AP3134N5
## N-Channel Enhancement Mosfet

AllPOWER
DATA SHEET

Feature

- 20V,0.75A
  $R_{DS(ON)} < 110m\Omega @V_{GS}=4.5V$ TYP:90mΩ
  $R_{DS(ON)} < 150m\Omega @V_{GS}=2.5V$ TYP:115mΩ
  $R_{DS(ON)} < 165m\Omega @V_{GS}=1.8V$ TYP:165 mΩ
- Advanced Trench Technology
- Lead free product is acquired
- ESD Protected
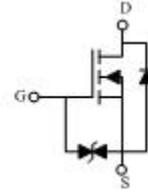
Equivalent Circuit

SOT-523

Application

- Interfacing Switching
- Load Switching
- Logic Level shift
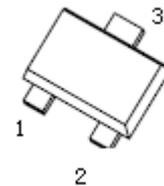
1. GATE
2. SOURCE
3. DRAIN

Package Marking and Ordering Information

Device Marking	Device	Device Package	Reel Size	Tape width	Quantity (PCS)
KF	AP3134N5	SOT-523	7 inch	-	3000

ABSOLUTE MAXIMUM RATINGS ($T_a=25℃$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	20	V
Gate-Source Voltage	V_{GS}	±12	V
Continuous Drain Current (T_c =25℃)	I_D	1.2	A
Continuous Drain Current (T_c =70℃)	I_D	0.7	A
Pulsed Drain Current	I_{DM}	1.8	A
Power Dissipation	P_D	0.15	W
Thermal Resistance from Junction to Ambient[4]	$R_{\theta JA}$	833	℃/W
Junction Temperature	T_J	150	℃
Storage Temperature	T_{STG}	-55~ +150	℃

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MOSFET ELECTRICAL CHARACTERISTICS(T_a=25℃ unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Type	Max	Unit
Static Characteristics						
Drain-source breakdown voltage	$V_{(BR)DSS}$	V_{GS} = 0V, I_D =250µA	20	-	-	V
Zero gate voltage drain current	I_{DSS}	V_{DS} =20V, V_{GS} = 0V	-	-	1	µA
Gate-body leakage current	I_{GSS}	V_{GS} =±10V,V_{DS} = 0V	-	-	±10	µA
Gate threshold voltage[3]	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =250µA	0.3	0.65	1.0	V
Drain-source on-resistance[3]	$R_{DS(on)}$	V_{GS}=4.5V, I_D =1.2A	-	90	110	mΩ
		V_{GS}=2.5V, I_D =0.8A	-	115	150	
		V_{GS}=1.8V, I_D =0.3A		165	215	
Dynamic characteristics						
Input Capacitance	C_{iss}	V_{DS} =16V, V_{GS} =0V, f =1MHz	-	79	-	pF
Output Capacitance	C_{oss}		-	13	-	
Reverse Transfer Capacitance	C_{rss}		-	9	-	
Switching characteristics						
Turn-on delay time	$t_{d(on)}$	V_{DD}=10V, I_D=0.5A, V_{GS}=4.5V, R_G=10Ω	-	6.7	-	ns
Turn-on rise time	t_r		-	4.8	-	
Turn-off delay time	$t_{d(off)}$		-	17.3	-	
Turn-off fall time	t_f		-	7.4	-	
Total Gate Charge	Qg	VDS=15V, ID=1A, VGS=4.5V	-	1.6	-	nC
Gate-Source Charge	Qgs		-	0.2	-	
Gate-Drain Charge	Qgd		-	0.2	-	
Source-Drain Diode characteristics						
Diode Forward voltage[3]	V_{DS}	V_{GS} =0V, I_S=0.5A	-	-	1.3	V
Diode Forward current[4]	I_S		-	-	1.2	A

Notes:

