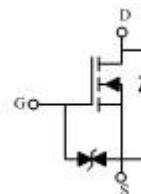


Feature

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

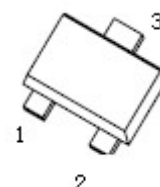


Equivalent Circuit

Application

- Interfacing Switching
- Load Switching
- Logic Level shift

SOT-523



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 ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	20	V
Gate-Source Voltage	V_{GS}	± 12	V
Continuous Drain Current ($T_c=25^{\circ}\text{C}$)	I_D	1.2	A
Continuous Drain Current ($T_c=70^{\circ}\text{C}$)	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	$^{\circ}\text{C}/\text{W}$
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55~ +150	$^{\circ}\text{C}$

MOSFET ELECTRICAL CHARACTERISTICS($T_a=25^{\circ}\text{C}$ unless otherwise noted)

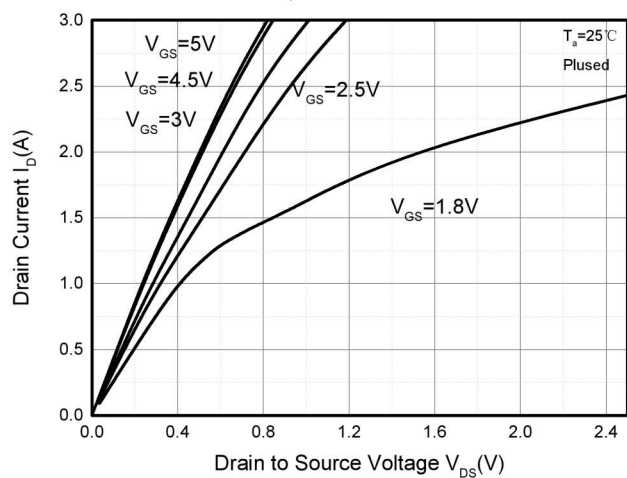
Parameter	Symbol	Test Condition	Min	Type	Max	Unit
Static Characteristics						
Drain-source breakdown voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D =250μA	20	-	-	V
Zero gate voltage drain current	I _{DSS}	V _{DS} =20V, V _{GS} = 0V	-	-	1	μA
Gate-body leakage current	I _{GSS}	V _{GS} =±10V,V _{DS} = 0V	-	-	±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	Q _g	V _D S=15V, I _D =1A, V _G S=4.5V	-	1.6	-	nC
Gate-Source Charge	Q _{gs}		-	0.2	-	
Gate-Drain Charge	Q _{gd}		-	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:

