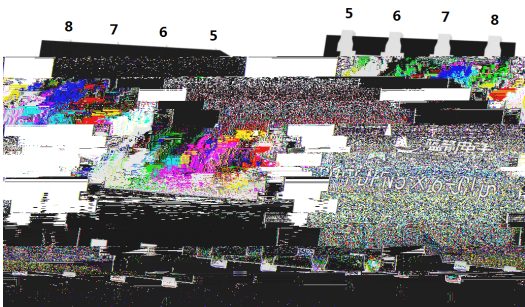
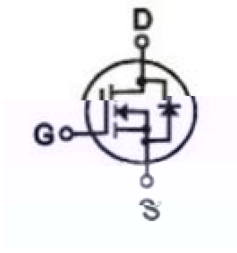


Rev.C Aug.-2025

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

$V_{DS}(V)=40V$ $I_D=200A$
 $R_{DS(ON)}@10V$ 0.8m (Typ. 0.65m)
 $R_{DS(ON)}@4.5V$ 1.3m (Typ.1.1m)
 。 HF Product.

DC-DC
 Motor drivers, DC-DC Converter.



PIN1、2、3: S PIN4: G PIN5、6、7、8: D

See Marking Instructions.

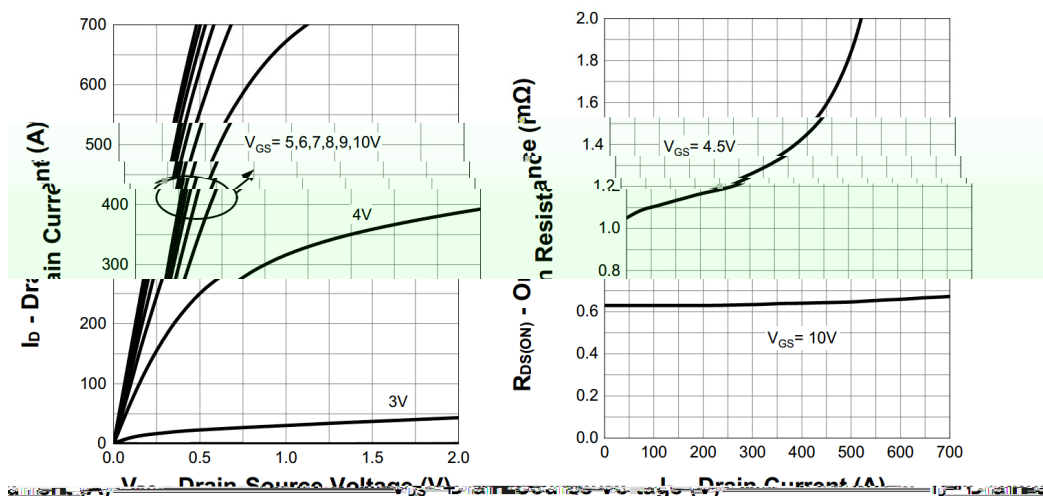
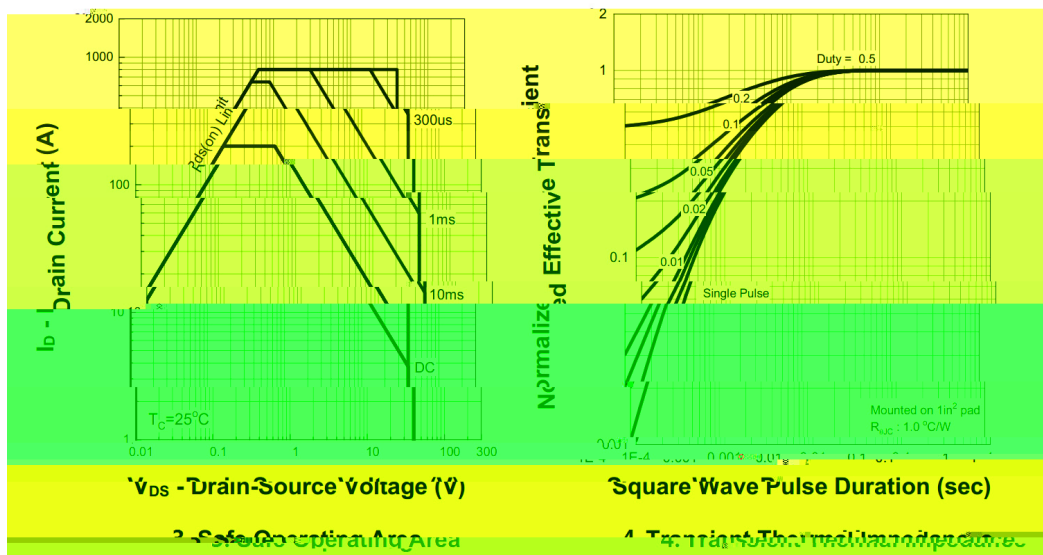
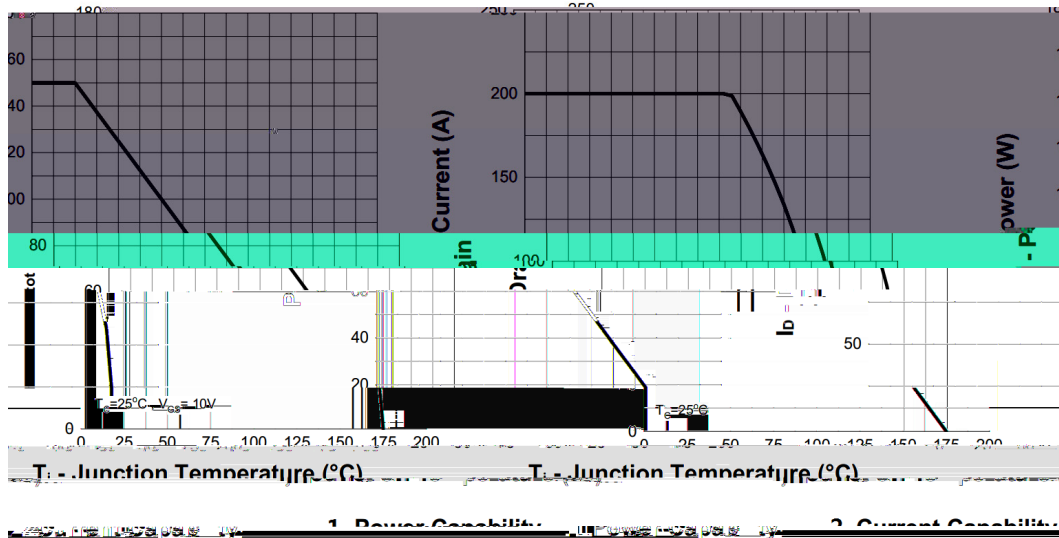
Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	40	V
