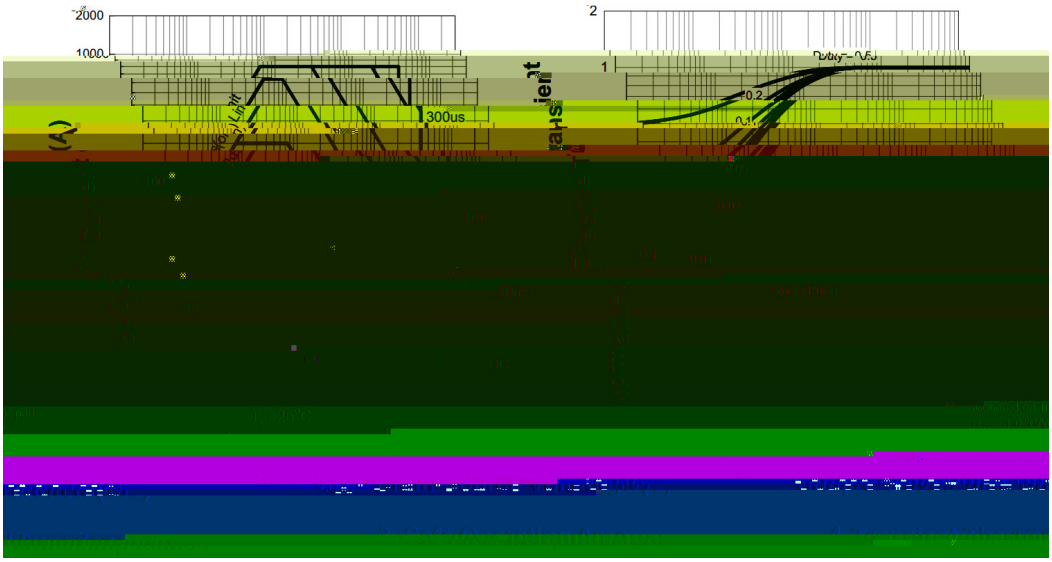
Drain-Source Diode Forward

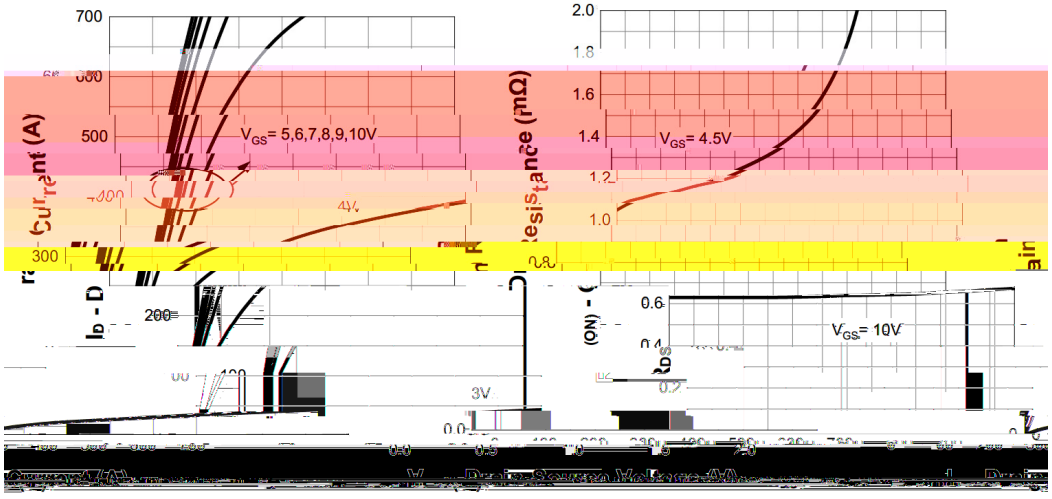
/ Electrical Characteristics(Ta=25)

v ̈Ω Parameter	ϒ N Symbol	⅄ ;ˆ ϒ Test Conditions	ѡ ṇ Ө Min	Ɛ ȝ Ө Typ	ѡ ᶻ Ө Max	ᴅ Ꮒ Unit
Turn-On Delay Time	$t_{d(on)}$	V_{GS}=10V V_{DS}=20V R_L=0.66Ω R_{GEN}=3.9Ω I_{DS}=30A		54		ns
Turn-On Rise Time	t_r			65		
Turn-Off Delay Time	$t_{d(off)}$			101		
Turn-Off Fall Time	t_f			73		
Total Gate Charge	Q_g	V_{GS}=10V V_{DS}=20V I_D=30A		114		nC
Gate Source Charge	Q_{gs}			23		
Gate Drain Charge	Q_{gd}			25		

