

20V N-CHANNEL ENHANCEMENT MODE MOSFET

MAIN CHARACTERISTICS

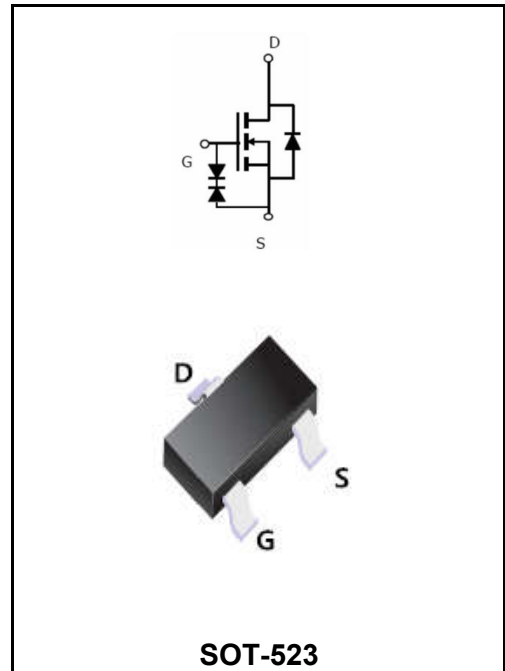
I_D	0.75A
V_{DSS}	20V
R_{DS(on)-typ(@V_{GS}=4.5V)}	< 380mΩ (Type:80 mΩ)

Features

◆HBM≥1000V

Application

- ◆Drivers: Relays, Solenoids,
- ◆Lamps, Hammers, Displays, Memories
- ◆Battery Operated Systems
- ◆Power Supply Converter Circuits
- ◆Load/Power Switching Cell Phones, Pagers



Product Specification Classification

Part Number	Package	Marking	Pack
YFW2334CI	SOT-523	34	3000PCS/Tape

Maximum Ratings at Tc=25°C unless otherwise specified

Characteristics	Symbols	Value	Units
Drain-Source Voltage	V_{DS}	20	V
Typical Gate-Source Voltage	V_{GS}	±12	V
Drain Current-Continuous	I_D	0.75	A
Drain Current -Pulsed(note1)	I_{DM}	3	A
Power Dissipation (note 2)	P_D	150	mW
Thermal Resistance from Junction to Ambient	R_{θJA}	833	°C/W
Storage Temperature	T_J	150	°C
Junction Temperature	T_{STG}	-55 to +150	°C

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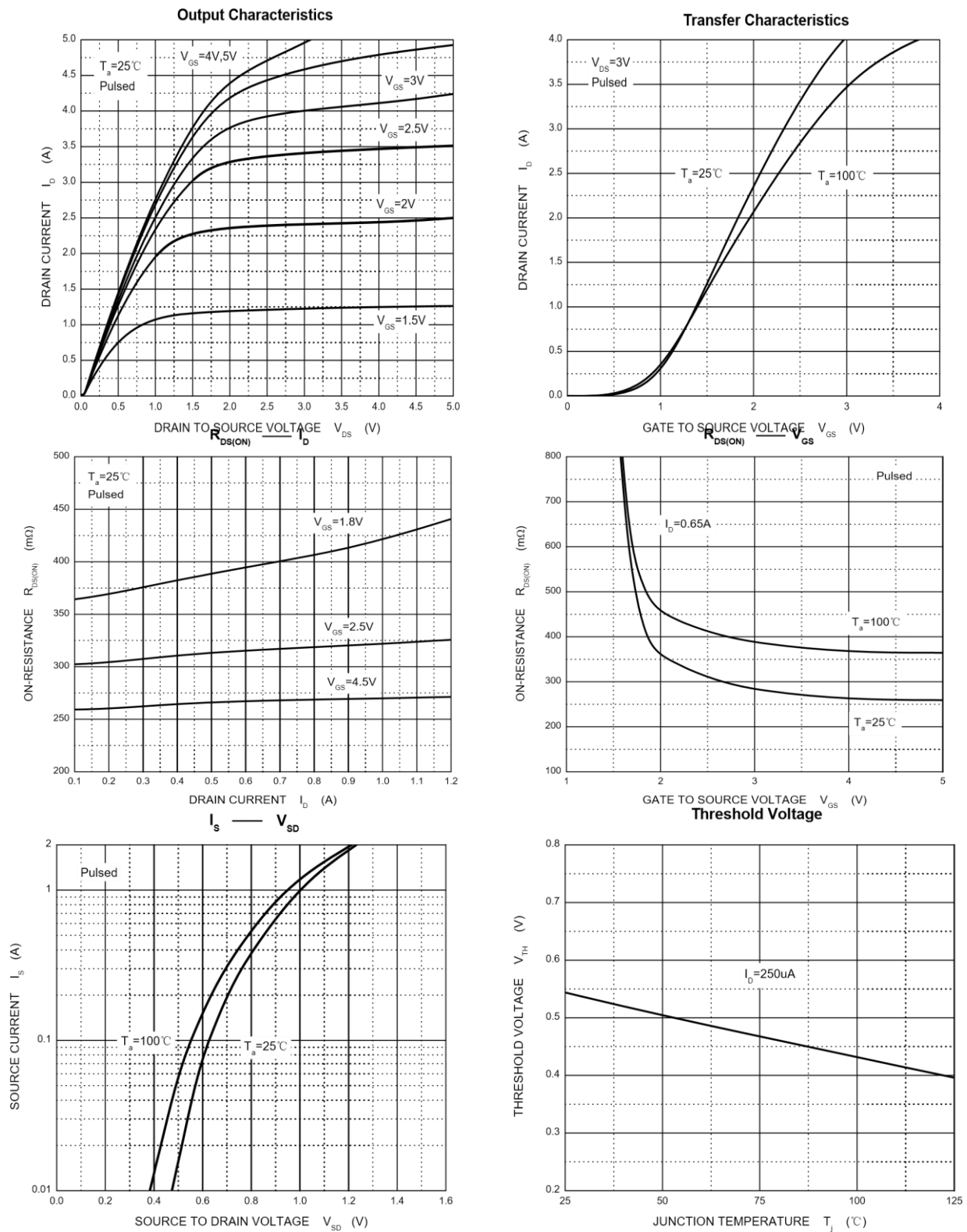
Characteristics	Test Condition	Symbols	Min	Typ	Max	Units
Drain-Source Breakdown Voltage	$V_{GS}=0V, I_D=250\mu A$	V(BR)DSS	20	-	-	V
Gate -Threshold Voltage ³⁾	$V_{DS}=V_{GS}, I_D=250\mu A$	V_{GS(th)}	0.35	-	1.1	V
Gate-Body Leakage Current	$V_{GS}=\pm 10V, V_{DS}=0V$	I_{GSS}	-	-	± 20	μA
Zero Gate Voltage Drain Current	$V_{DS}=20V, V_{GS}=0V$	I_{DSS}	-	-	1	μA
Drain-Source On-State Resistance(note 3)	$V_{GS}=4.5V, I_D=650mA$	R_{DS(ON)}	-	80	380	mΩ
	$V_{GS}=2.5V, I_D=550mA$		-	160	450	
	$V_{GS}=1.8V, I_D=450mA$		-	420	800	
Forward Transconductance	$V_{DS}=10V, I_D=800mA$	g_{FS}	1	-	-	S
Input Capacitance	$V_{DS}=16V$ $V_{GS}=0V$ $f=1.0MHz$	C_{iss}	-	-	120	μF
Output Capacitance		C_{oss}	-	-	20	
Reverse Transfer Capacitance		C_{rss}	-	-	15	
Turn-on delay time	$V_{DD}=10V$ $I_D=500mA$ $V_{GS}=4.5V$ $R_G=10\Omega$	t_{d(on)}	-	6.7	-	ns
Rise Time		T_r	-	4.8	-	
Turn-Off Delay Time		t_{d(OFF)}	-	17.3	-	
Fall Time		t_f	-	7.4	-	
Drain to Source Diode Forward Voltage(note 3)	$V_{GS}=0V, I_S=0.15A$	V_{SD}	-	-	1.2	V

