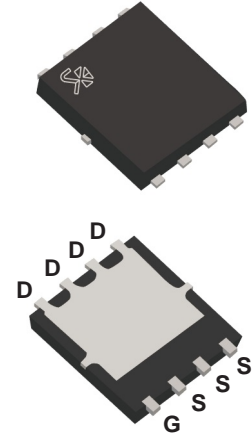
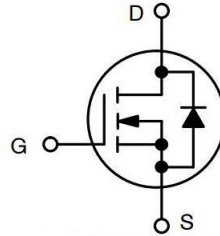


## Feature

- 100V N-Channel MOSFET High Dense Design.
- $R_{DS(ON)} = 4m\Omega$ (typ.) @  $V_{GS} = 10V$
- $R_{DS(ON)} = 5m\Omega$ (typ.) @  $V_{GS} = 4.5V$
- Reliable and Rugged



PDFN5060

## Applications

- Secondary Side Synchronous Rectification.
- DC-DC Converter.
- Motor Control.
- Load Switching

### 1. Absolute Maximum Ratings (T<sub>A</sub>=25°C Unless Otherwise Noted)

Symbol	Parameter	Rating	Unit
V <sub>DSS</sub>	Drain-Source Voltage	100	V
V <sub>GSS</sub>	Gate-Source Voltage	±20	
I <sub>D</sub>	Continue Drain Current	93	A
I <sub>DM</sub> <sup>a</sup>	Pulsed Drain Current	140	
T <sub>J</sub>	Maximum Junction Temperature	150	°C
T <sub>STG</sub>	Storage Temperature Range	-55 to 150	

### 2. Static Electrical Characteristics (T<sub>A</sub>=25°C Unless Otherwise Noted)

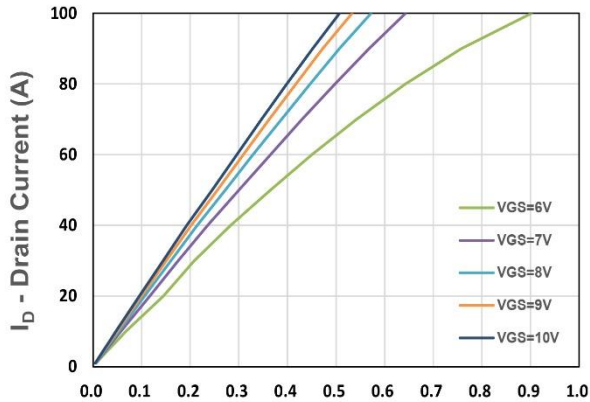
Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Unit
<b>Static Characteristics<sup>c</sup></b>						
BV <sub>DSS</sub>	Drain-Source Breakdown Voltage	V <sub>GS</sub> =0V, I <sub>DS</sub> =250μA	100	-	-	V
I <sub>DSS</sub>	Zero Gate Voltage Drain Current	V <sub>DS</sub> =80V, V <sub>GS</sub> =0V T <sub>J</sub> =85°C	-	-	1	μA
			-	-	30	
V <sub>GS(th)</sub>	Gate Threshold Voltage	V <sub>DS</sub> =V <sub>GS</sub> , I <sub>DS</sub> =250μA	2	3	4	V
I <sub>GSS</sub>	Gate Leakage Current	V <sub>GS</sub> =±20V, V <sub>DS</sub> =0V	-	-	±100	nA
R <sub>DS(ON)</sub>	Drain-Source On-state Resistance	V <sub>GS</sub> =10V, I <sub>DS</sub> =1A	-	4	5.2	mΩ
		V <sub>GS</sub> =6V, I <sub>DS</sub> =1A	-	5	7	
V <sub>SD</sub>	Diode Forward Voltage	I <sub>SD</sub> =0.5A, V <sub>GS</sub> =0V	-	0.7	1.3	V

\*Note:

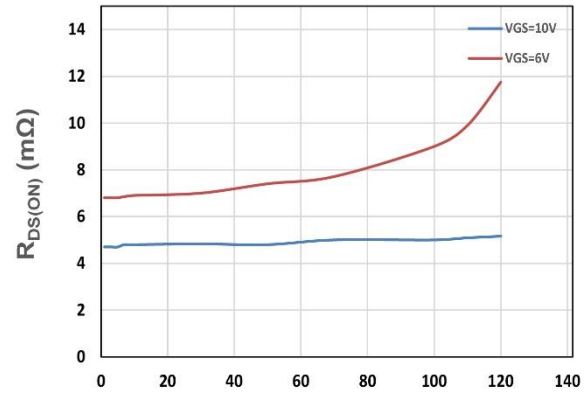
a : Current maybe limit by bonding wire.

b : The R<sub>θJC</sub> is the sum of the thermal impedance from junction to ambient and depend on package type.