/ Electrical Characteristic Curve





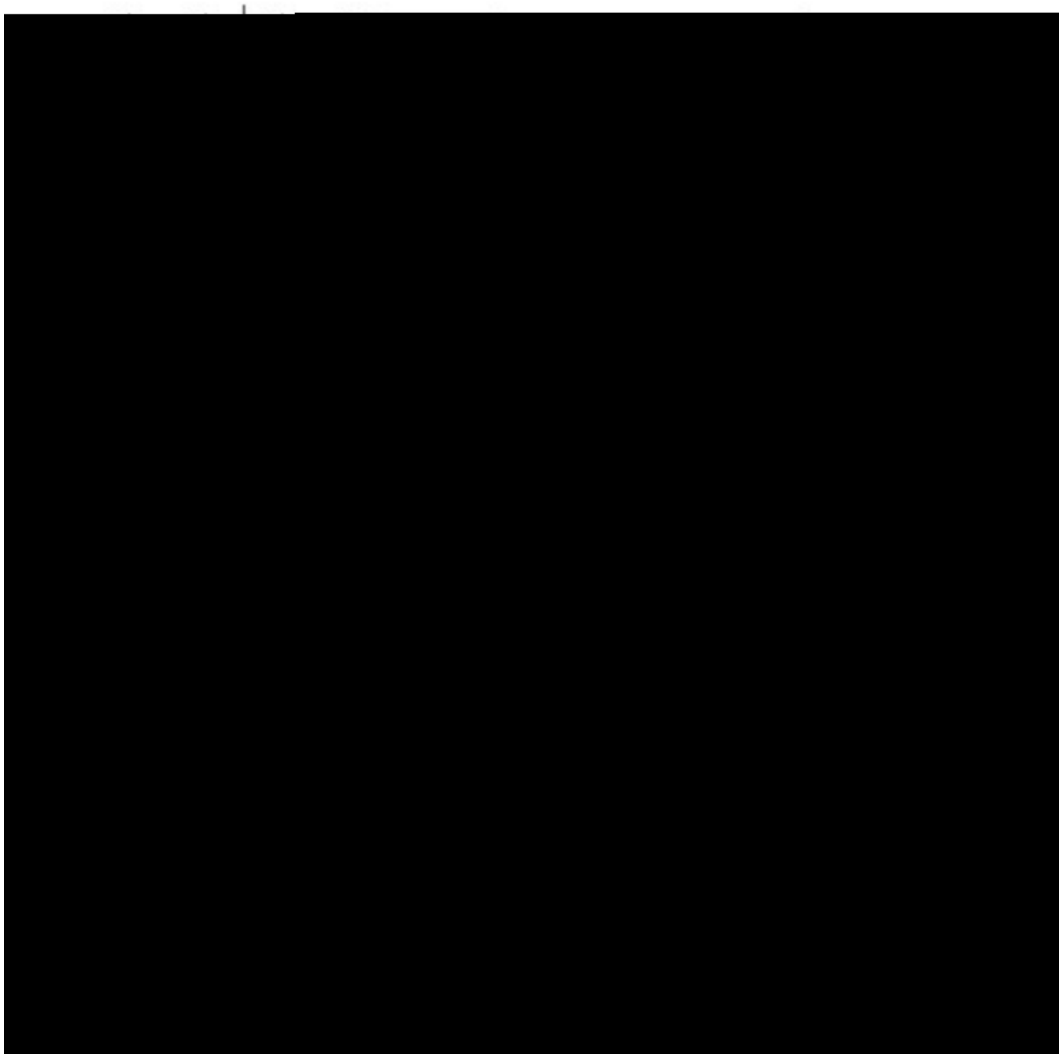


6. On Resistance

5. Output Characteristics

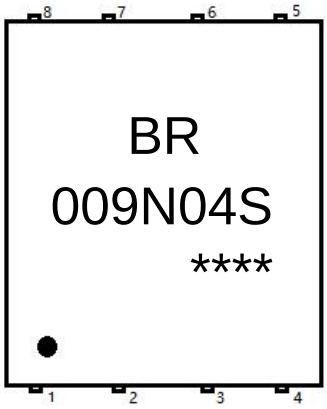
/ Electrical Characteristic Curve

/ Package Dimensions



	MAX.		MIN.
	1.17	A	1.03
D	4.80		5.40
D1	4.11		4.31
	6.15	E	5.95
	5.85	E1	5.65
	-	E2	1.40
	0.25	L	
	0.50	L1	
	0.71	L2	
	3.50	H	

/ Marking Instructions



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EU χ	ꟻ ʒ ᴎ Ꮆ
009N04S χ	ꟻ ȝ ᴺ Ꮆ
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Note χ	
BR χ	Company Code
009N04S χ	Product Type Code
****:	Lot No. Code, code change with Lot No.

ure Profile for IR Reflow Soldering(Pb-Free)

Note:

sec;

1.Preheating:150~180 ł , Time:60~90sec.

.5sec;

2.Peak Temp.:245 ° 5 ł , Duration:5 ° 0.5sec.

3. Cooling Speed: 2~10 ł /sec.

oldering Heat Test Conditions

Temp.:260±5 Time:10±1 sec

	Dimension (unit mm³)