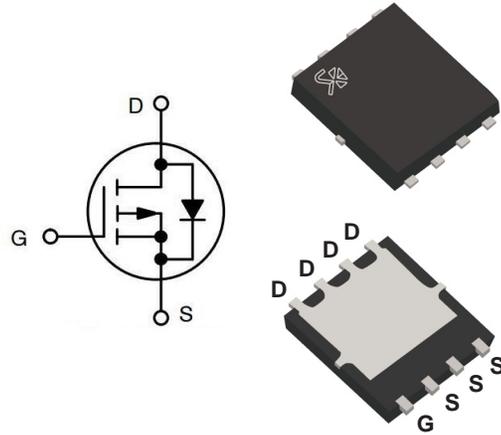


## Feature

- 20V P-Channel MOSFET High Dense Design.
- Ultra low On-Resistance.
- $R_{DS(ON)} = 6m\Omega$ (typ.) @  $V_{GS} = -4.5V$
- $R_{DS(ON)} = 7.5m\Omega$ (typ.) @  $V_{GS} = -2.5V$
- Reliable and Rugged.

## Applications

- Power Management in Notebook Computer, and Portable Equipment and Battery Systems.



PDFN5060

## Electrical Characteristics

### 1. Absolute Maximum Ratings ( $T_A = 25^\circ C$ Unless Otherwise Noted)

Symbol	Parameter	Rating	Unit
$V_{DSS}$	Drain-Source Voltage	-20	V
$V_{GSS}$	Gate-Source Voltage	$\pm 12$	
$I_D$	Continue Drain Current	-40	A
$I_{DM}$	Pulsed Drain Current	-160	
$I_S$	Diode Continuous Forward Current	-40	A
$T_J$	Maximum Junction Temperature	150	$^\circ C$
$T_{STG}$	Storage Temperature Range	-55 to 150	

### 2. Static Electrical Characteristics ( $T_A = 25^\circ C$ Unless Otherwise Noted)

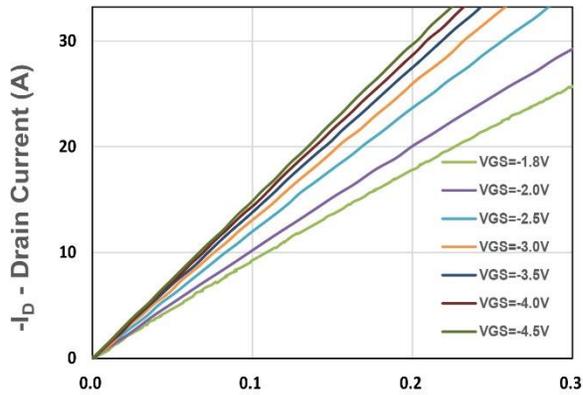
Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Unit
<b>Static</b>						
$BV_{DSS}$	Drain-Source Breakdown Voltage	$V_{GS} = 0V, I_{DS} = -250\mu A$	-20			V
$I_{DSS}$	Zero Gate Voltage Drain Current	$V_{DS} = -16V, V_{GS} = 0V$ $T_J = 85^\circ C$			-1	$\mu A$
					-30	
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS} = V_{GS}, I_D = -250\mu A$	-0.4	-0.6	-0.8	V
$I_{GSS}$	Gate Body Leakage Current	$V_{GS} = \pm 12V, V_{DS} = 0V$			$\pm 100$	nA
$R_{DS(ON)}$	Drain-Source On-state Resistance	$V_{GS} = -4.5V, I_{DS} = -2A$		6	8	m $\Omega$
		$V_{GS} = -2.5V, I_{DS} = -2A$		7.5	9	
$V_{SD}$	Diode Forward Voltage	$I_{SD} = -2A, V_{GS} = 0V$		-0.6	-1.3	V

\*Note:

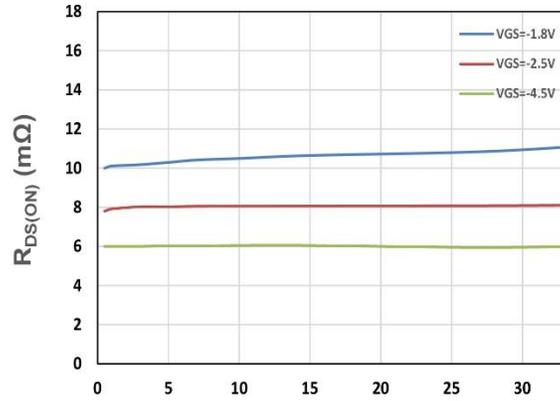
a : Current maybe limit by bonding wire.

b : The  $R_{\theta JA}$  is the sum of the thermal impedance from junction to ambient and depend on package type.

