

- ★ 100% EAS Guaranteed
- ★ Green Device Available
- ★ Super Low Gate Charge
- ★ Excellent CdV/dt effect decline
- ★ Advanced high cell density Trench technology

Product Summary



BVDSS	RDSON	ID
-60V	24mΩ	-30A

Description

The JH30P06F is the high cell density trenched P-ch MOSFETs, which provide excellent RDSON and gate charge for most of the synchronous buck converter applications.

The JH30P06F meet the RoHS and Green Product requirement, 100% EAS guaranteed with full function reliability approved.

PDFN5X6 Pin Configuration

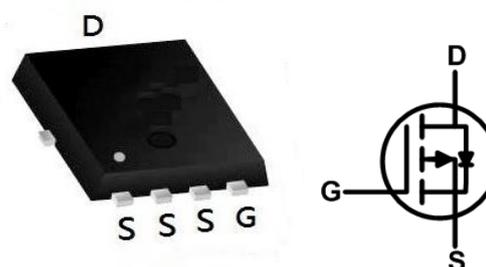


Table 1. Absolute Maximum Ratings (T_A=25°C unless otherwise noted)

Symbol	Parameter	Limit	Unit
V _{DS}	Drain-Source Voltage (V _{GS} =0V)	-60	V
V _{GS}	Gate-Source Voltage (V _{DS} =0V)	±20	V
I _D	Drain Current-Continuous(T _C =25°C)	-30	A
	Drain Current-Continuous(T _C =100°C)	-25.5	A
I _{DM (pluse)}	Drain Current-Continuous@ Current-Pulsed (Note 1)	-144	A
P _D	Maximum Power Dissipation(T _C =25°C)	79	W
	Maximum Power Dissipation(T _C =100°C)	39.5	W
E _{AS}	Avalanche energy (Note 2)	196	mJ
T _J , T _{STG}	Operating Junction and Storage Temperature Range	-55 To 175	°C

Table 2. Thermal Characteristic

Symbol	Parameter	Typ	Max	Unit
R _{θJC}	Thermal Resistance, Junction-to-Case		1.9	°C/W

Table 3. Electrical Characteristics (T_J=25°C unless otherwise noted)

