

5 é / Descriptions

PDFN5~6 / x N ?ú 3 « | • ’ ož
N-Channel MOSFET in a PDFN5~6 Plastic Package .

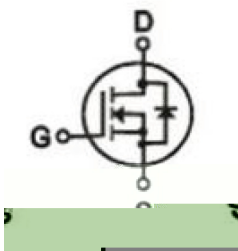
□ a / Features

V_{DS}=60V I_D=67A
R_{DS(on)}@10V 7m (Type. 5.7m)
R_{DS(on)}@6V 12m (Type. 6.2m)
—)í D } ÄHF Product.

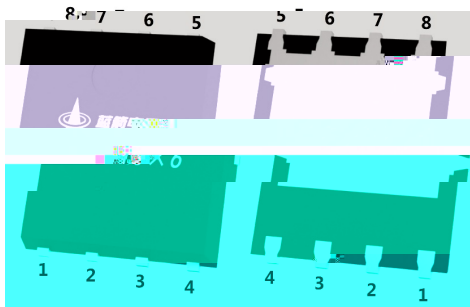
Đ ÷ / Applications

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This device is ideal for boost converters and synchronous rectifiers for consumer, telecom, industrial power supplies and LED backlighting.

Ä w] Ô • / Equivalent Circuit



• Ô - æ / Pinning



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

, M V / Marking

• - ~ a ¢ ož
See Marking Instructions.

1 Absolute Maximum Ratings(Ta=25℃ ;)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	60	V
Drain Current	$I_D(T_C=25^\circ\text{C})$	67	A
Pulsed Drain Current	I_{DM}	212	A
Gate-Source Voltage	V_{GS}	± 20	V
Single Pulsed Avalanche Energy(L=0.5mH)	E_{AS}	720	mJ
Avalanche Current	I_{AS}	41	A
Total Power Dissipation	$P_D(T_C=25^\circ\text{C})$	60	W
Junction and Storage Temperature Range	T_J, T_{STG}	-55 to 150	
Thermal Resistance-Junction to Ambient	Steady-State R_{JA}	60	- /W
Thermal Resistance-Junction to Case	Steady-State R_{JC}	2.08	