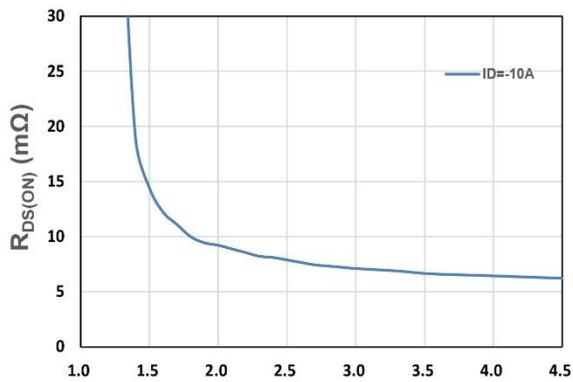
## TYPICAL CHARACTERISTICS



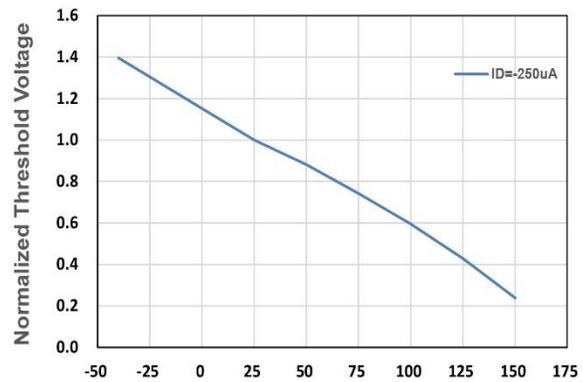
- $V_{DS}$  - Drain - Source Voltage (V)  
Figure 1. Output Characteristics



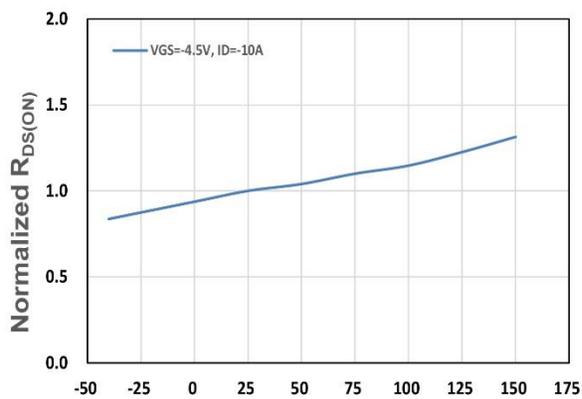
- $I_D$  - Drain Current (A)  
Figure 2. On-Resistance vs. ID



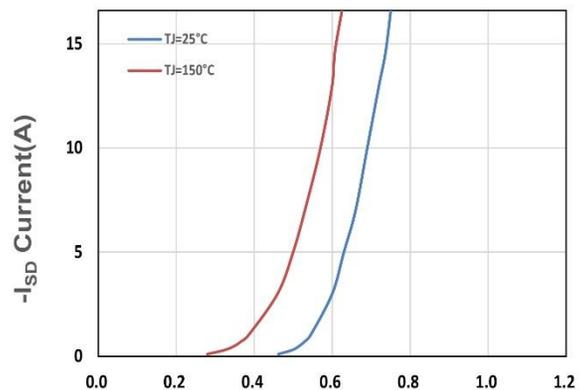
- $V_{GS}$  - Gate - Source Voltage (V)  
Figure 3. On-Resistance vs. VGS