Gate-Source Voltage	V_{GS}	± 20	V
Drain Current	$I_D(T_C=25^\circ\text{C})$	200	A
	$I_D(T_C=100^\circ\text{C})$	200	A
Drain Current – Pulsed	$I_{DM}(T_C=25^\circ\text{C})$	800	A
Power Dissipation	$P_D(T_C=25^\circ\text{C})$	150	W
Operating and Storage Temperature Range	T_J, T_{stg}	-55 to 175	
Diode Forward Current	$I_S(T_C=25^\circ\text{C})$	200	A
Single Pulsed Avalanche Energy(L=1.0mH)	E_{AS}	1012	mJ
Thermal resistance, junction – ambient	R_{JA}	56	/ W
Thermal resistance, junction – case	R_{JC}	1	

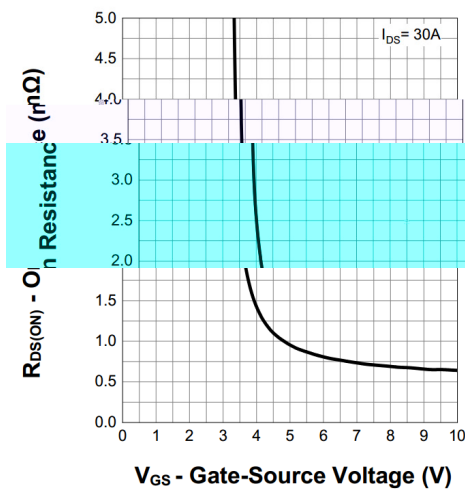
Note:

