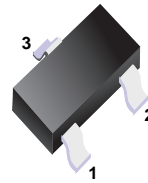
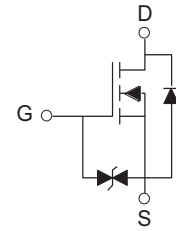


FEATURES

- Low on resistance $R_{DS(ON)}$
- Low gate threshold voltage
- Low input capacitance
- ESD protected up to 2KV



Simplified outline(SOT-323)



Schematic Diagram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Maximum ratings ($T = 25^{\circ}\text{C}$ unless otherwise noted)

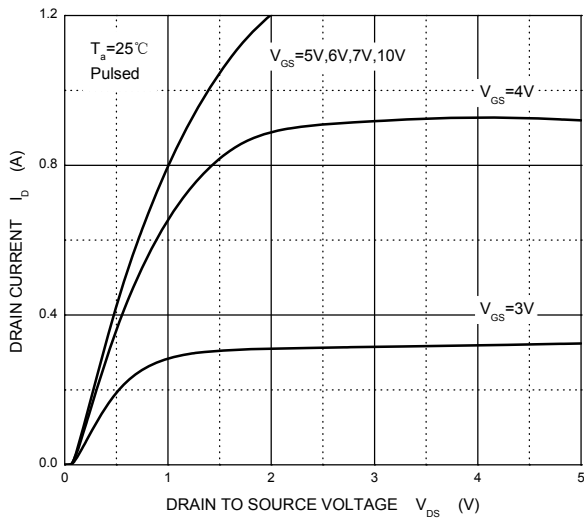
Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DSS}	60	V
Gate-Source Voltage	V_{GSS}	± 20	V
Drain Current (Continuous)	I_D	300	mA
Drain Current (Pulse Width $\leq 10 \mu\text{s}$)	I_{DM}	800	mA
Total Power Dissipation	P_{tot}	150	mW
Operating and Storage Temperature Range	T_j, T_{stg}	- 55 to + 150	$^{\circ}\text{C}$

Electrical Characteristics

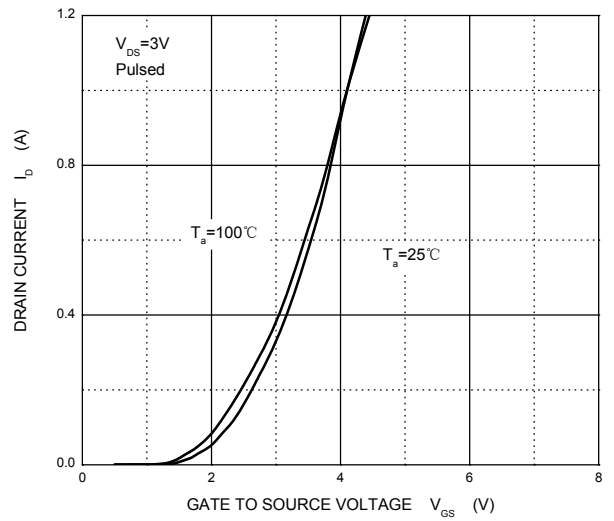
Parameter	Symbol	Min.	Max.	Unit
Drain Source Breakdown Voltage at $I_D = 10 \mu\text{A}$	BV_{DSS}	60	-	V
Zero Gate Voltage Drain Current at $V_{DS} = 60 \text{ V}$	I_{DSS}	-	1	μA
Gate Source Leakage Current at $V_{GS} = \pm 20 \text{ V}$	I_{GSS}	-	± 10	μA
Gate Threshold Voltage at $V_{DS} = 10 \text{ V}$, $I_D = 250 \mu\text{A}$	$V_{GS(th)}$	1	2.5	V
Static Drain Source On-Resistance at $V_{GS} = 10 \text{ V}$, $I_D = 500 \text{ mA}$ at $V_{GS} = 4.5 \text{ V}$, $I_D = 200 \text{ mA}$	$R_{DS(ON)}$	- -	3 4	Ω
Diode Forward Voltage $I_S=115\text{mA}$, $V_{GS}=0 \text{ V}$	V_{SD}	0.55	1.2	V
Forward Transconductance at $V_{DS} = 10 \text{ V}$, $I_D = 200 \text{ mA}$	g_{fs}	80	-	mS
Input Capacitance at $V_{DS} = 25 \text{ V}$, $f = 1 \text{ MHz}$	C_{iss}	-	50	pF
Output Capacitance at $V_{DS} = 25 \text{ V}$, $f = 1 \text{ MHz}$	C_{oss}	-	25	pF
Reverse Transfer Capacitance at $V_{DS} = 25 \text{ V}$, $f = 1 \text{ MHz}$	C_{rss}	-	5	pF