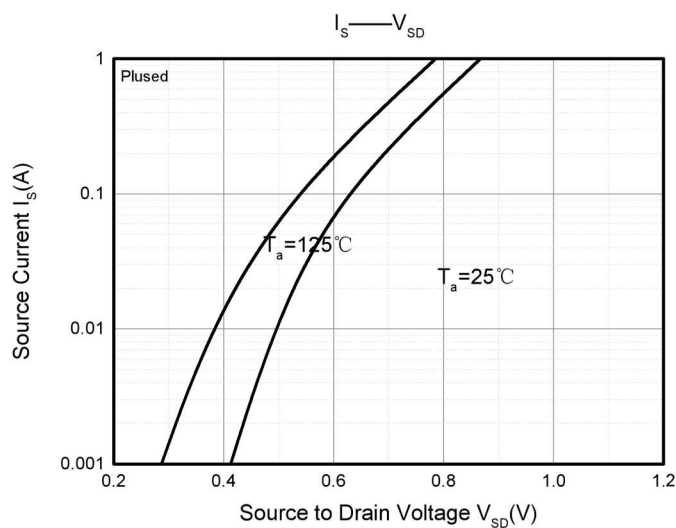
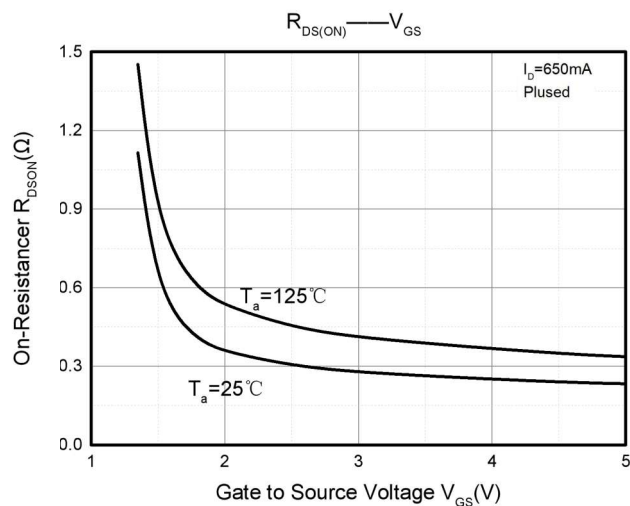
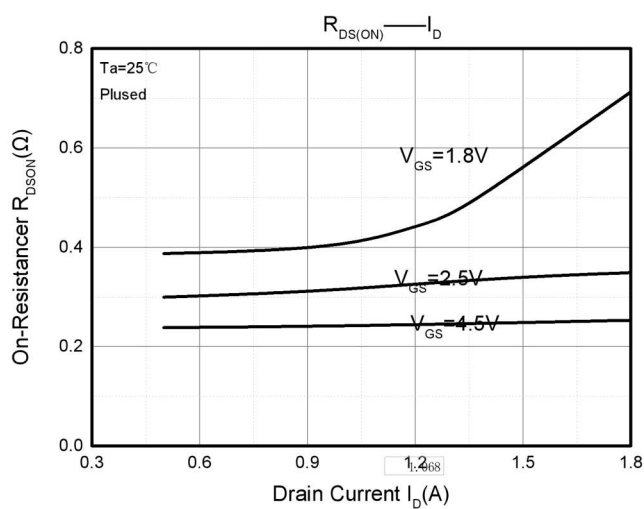
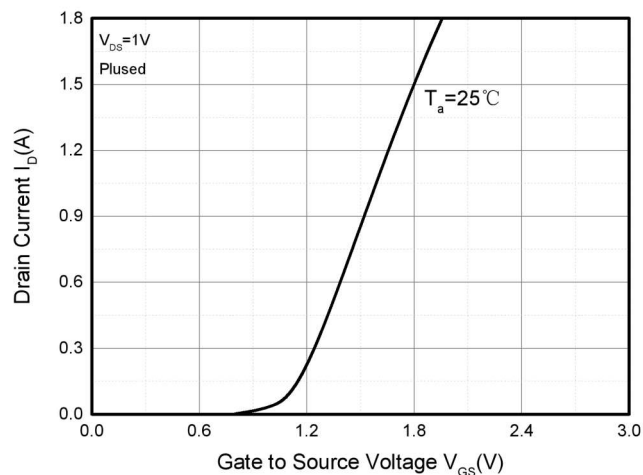
1. Repetitive Rating: pulse width limited by maximum junction temperature
2. Pulse Test: pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$
3. Surface Mounted on FR4 Board, $t \leq 10$ sec