1. Surface Mounted on 1 in² pad area, t = 10 sec
2. Pulse width = 10 μ s, duty cycle = 1 %
3. limited by bonding wire

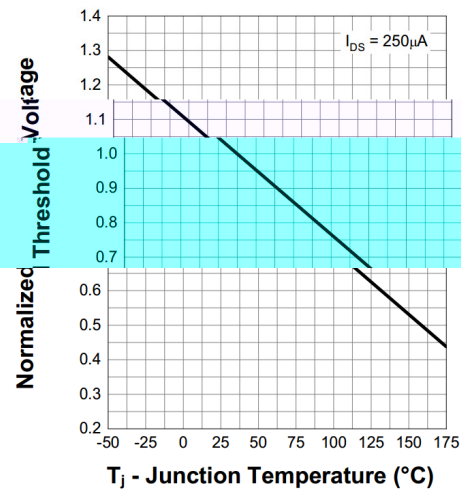
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V$ $I_D=250\text{ }\mu\text{A}$	40			V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=250\text{ }\mu\text{A}$	1.0		2.5	V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=32V$ $V_{GS}=0V$			1	A
Gate-Body Leakage Current Forward	I_{GSS}	$V_{GS}=\pm 20V$ $V_{DS}=0V$			± 0.1	A
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V$ $I_D=30A$		0.65	0.8	m
		$V_{GS}=4.5V$ $I_D=20A$		1.1	1.3	m
Drain-Source Diode Forward Voltage	V_{SD}	$V_{GS}=0V$ $I_S=30A$			1.3	V
Reverse Recovery Time	t_{rr}	$I_{DS} = 30\text{ A}, V_{GS} = 0\text{ V}$ $dI_{SD}/dt = 100\text{ A}/\mu\text{s}$		40		nS
Reverse Recovery Charge	Q_{rr}			28		nC
Input Capacitance	C_{iss}	$V_{DS}=20V$ $V_{GS}=0V$ $f=1.0\text{ MHz}$		5702		pF
Output Capacitance	C_{oss}			1876		
Reverse Transfer Capacitance	C_{rss}			204		

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	$t_{d(on)}$	$V_{GS}=10V$ $V_{DS}=20V$ $R_L=0.66$ $R_{GEN}=3.9$ $I_{DS}=30A$		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		