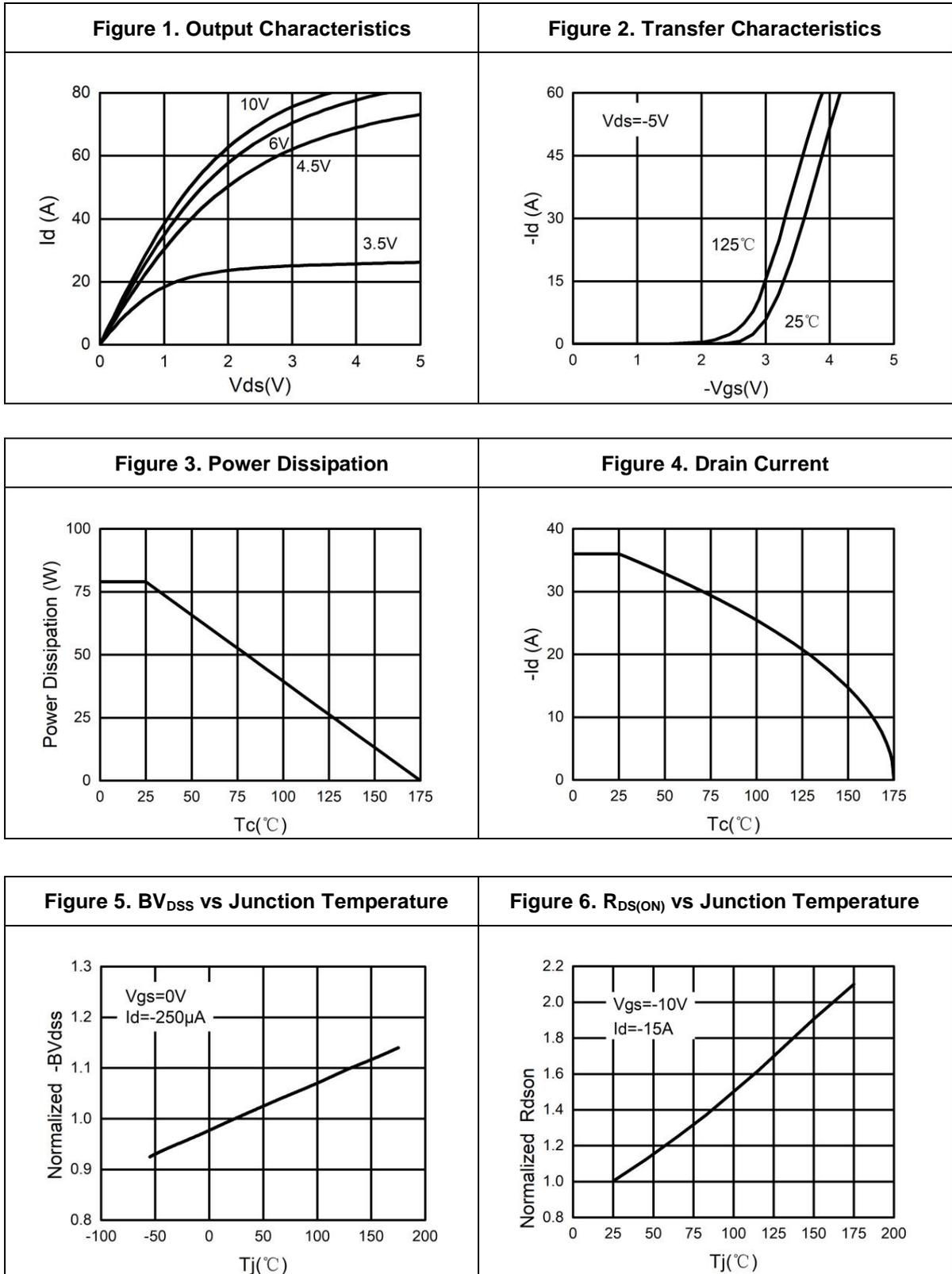
Symbol	Parameter	Conditions	Min	Typ	Max	Unit
On/Off States						
B _{VDSS}	Drain-Source Breakdown Voltage	V _{GS} =0V I _D =-250μA	-60			V
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =-60V, V _{GS} =0V			-1	μA
I _{GSS}	Gate-Body Leakage Current	V _{GS} =±20V, V _{DS} =0V			±100	nA
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} , I _D =-250μA	-1	-1.8	-2.5	V
g _{FS}	Forward Transconductance	V _{DS} =-5V, I _D =-15A		35		S
R _{DS(ON)}	Drain-Source On-State Resistance	V _{GS} =-10V, I _D =-15A		24	30	mΩ
		V _{GS} =-4.5V, I _D =-10A		30	40	mΩ
Dynamic Characteristics						
C _{iss}	Input Capacitance	V _{DS} =-25V, V _{GS} =0V, f=1.0MHz		4026		pF
C _{oss}	Output Capacitance			134		pF
C _{rss}	Reverse Transfer Capacitance			98		pF
Switching Parameters						
t _{d(on)}	Turn-on Delay Time	V _{GS} =-10V, V _{DS} =-30V, R _L =1.5Ω, R _{GEN} =3Ω		12.2		nS
t _r	Turn-on Rise Time			10		nS
t _{d(off)}	Turn-Off Delay Time			64		nS
t _f	Turn-Off Fall Time			14		nS
Q _g	Total Gate Charge	V _{GS} =-10V, V _{DS} =-30V, I _D =-20A		68		nC
Q _{gs}	Gate-Source Charge			10.5		nC
Q _{gd}	Gate-Drain Charge			13		nC
Source-Drain Diode Characteristics						
I _{SD}	Source-Drain Current (Body Diode)				30	A
V _{SD}	Forward on Voltage ^(Note 3)	V _{GS} =0V, I _S =-15A			-1.2	V
t _{rr}	Reverse Recovery Time	I _F =-20A, di/dt=100A/μs		26		ns
Q _{rr}	Reverse Recovery Charge	I _F =-20A, di/dt=100A/μs		29		nC