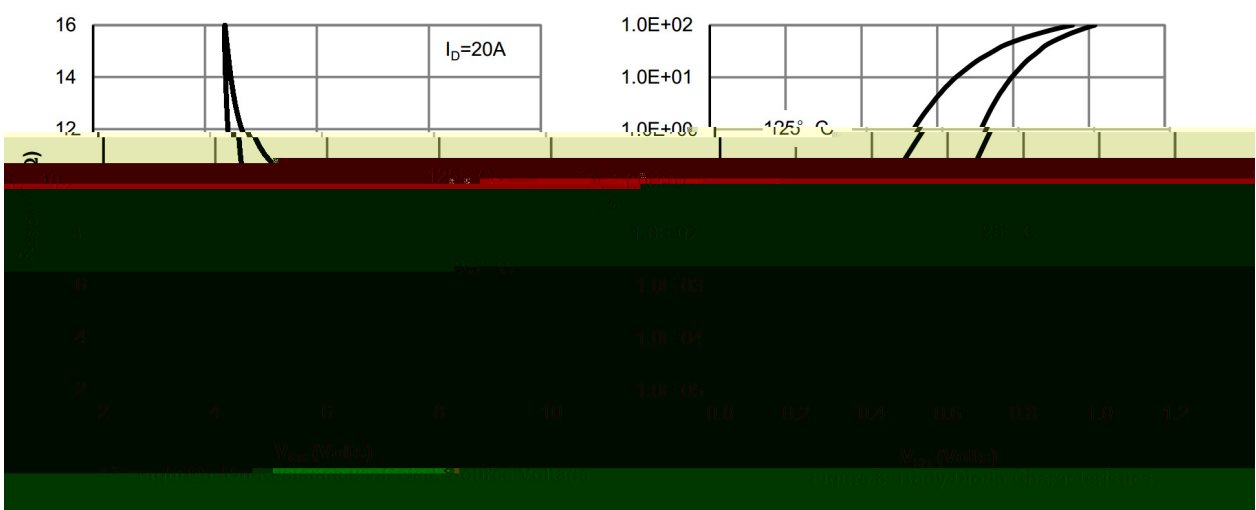
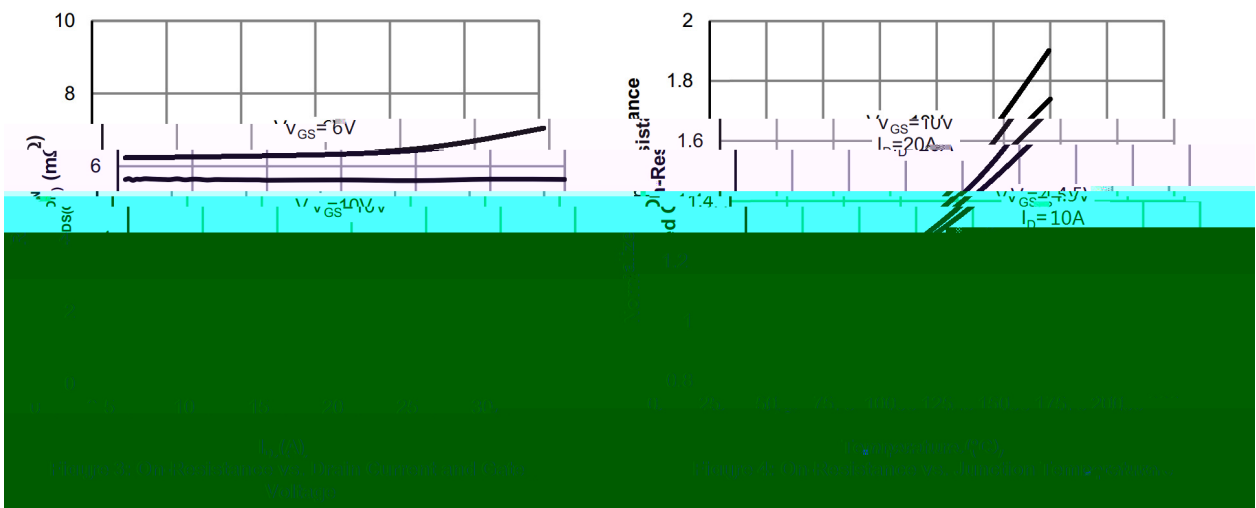
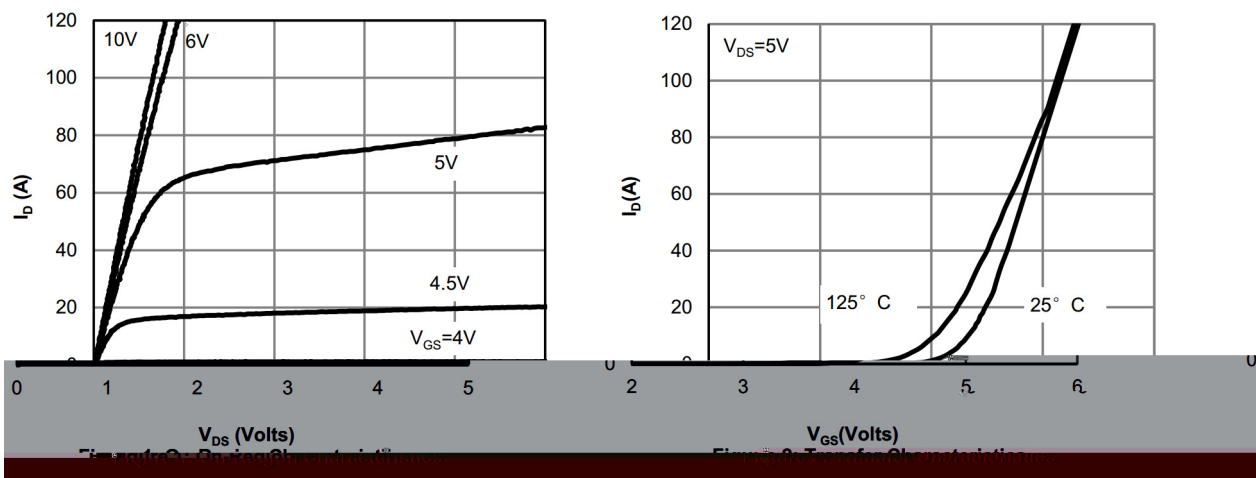
2 Electrical Characteristics(Ta=25℃ ;)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DS}	$I_D=250\mu\text{A}, V_{GS}=0\text{V}$	60	70		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	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu\text{A}$	2.0	2.9	4.0	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10\text{V}, I_D=20\text{A}$		5.7	7	m Ω
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=6\text{V}, I_D=10\text{A}$		6.2	12	m Ω
Diode Forward Voltage	V_{SD}	$I_S=1\text{A}, V_{GS}=0\text{V}$			1.2	V
Input Capacitance	C_{iss}	$V_{DS}=25\text{V}, V_{GS}=0\text{V}, f=1.0\text{MHz}$		5590		pF
Output Capacitance	C_{oss}			295		
Reverse Transfer Capacitance	C_{rss}			185		
Gate resistance	R_g	$V_{GS}=0\text{V}, V_{DS}=0\text{V}, f=1\text{MHz}$		0.77		
Total Gate Charge	Q_g	$V_{GS}=10\text{V}, V_{DS}=30\text{V}, I_D=20\text{A}$		53		nC
Gate Source Charge	Q_{gs}			17		
Gate Drain Charge	Q_{gd}			5		