1. Repetitive Rating: pulse width limited by maximum junction temperature

2. Pulse Test: pulse width≤300µs, duty cycle≤2%

3. Surface Mounted on FR4 Board,t≤10 sec

Typical Characteristics

Output Characteristics
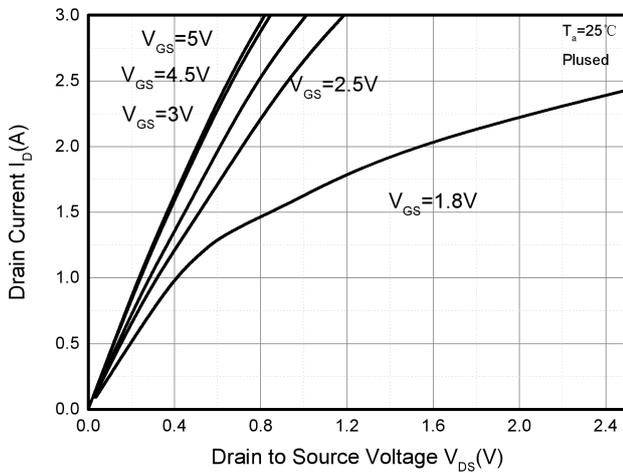
Transfer Characteristics
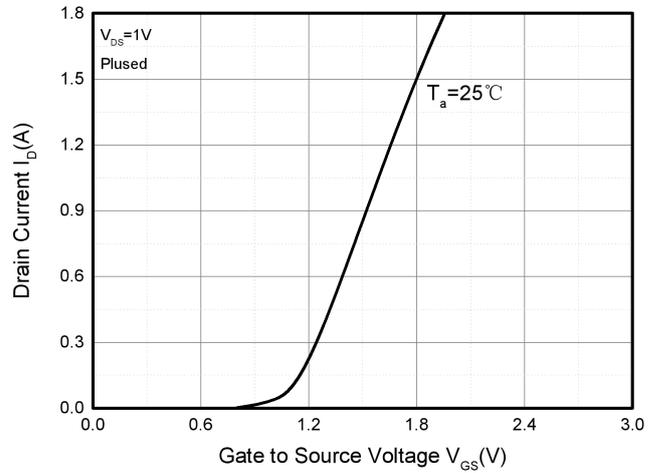
$R_{DS(ON)}$——I_D
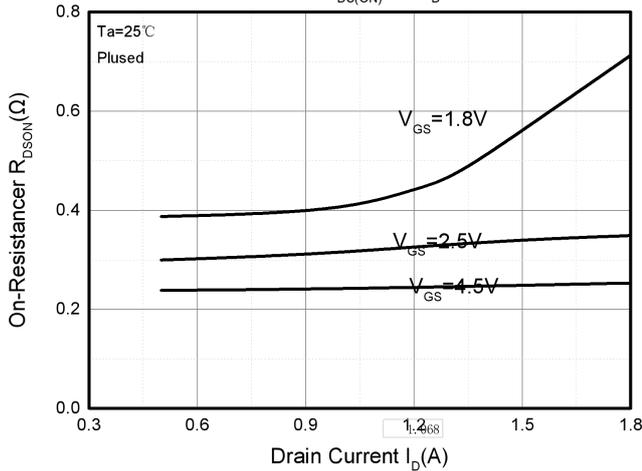
$R_{DS(ON)}$——V_{GS}
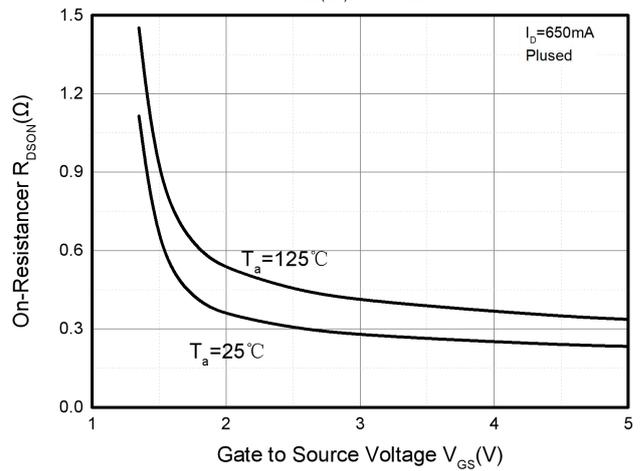