RATING AND CHARACTERISTIC CURVES

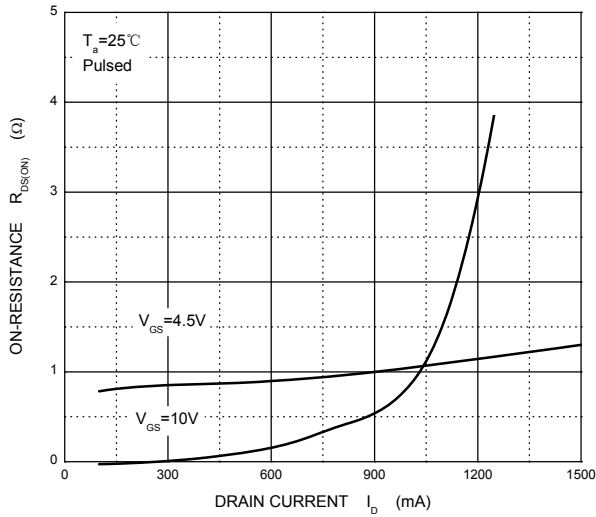
Output Characteristics



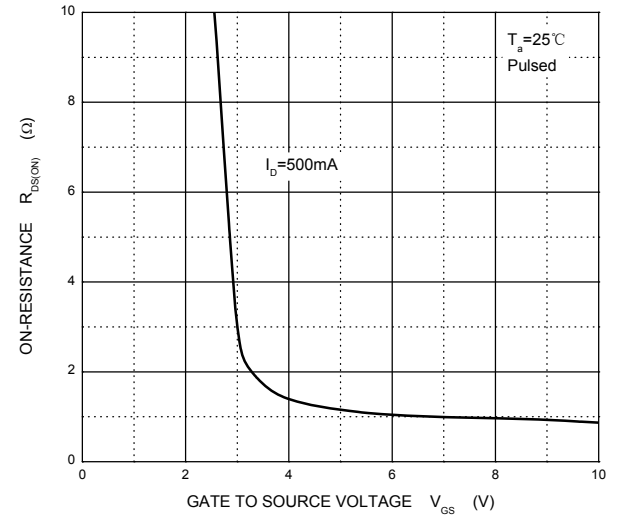
Transfer Characteristics



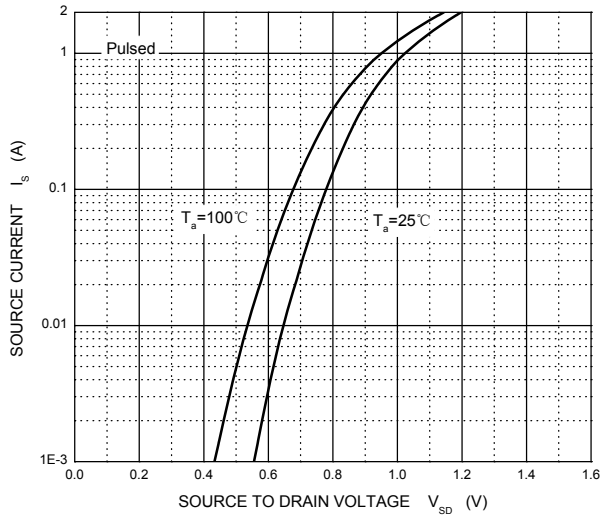
$R_{DS(ON)}$ — I_D



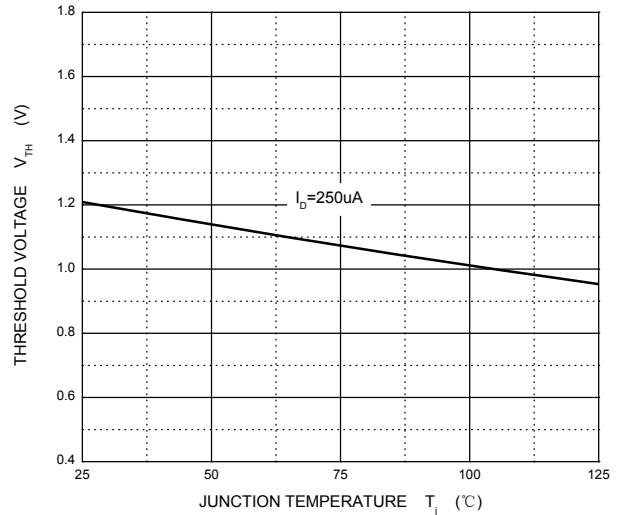
$R_{DS(ON)}$ — V_{GS}



I_S — V_{SD}



Threshold Voltage



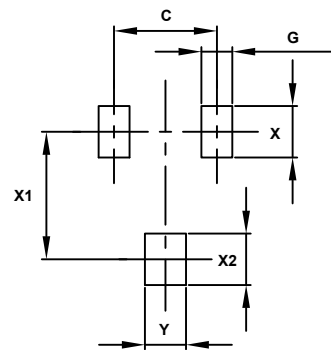
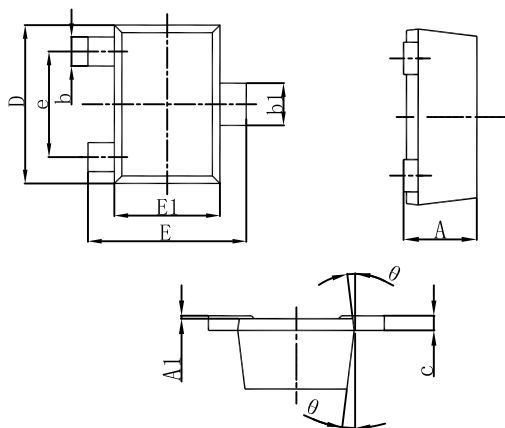
Soldering parameters

Reflow Condition		Pb-Free assembly (see as below)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150 °C
	-Temperature Max($T_{s(max)}$)	+200 °C
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3 °C/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3 °C/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217 °C
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_P)		+260(+0/-5) °C
Time within 5 °C of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6 °C/sec. Max