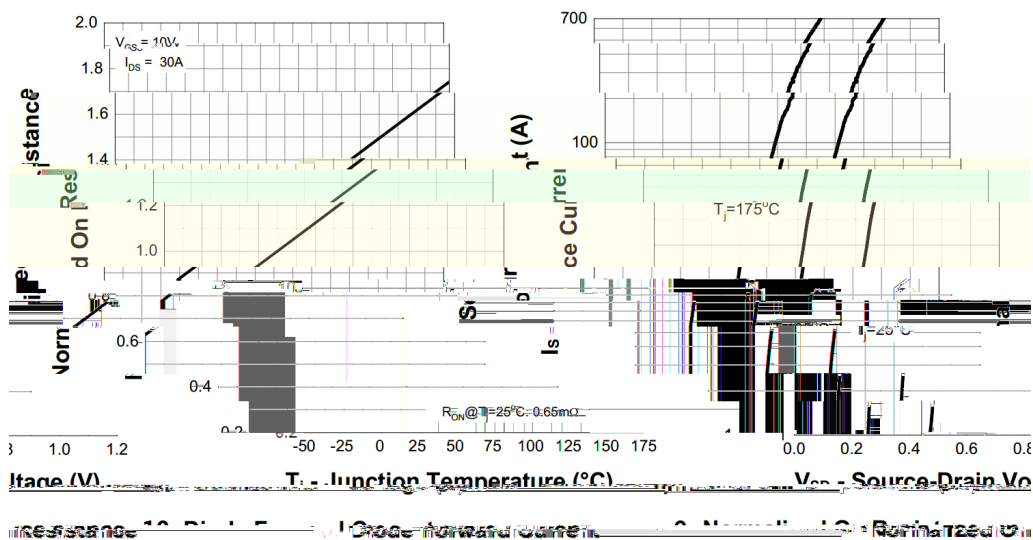




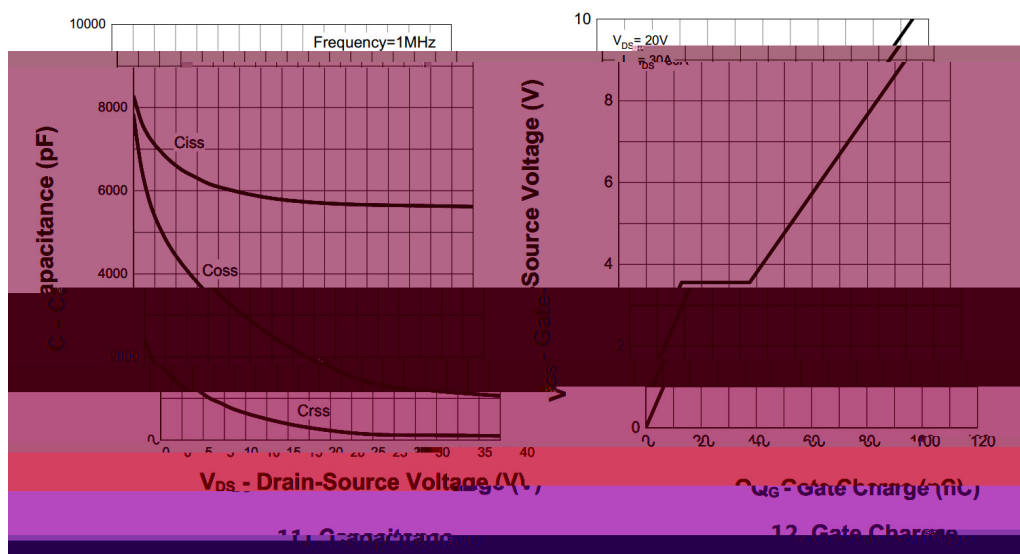
7. Transfer Characteristics

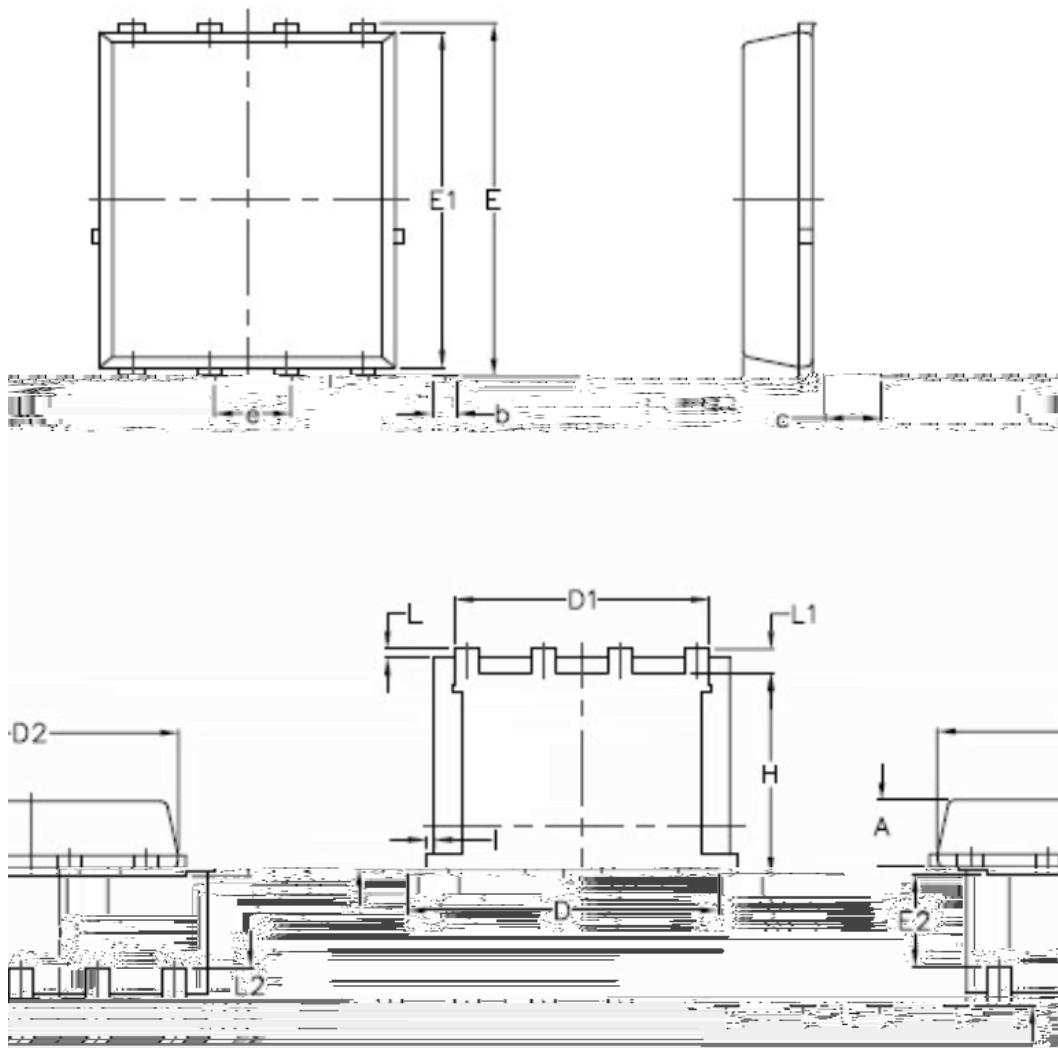


8. Normalized Threshold Voltage

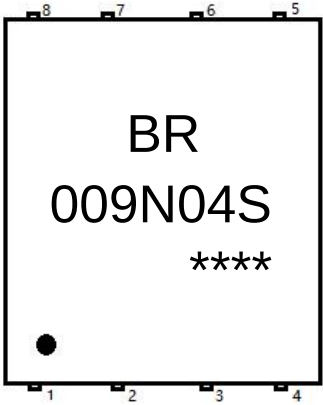


9. Normalized On-Resistance





MAX.		Dimensions In Millimeters		MIN.	
1.17		A		1.03	
0.48		b		0.34	
0.970		c		0.824	
5.40		D		4.80	
4.31		D1		4.11	
5.95				6.15	JZ
5.65				5.85	E
1.40				-	E1
-				-	E2