Notes:

- 1、Repetitive Rating: Pulse width limited by maximum junction temperature.
- 2、This test is performed with no heat sink at Ta=25°C.
- 3、Pulse Test : Pulse Width $\leq 300\mu s$, Duty Cycle $\leq 0.5\%$.
- 4、These parameters have no way to verify.

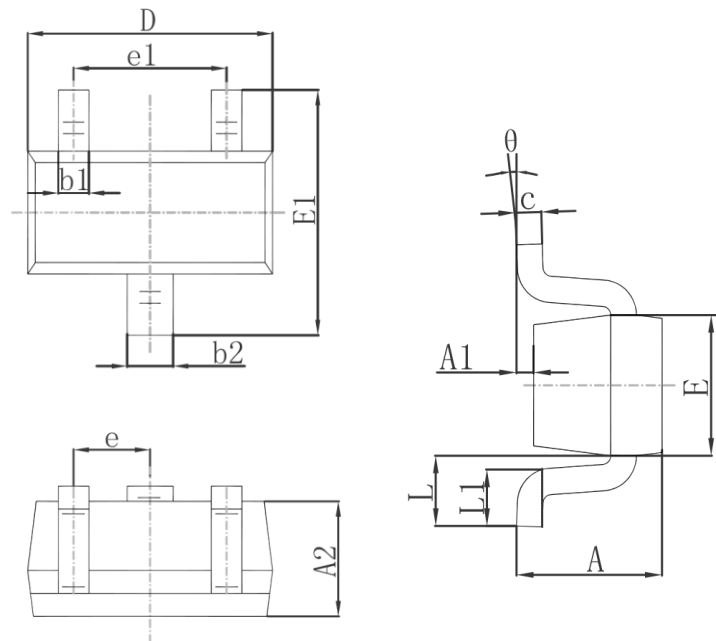
Ratings and Characteristic Curves

Typical Characteristics



Package Outline Dimensions Millimeters

SOT-523



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.700	0.900	0.028	0.035
A1	0.000	0.100	0.000	0.004
A2	0.700	0.800	0.028	0.031
b1	0.150	0.250	0.006	0.010
b2	0.250	0.350	0.010	0.014
c	0.100	0.200	0.004	0.008
D	1.500	1.700	0.059	0.067
E	0.700	0.900	0.028	0.035
E1	1.450	1.750	0.057	0.069
e	0.500 TYP.		0.020 TYP.	
e1	0.900	1.100	0.035	0.043
L	0.400 REF.		0.016 REF.	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°