Time 25 °C to Peak Temp (T_P)		8 min. Max
Do not exceed		+260 °C



Package Dimensions & Suggested Pad Layout

SOT-723



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.430	0.500	0.017	0.020
A1	0.000	0.050	0.000	0.002
b	0.170	0.270	0.007	0.011
b1	0.270	0.370	0.011	0.015
c	0.080	0.150	0.003	0.006
D	1.150	1.250	0.045	0.049
E	1.150	1.250	0.045	0.049
E1	0.750	0.850	0.030	0.033
e	0.800 TYP.		0.031 TYP.	
θ	7° REF.		7° REF.	

Dimensions	Value (in mm)
C	0.80
G	0.35
X	0.40
X1	1.00
X2	0.40
Y	0.45

Tape & reel specification

Tape		Symbol	Dimension (mm)
<p>SECTION : A-A</p> <p>SECTION : B-B</p>		P0	4.00±0.20
		P1	2.00±0.20
		P2	2.00±0.20
		D0	1.55±0.20
		D1	0.65±0.20
		E	1.55±0.25
		F	3.60±0.20
		W	8.00±0.20
		A0	1.65±0.20
		B0	1.75±0.20
		K0	0.85±0.20
		T	0.20±0.20
		D2	177.0±5.0
		D3	55Min.
		D4	R24.6±2.0
		G	R82.0±2.0
I	13.0±2.0		
W1	10.20±3.0		
Quantity: 3000PCS			

7" Reel	