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 =1.5Ω R _{GEN} =3Ω		21		ns
Turn-On Rise Time	t _r			23		
Turn-Off Delay Time	t _{d(off)}			35		
Turn-Off Fall Time	t _f			4.2		

Electrical Characteristic Curve



Electrical Characteristic Curve

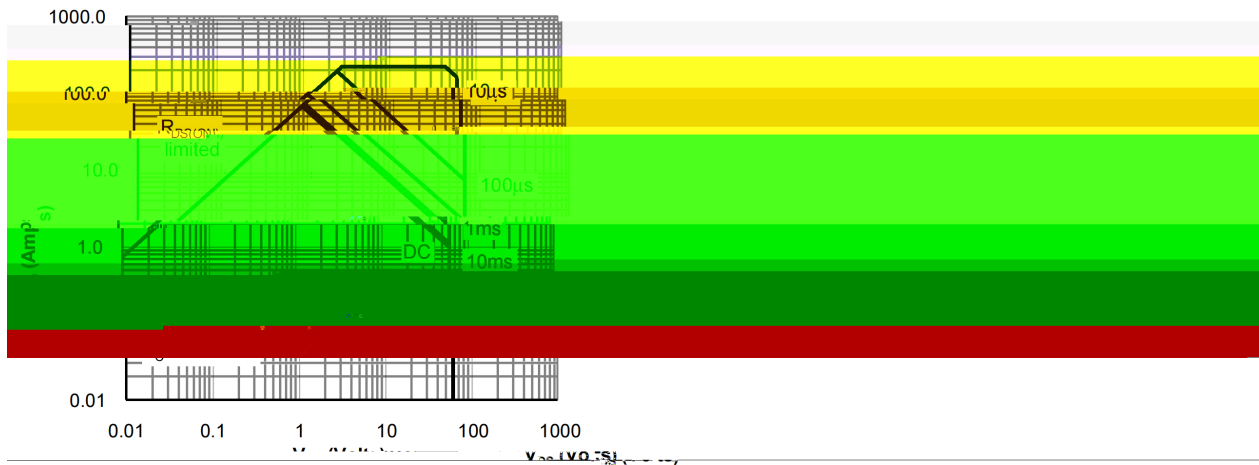
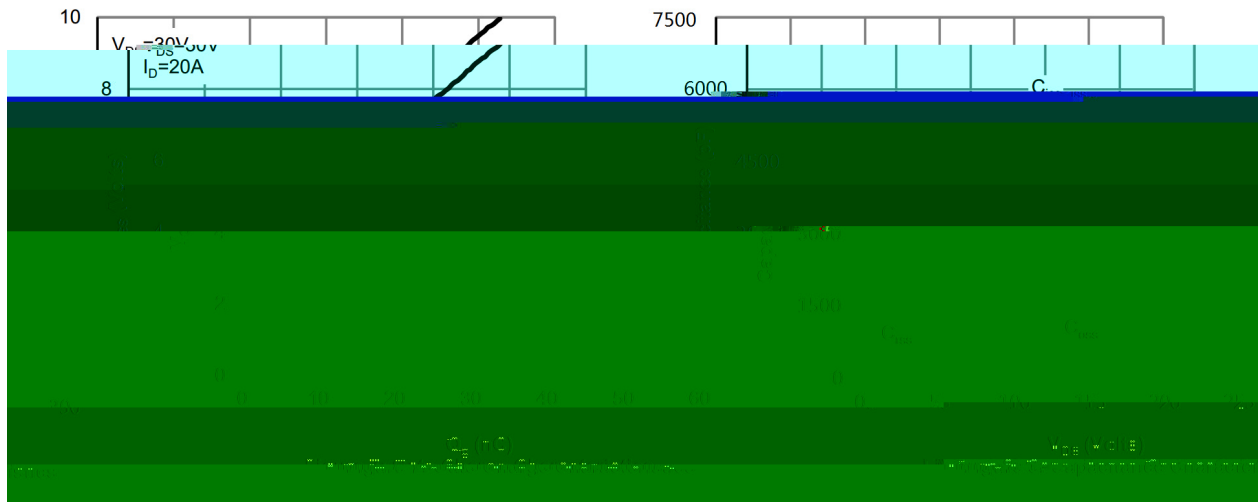
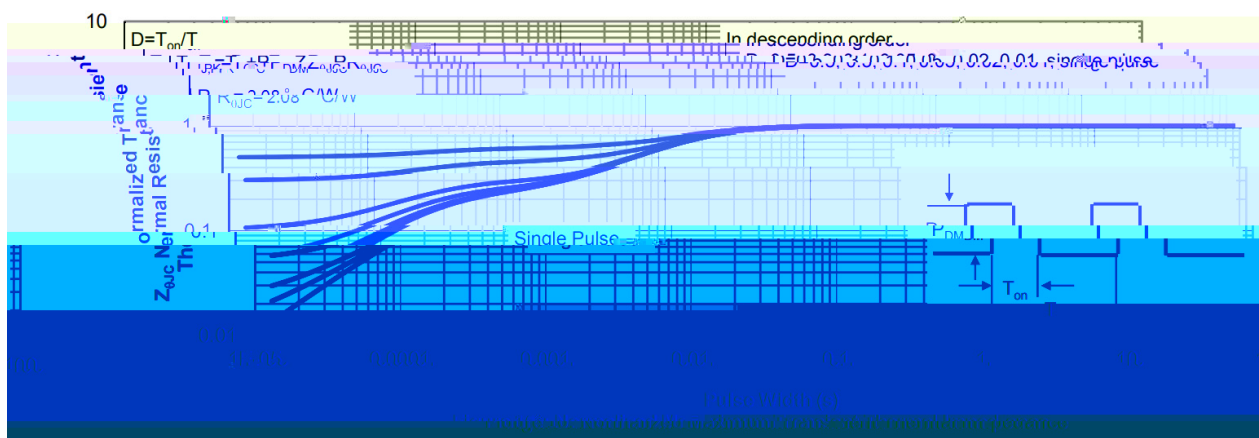
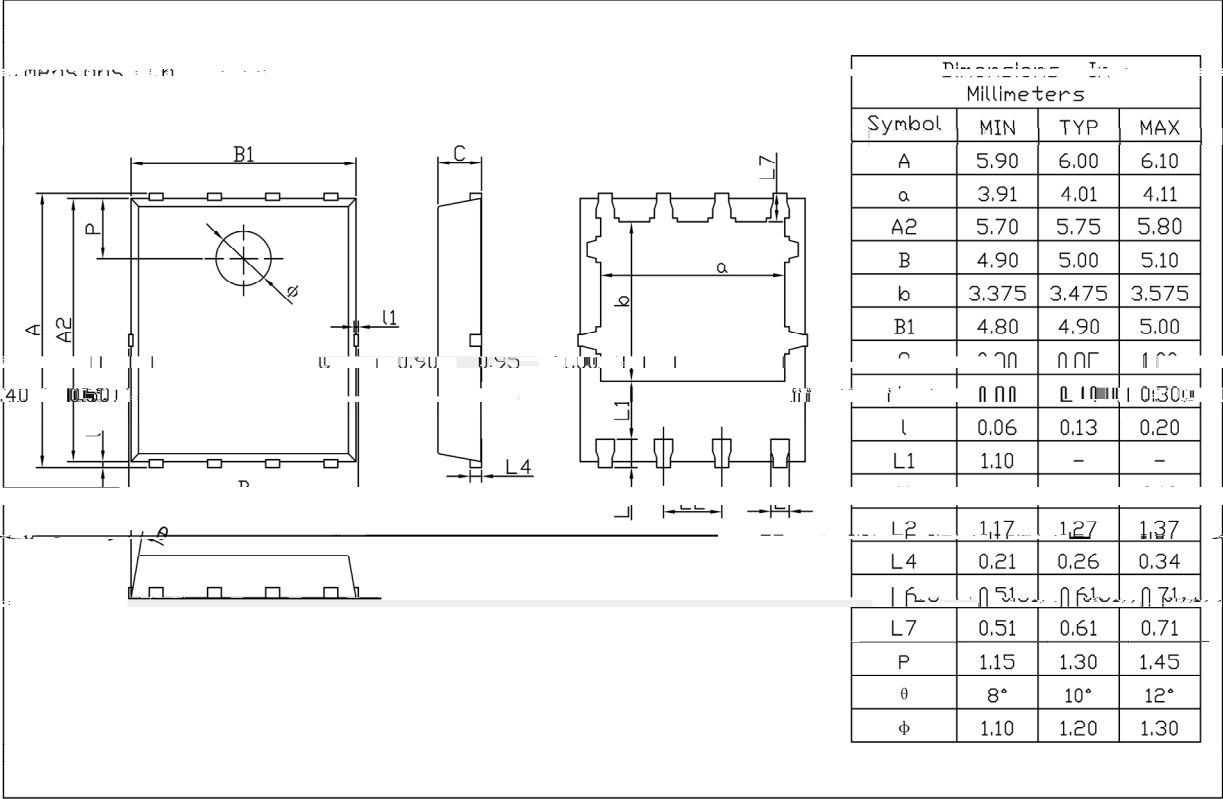