-	1 27 BSC			-	F
L		0.05		0.25	
L1		0.38		0.50	
L2		0.38		0.71	
H		3.30		3.50	
I		-		0.18	

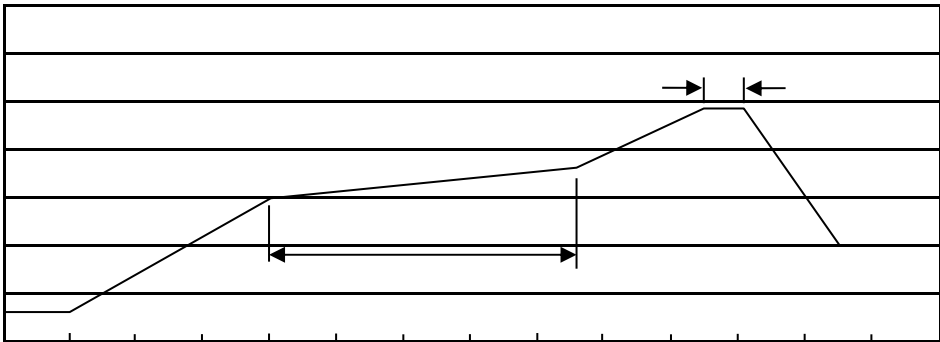


009N04S

Note

BR	Company Code
009N04S	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.

260 5

10 1 sec.

Temp.:260±5

Time:10±1 sec

/ 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-Clip	5,000	2	10,000	6	60,000	13"×12	360×360×50	380×335×366

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