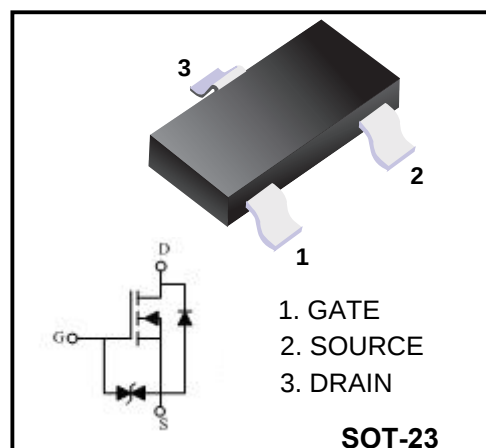


20V N-Channel MOSFET

MAIN CHARACTERISTICS

I_D	0.75A
V_{DSS}	20V
$R_{DS(on)-typ}(@V_{GS}=4.5V)$	<380mΩ(Typ:270mΩ)
$R_{DS(on)-typ}(@V_{GS}=2.5V)$	<450mΩ(Typ:320mΩ)
$R_{DS(on)-typ}(@V_{GS}=1.8V)$	<800mΩ(Typ:390mΩ)



Marking Code

YFW3134K	34K
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FEATURES

- ◆Lead Free Product is Acquired
- ◆Surface Mount Package
- ◆N-Channel Switch with Low RDS(on)
- ◆Operated at Low Logic Level Gate Drive

APPLICATIONS

- ◆Load/Power Switching
- ◆Interfacing Switching
- ◆Battery Management for Ultra Small Portable Electronics
- ◆Logic Level Shift

Maximum Ratings at Tc=25°C unless otherwise specified

Characteristics	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	20	V
Gate-Source Voltage	V_{GS}	±12	V
Continue Drain Current(note 1)	I_D	0.75	A
Pulsed Drain Current ($t_r=10\mu s$)	I_{DM}	1.8	A
Power Dissipation (note 1)	P_D	350	mW
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	357	°C/W
Operating Temperature Range	T_J	150	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C
Lead Temperature for Soldering Purposes(1/8" duration for 10 s)	T_L	260	°C

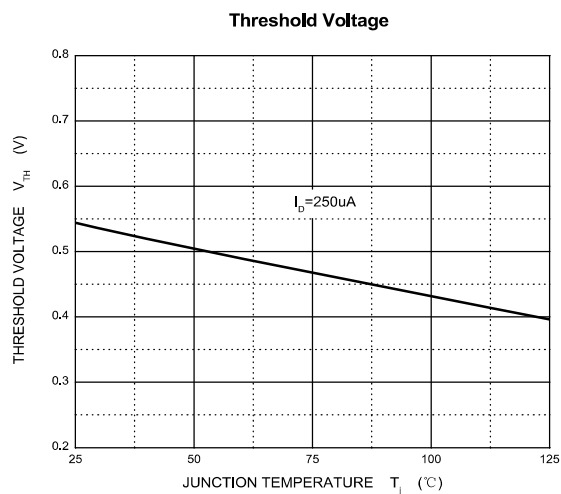
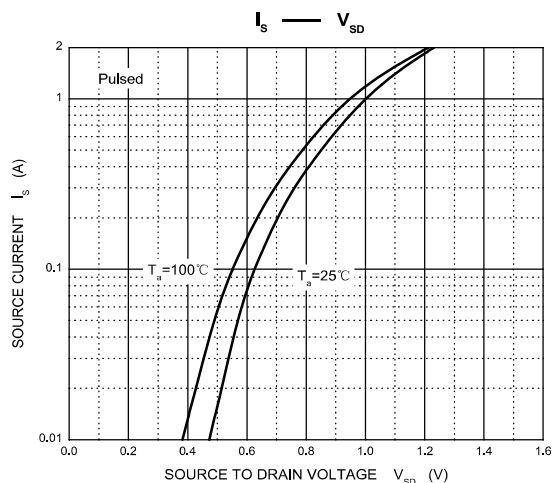
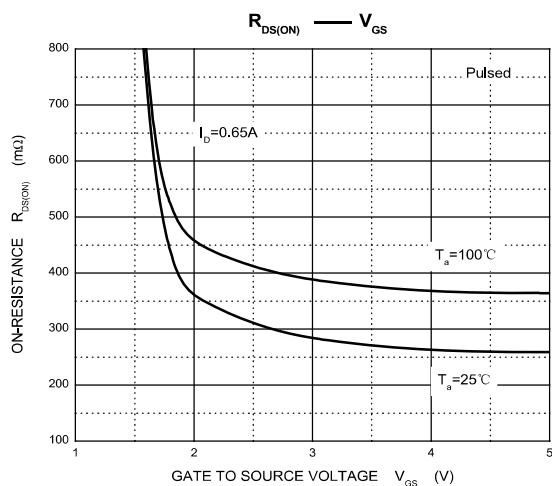
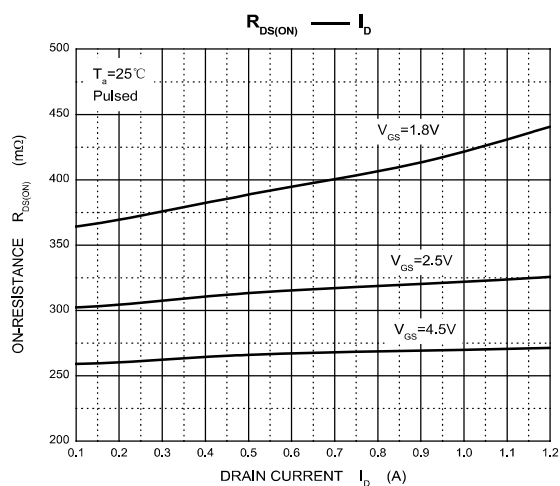
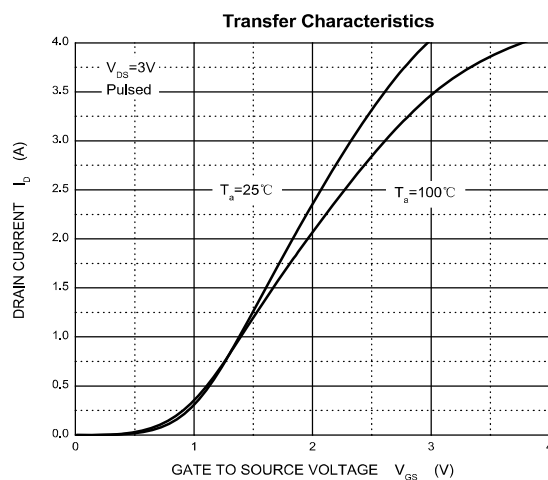
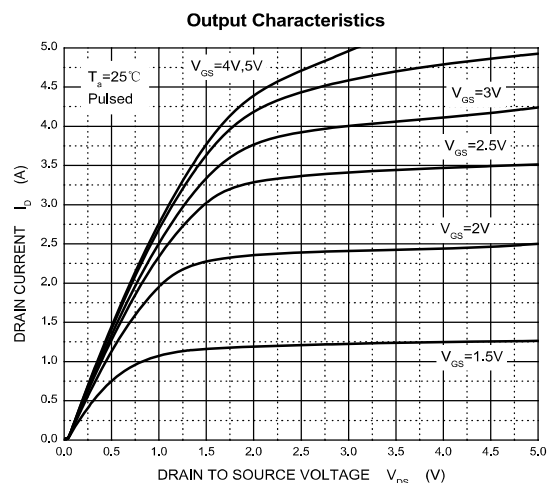
Maximum Ratings at Ta=25°C unless otherwise specified