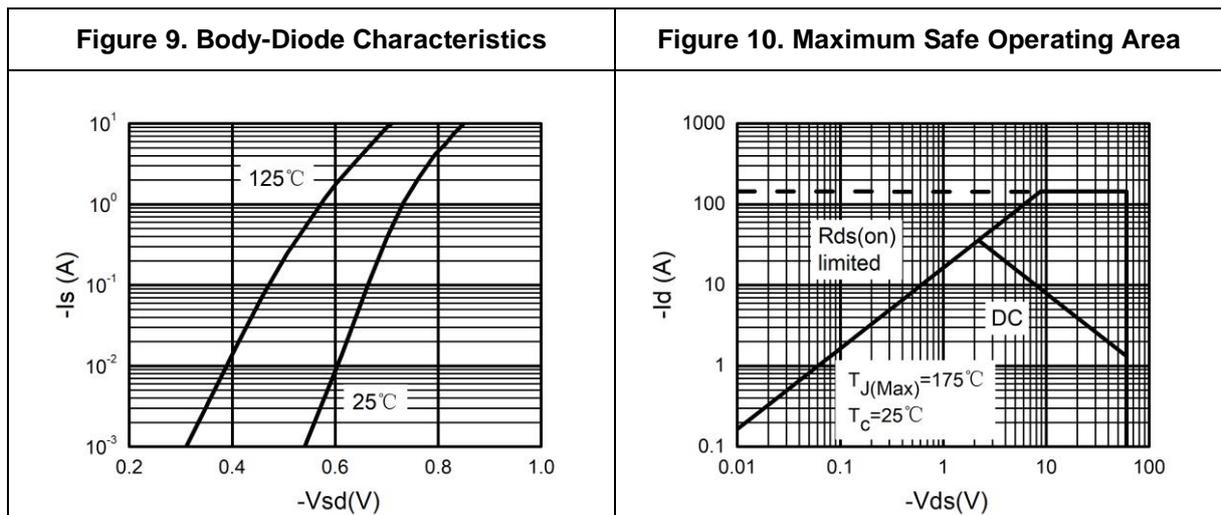
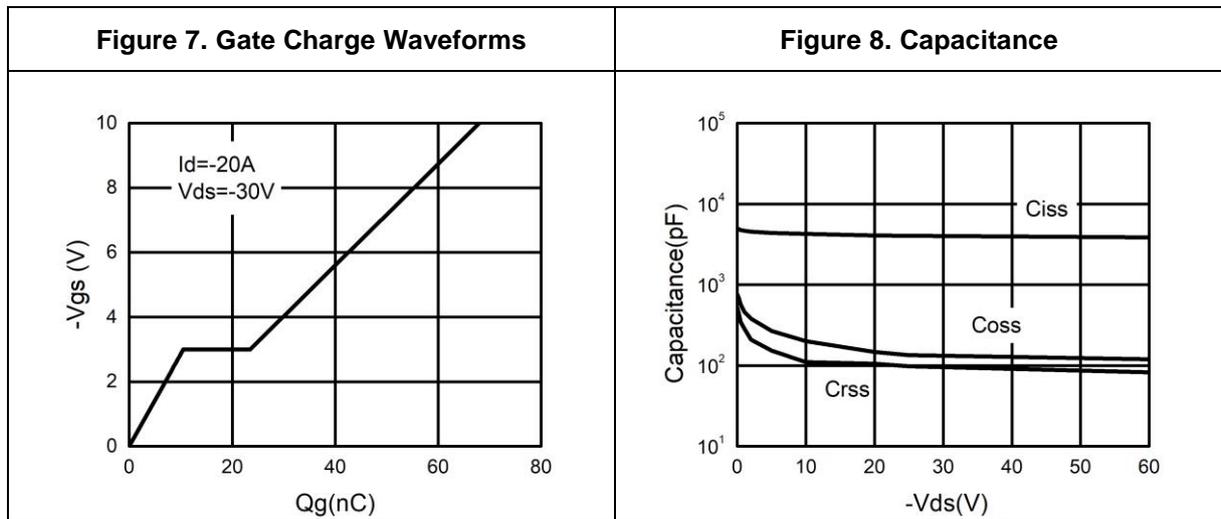
Notes 1.Repetitive Rating: Pulse width limited by maximum junction temperature.

Notes 2.E_{AS} condition: T_J=25°C, V_{DD}=40V, V_G=-10V, R_g=25Ω, L=0.5mH.

Notes 3.Repetitive Rating: Pulse width limited by maximum junction temperature.

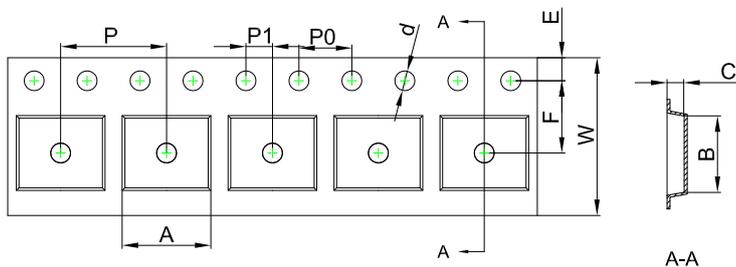
Typical Electrical And Thermal Characteristics (Curves)