$T_j$ , Junction Temperature(°C)  
Figure 4. Gate Threshold Voltage



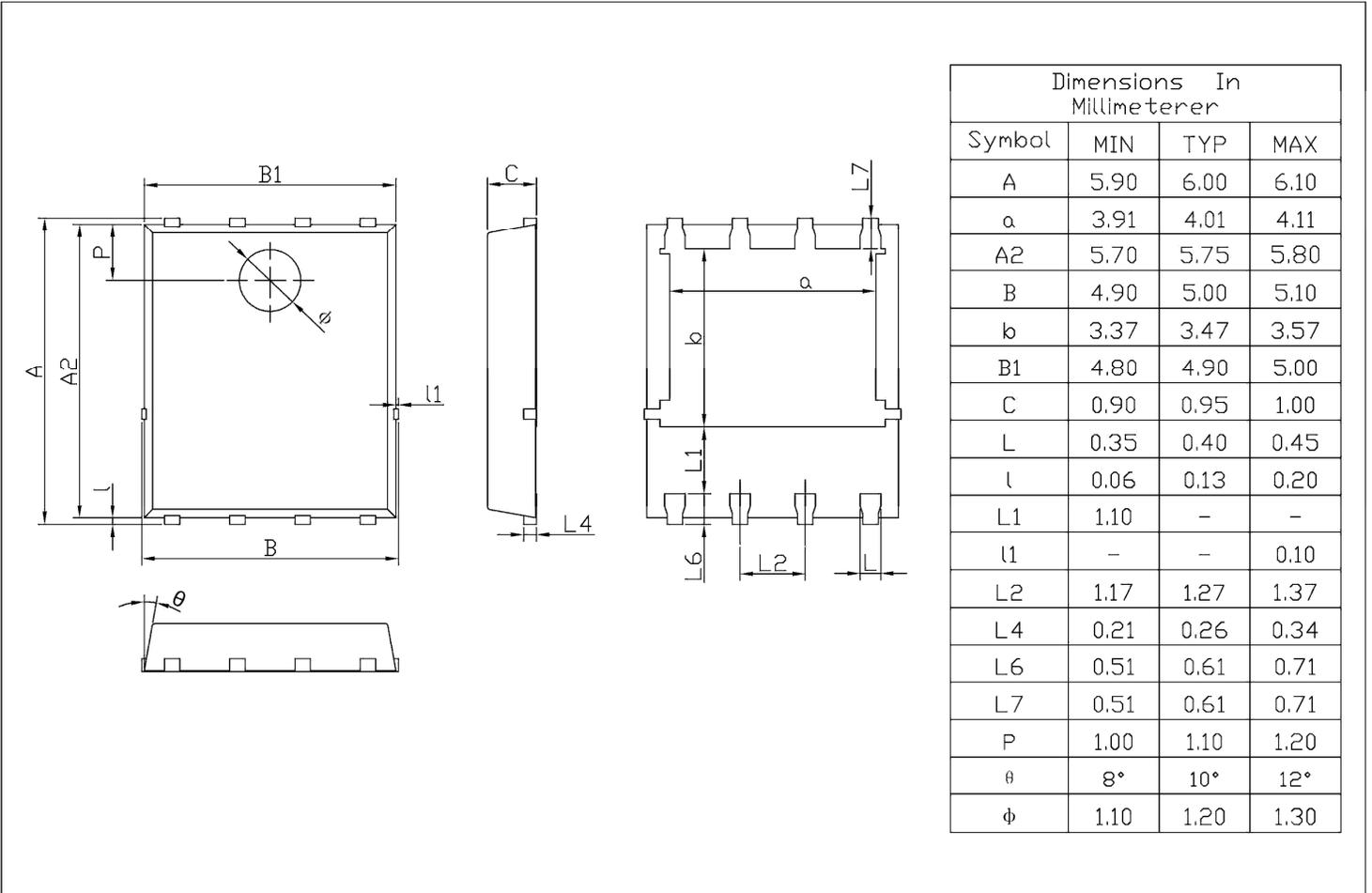
$T_j$ , Junction Temperature(°C)  
Figure 5. Drain-Source On Resistance



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

PDFN5060

Unit:mm



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