Figure 9: Maximum Forward Biased Safe Operating Area



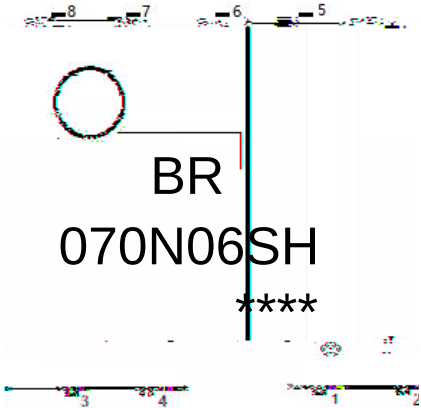
Ø □ =) ☎ / Package Dimensions

PDFN5 X6 Unit:mm



Rev.01 202209

, M y f / Marking Instructions



Marking Instructions

(8 y) [W A

070N06SH y ° Z W A

y Ÿ D Z W A k š Ÿ D Z J

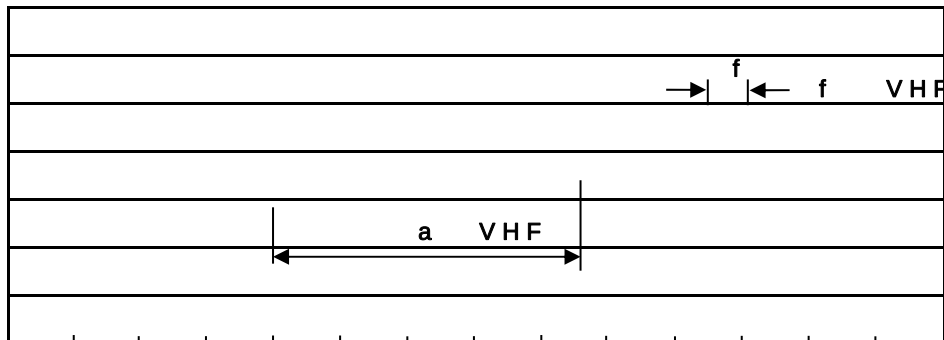
Note y

BR y Company Code

070N06SH y Product Type Code

****: Lot No. Code, code change with Lot No

šWD t...•Žč (x/) / :KSVKXGZ[XK 6XULORK LUX /8 8KLRU] 9URJKXOTM 6



7 L P H `ã! 1 0 Z°Ý... B“Bñ`0

^ač y

10• Ä ½ “† 150 ½180 - k ž • 60 ½90sec;

20• Q > “† 245 r5 - k ž • 4 Ò 5 r0.5sec;

30•D N ò i Ò 0 ,† 2 ½10 - /sec.

Note:

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

2.Peak Temp.:245 r5 - , Duration:5 r0.5sec.

3. Cooling Speed: 2~10 - /sec.

ÂD /Cã p ¯ »] / Resistance to Soldering Heat Test Conditions

“† y 260 r5 -

ž • y 10 r1 sec.

Temp.:260±5

Time:10±1 sec

G P á / Packaging SPEC.

2 & x / REEL

Package Type / x ¥ "	Units ;>û H					Dimension ;>û p . (unit /mm³)		
	Units/Reel Q 2 &	Reels/Inner Box 2 & "	Units/Inner Box Q "	Inner Boxes/Outer Box " "	Units/Outer Box Q "	Reel	Inner Box	Outer Box
PDFN5×6	5,000	2	10,000	6	60,000	13"×12	360×360×50	380×335×366

„Đ y f / Notices