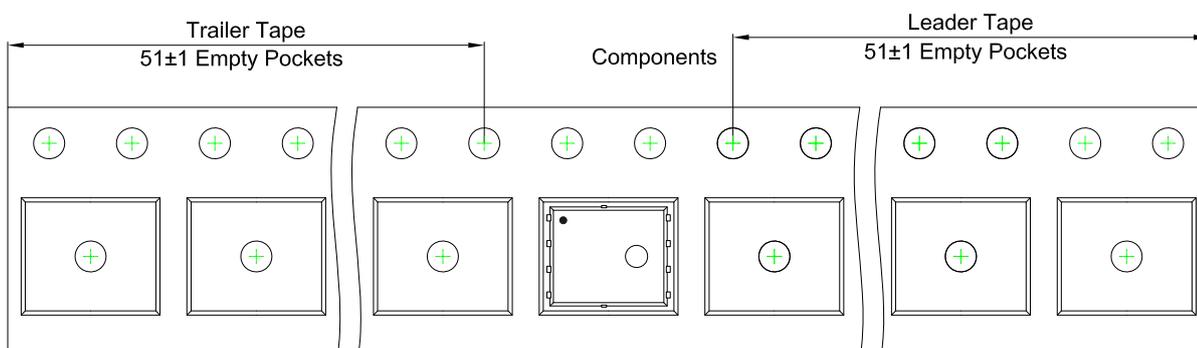
PDFN5×6 Tape and Reel

PDFN5×6 Embossed Carrier Tape

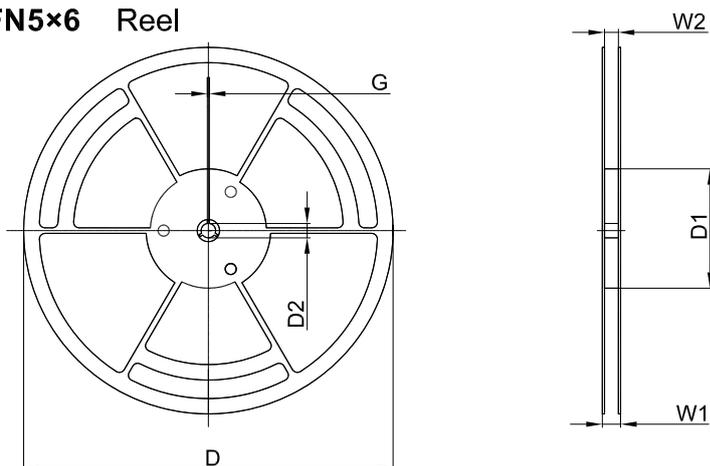


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
PDFN5×6	6.30	5.30	1.10	Ø1.50	1.75	5.50	4.00	8.00	2.00	12.00

PDFN5×6 Tape Leader and Trailer

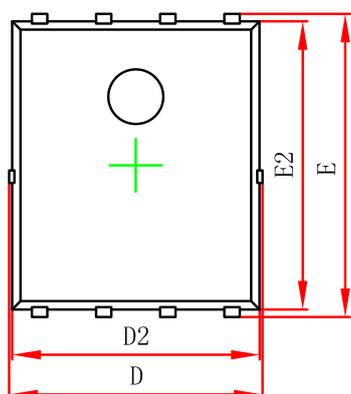


PDFN5×6 Reel

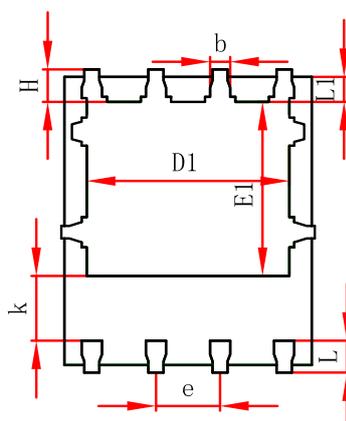


Dimensions are in millimeter						
Reel Option	D	D1	D2	G	W1	W2
13" Dia	Ø330.00	100.00	13.00	1.90	17.60	12.40

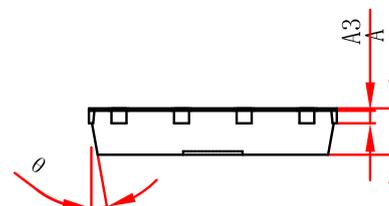
REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)
5,000 pcs	13 inch	5,000 pcs	340×336×29	50,000 pcs	353×346×365



Top View
[顶视图]



Bottom View
[背视图]



Side View
[侧视图]

Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.000	0.035	0.039
A3	0.254REF.		0.010REF.	
D	4.944	5.096	0.195	0.201
E	5.974	6.126	0.235	0.241
D1	3.910	4.110	0.154	0.162
E1	3.375	3.575	0.133	0.141
D2	4.824	4.976	0.190	0.196
E2	5.674	5.826	0.223	0.229
k	1.190	1.390	0.047	0.055
b	0.350	0.450	0.014	0.018
e	1.270TYP.		0.050TYP.	
L	0.559	0.711	0.022	0.028
L1	0.424	0.576	0.017	0.023
H	0.574	0.726	0.023	0.029
θ	10°	12°	10°	12°

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