I_S——V_{SD}
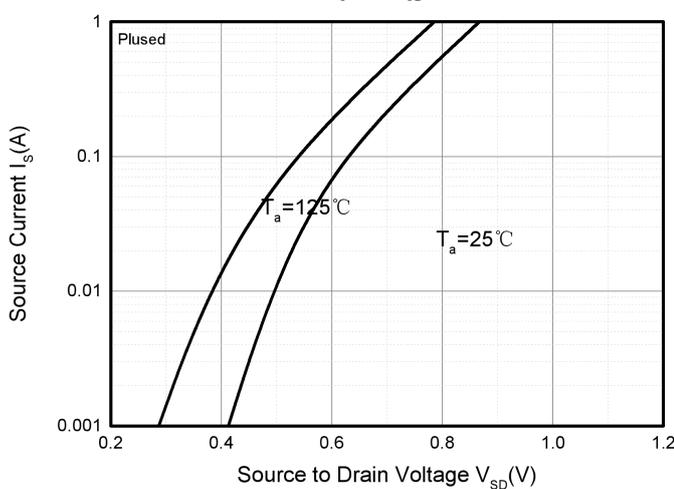
Threshold Voltage
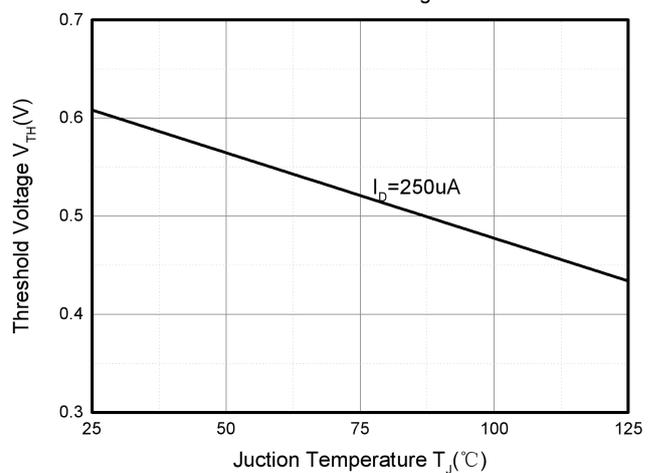
SOT-523 Package Information
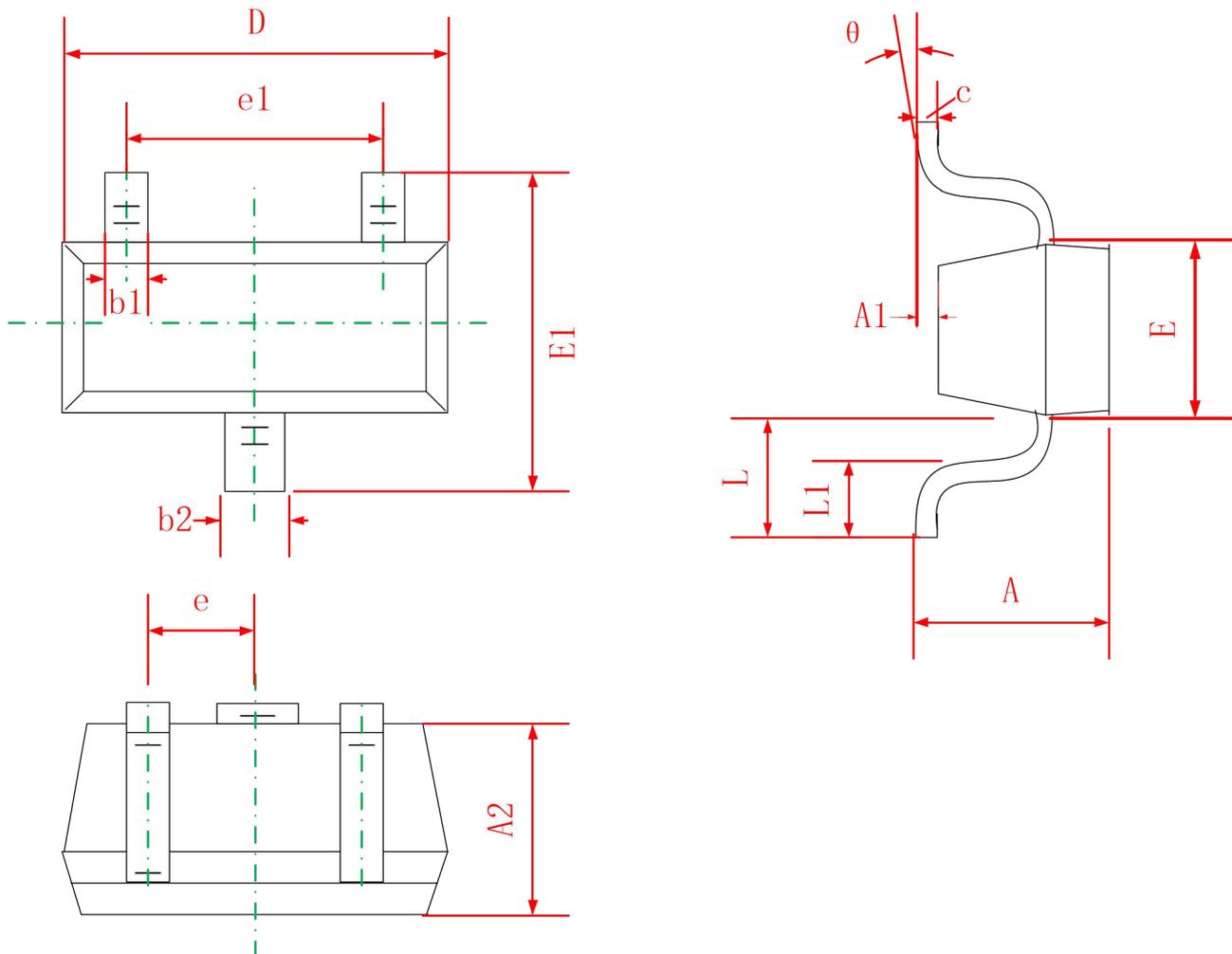
Symbol	Dimensions In Millimeters	
	Min	**Max**
A	0.700	0.900
A1	0.000	0.100
A2	0.700	0.800
b1	0.150	0.250
b2	0.250	0.350
C	0.100	0.200
D	1.500	1.700
E	0.700	0.900
E1	1.450	1.750
e	0.500 TYP	
e1	0.900	1.100
L	0.400 REF	
L1	0.260	0.460
θ	0°	8°