Typical Characteristics

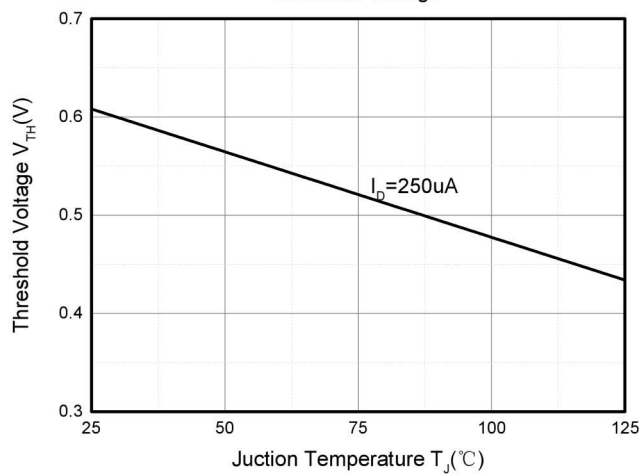
Output Characteristics



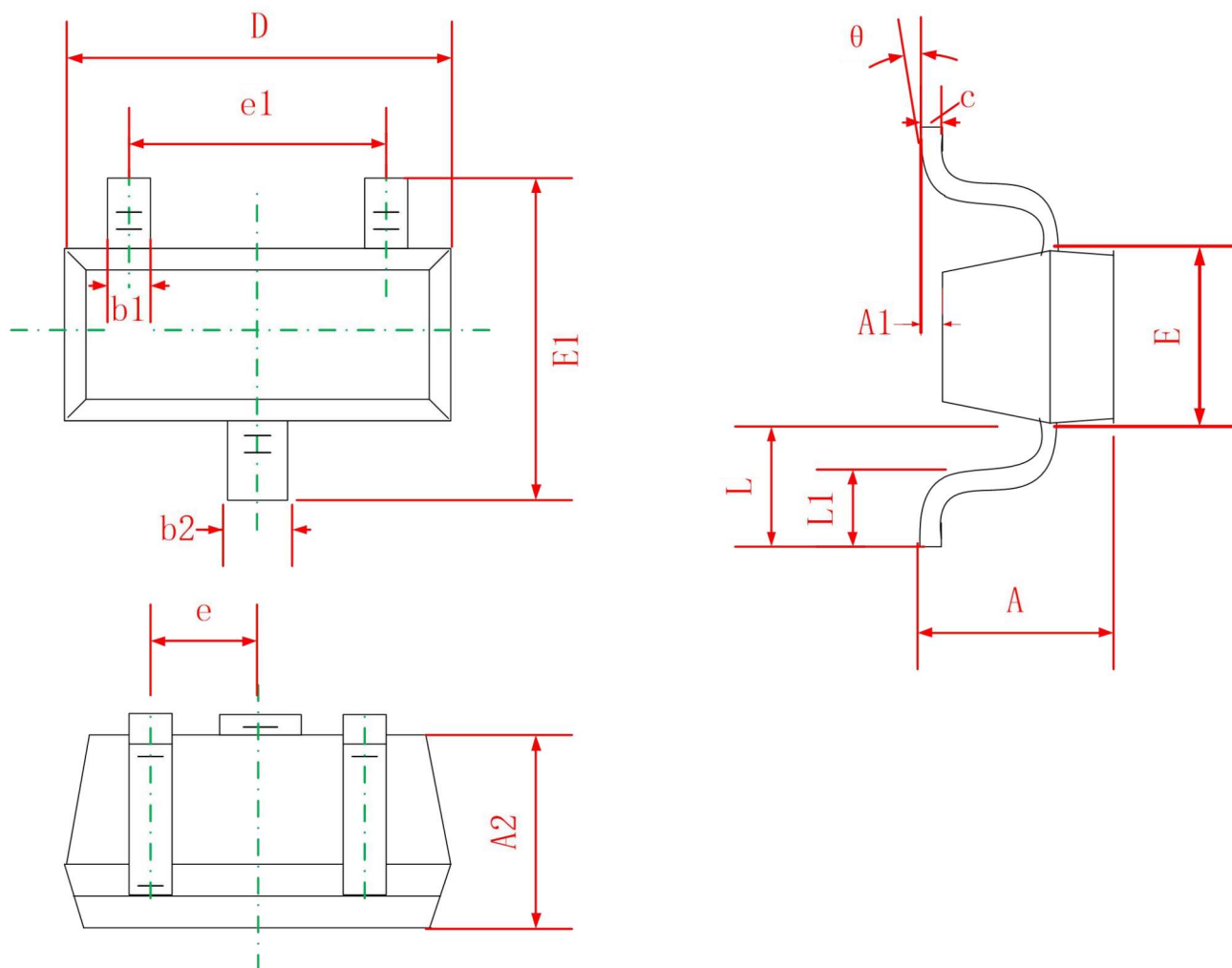
Transfer Characteristics



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°