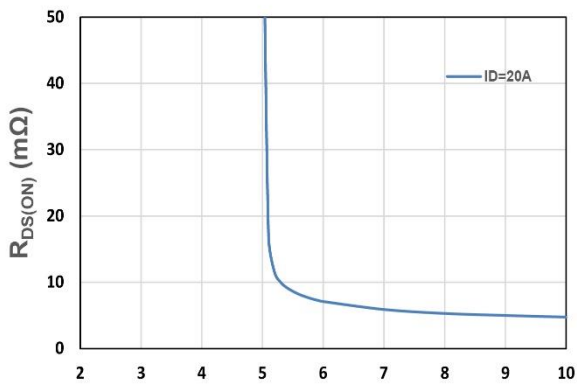
## TYPICAL CHARACTERISTICS



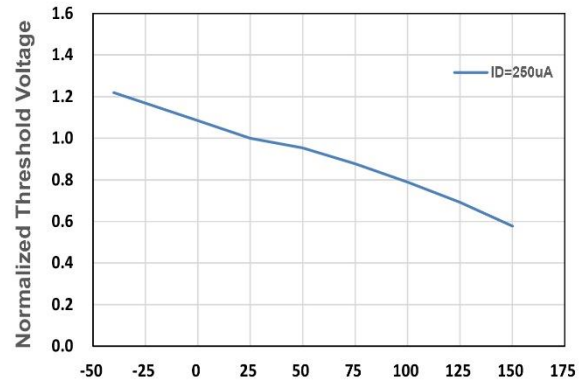
$V_{DS}$  - Drain - Source Voltage (V)  
Figure 1. Output Characteristics



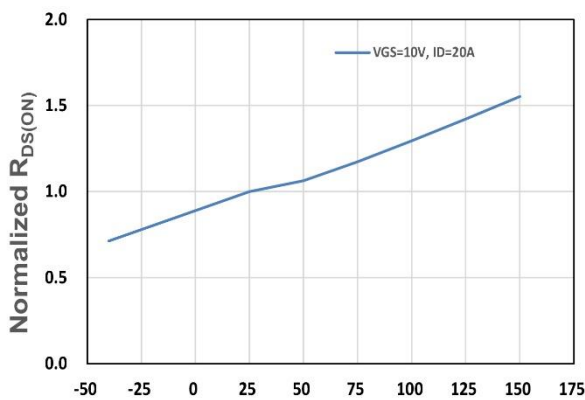
$I_D$  - Drain Current (A)  
Figure 2. On-Resistance vs.  $I_D$



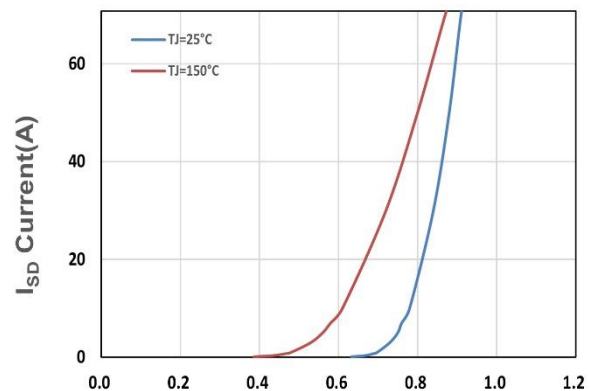
$V_{GS}$  - Gate - Source Voltage (V)  
Figure 3. On-Resistance vs.  $V_{GS}$



$T_j$ , Junction Temperature ( $^{\circ}C$ )  
Figure 4. Gate Threshold Voltage



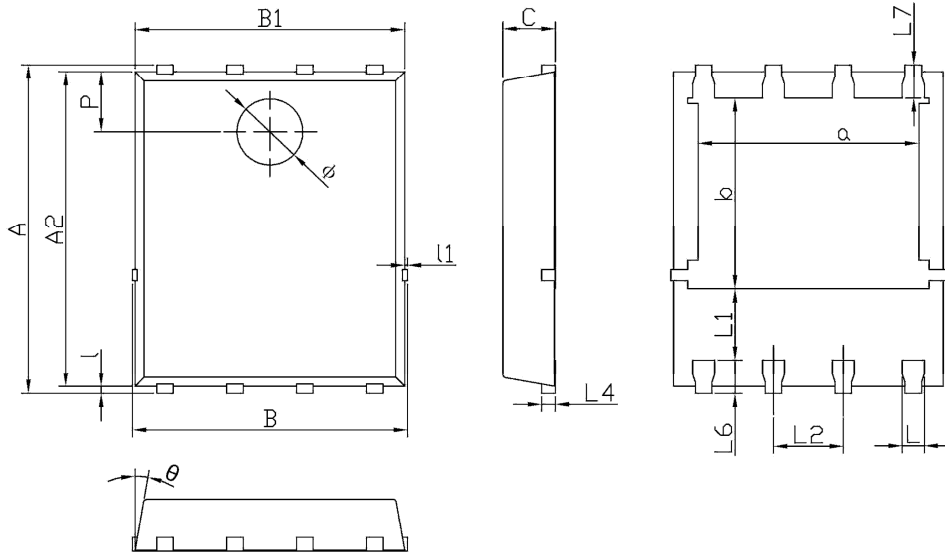
$T_j$ , Junction Temperature ( $^{\circ}C$ )  
Figure 5. Drain-Source On Resistance



$V_{SD}$ , Source-Drain Voltage (V)  
Figure 6. Source-Drain Diode Forward

PDFN5060

Unit:mm



Dimensions In Millimeterer			
Symbol	MIN	TYP	MAX
A	5.90	6.00	6.10
a	3.91	4.01	4.11
A2	5.70	5.75	5.80
B	4.90	5.00	5.10
b	3.37	3.47	3.57
B1	4.80	4.90	5.00
C	0.90	0.95	1.00
L	0.35	0.40	0.45
l	0.06	0.13	0.20
L1	1.10	-	-
l1	-	-	0.10
L2	1.17	1.27	1.37
L4	0.21	0.26	0.34
L6	0.51	0.61	0.71
L7	0.51	0.61	0.71
P	1.00	1.10	1.20
$\theta$	8°	10°	12°
$\phi$	1.10	1.20	1.30