Characteristics	Test Condition	Symbo	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	$V_{GS} = 0\text{ V}, I_D = 250\text{ }\mu\text{A}$	BV_{DSS}	20	-	-	V
Drain-Source Leakage Current	$V_{DS} = 20\text{ V}, V_{GS} = 0\text{ V}$	I_{DSS}	-	-	1	μA
Gate Leakage Current	$V_{GS} = \pm 10\text{ V}, V_{DS} = 0\text{ V}$	I_{GSS}	-	-	± 20	nA
Gate-Source Threshold Voltage (note 2)	$V_{DS} = V_{GS}, I_D = 250\text{ }\mu\text{A}$	$V_{GS(th)}$	0.35	0.54	1.1	V
Drain-Source On-State Resistance (note 2)	$V_{GS} = 4.5\text{ V}, I_D = 0.65\text{ A}$	$R_{DS(on)}$	-	270	380	m Ω
	$V_{GS} = 2.5\text{ V}, I_D = 0.55\text{ A}$		-	320	450	m Ω
	$V_{GS} = 1.8\text{ V}, I_D = 0.45\text{ A}$		-	390	800	m Ω
Forward tranconductance (note 2)	$V_{DS} = 10\text{ V}, I_D = 0.8\text{ A}$	g_{FS}	-	1.6	-	S
Diode forward voltage	$I_S = 0.15\text{ A}, V_{GS} = 0\text{ V}$	V_{SD}	-	-	1.2	V
Input Capacitance	$V_{DS} = 16\text{ V}$ $V_{GS} = 0\text{ V}$ $f = 1\text{ MHz}$	C_{iss}	-	79	120	pF
Output Capacitance		C_{oss}	-	13	20	pF
Reverse Transfer Capacitance		C_{rss}	-	9	15	pF
Turn-on Delay Time(note 3)	$V_{GS} = 4.5\text{ V}$ $V_{DS} = 10\text{ V}$ $I_D = 500\text{ mA}$ $R_{GEN} = 10\Omega$	$t_{d(on)}$	-	6.7	-	ns
Rise Time(note 3)		T_r	-	4.8	-	ns
Turn-Off Delay Time(note 3)		$t_{d(OFF)}$	-	17.3	-	ns
Fall Time(note 3)		t_f	-	7.4	-	ns

Notes

1. Surface mounted on FR4 board using the minimum recommended pad size.
2. Pulse Test : Pulse Width=300us, Duty Cycle=2%.
3. Switching characteristics are independent of operating junction temperatures.
4. Guaranteed by design, not subject to producing.

Typical Characteristics



Ordering information

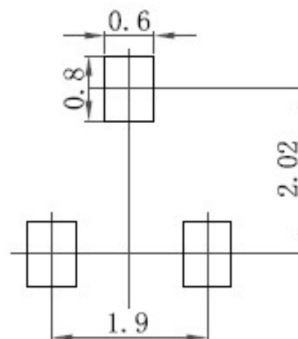
Package	Packing Description	Base Quantity	Packing Quantity
SOT-23	Tape/Reel, 7" reel	3000pcs/Reel	24000PCS/Box 120000PCS/Carton

Package Dimensions

SOT-23

Dim.	Millimeter (mm)		mil	
	Min.	Max.	Min.	Max.
A	0.9	1.15	35	45
A1	0.1		3.9	
bp	0.38	0.48	15	19
C	0.09	0.15	3.54	5.9
D	2.8	3.0	110	118
E	1.2	1.4	47	55
E	1.9		75	
E1	0.95		37	
HE	2.1	2.55	83	100
Lp	0.15	0.45	5.9	18
Q	0.45	0.55	18	22
v	0.2		7.9	
W	0.1		4	

The recommended mounting pad size



Disclaimer

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