Product Summary

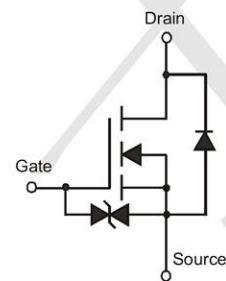| BVDSS	RDSON	ID
20V	300mΩ@2.5V	0.9 A

Application

- Load/Power Switching
- Interfacing Switching
- Logic Level Shift

Package and Pin Configuration

SOT-23

Circuit diagram

Marking:

34K

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}	±8	V
Continuous Drain Current	I_D	0.9	A
Pulsed Drain Current (t=300μs) [1]	I_{DM}	1.5	A
Power Dissipation [2]	P_D	0.35	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	357	℃/W
Junction Temperature	T_J	150	℃
Storage Temperature	T_{STG}	-55~ +150	℃

Electrical Characteristics (T$_J$=25 ℃, unless otherwise noted)

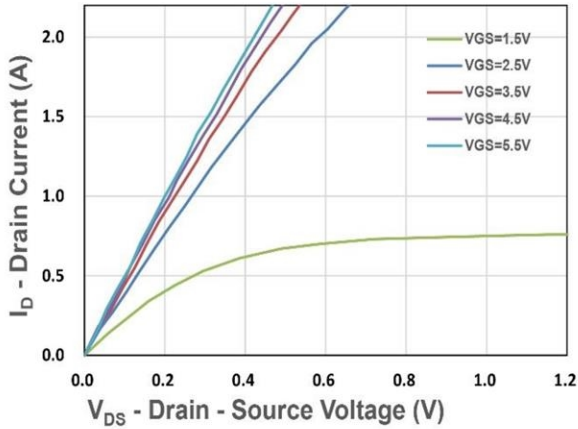| Parameter	Symbol	Test Condition	Min	Type	Max	Unit
Static Characteristics						
Drain-source breakdown voltage	V$_{(BR)DSS}$	V$_{GS}$ = 0V, I$_D$ =250μA	20	25		V
Zero gate voltage drain current	I$_{DSS}$	V$_{DS}$ =20V,V$_{GS}$ = 0V			1	μA
Gate-body leakage current	I$_{GSS}$	V$_{GS}$ =±18V, V$_{DS}$ = 0V			±10	μA
Gate threshold voltage[3]	V$_{GS(th)}$	V$_{DS}$ =V$_{GS}$, I$_D$ =250μA	0.5	0.7	1.1	V
Drain-source on-resistance[3]	R$_{DS(on)}$	V$_{GS}$ =4.5V, I$_D$ =500mA		250	400	mΩ
		V$_{GS}$ =2 5V I$_D$ =500mA		300	500	
Forward tranconductance	g$_{FS}$	V$_{DS}$ =10V, I$_D$ =500mA			1.2	S
Dynamic characteristics[4]						
Input Capacitance	C$_{iss}$	V$_{DS}$ =10V,V$_{GS}$ =0V,f =1MHz		45		pF
Output Capacitance	C$_{oss}$			9		
Reverse Transfer Capacitance	C$_{rss}$			6		
Switching Characteristics[4]						
Turn-on delay time	t$_{d(on)}$	V$_{DD}$=10V,I$_D$=500mA, V$_{GS}$=4.5V,R$_G$=6Ω		20		ns
Turn-on rise time	t$_r$			90		
Turn-off delay time	t$_{d(off)}$			750		
Turn-off fall time	t$_f$			400		
Source-Drain Diode characteristics						
Diode Forward voltage[3]	V$_{DS}$	I$_S$=0.15A, V$_{GS}$ = 0V			1.3	V

Typical Electrical and Thermal Characteristics
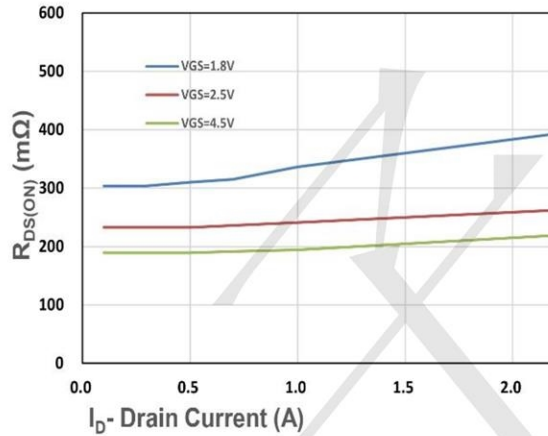

Figure 1. Output Characteristics

Figure 2. On-Resistance vs. ID

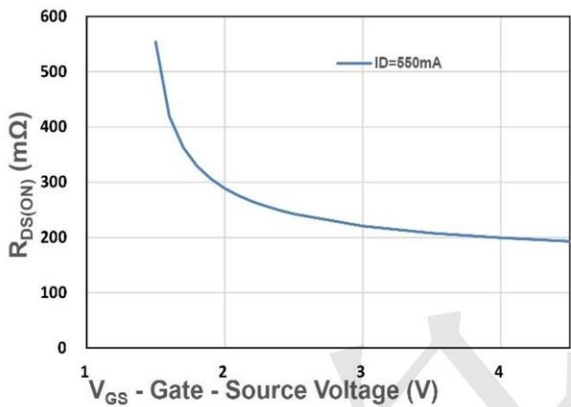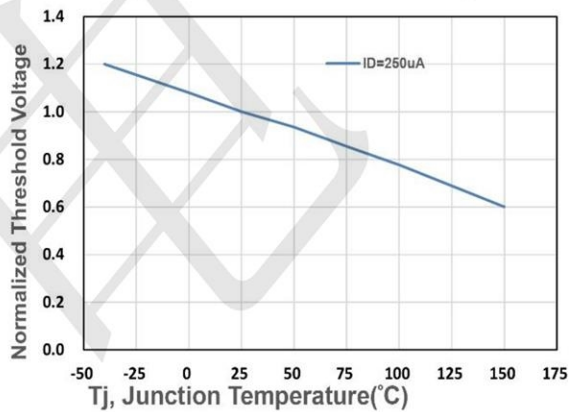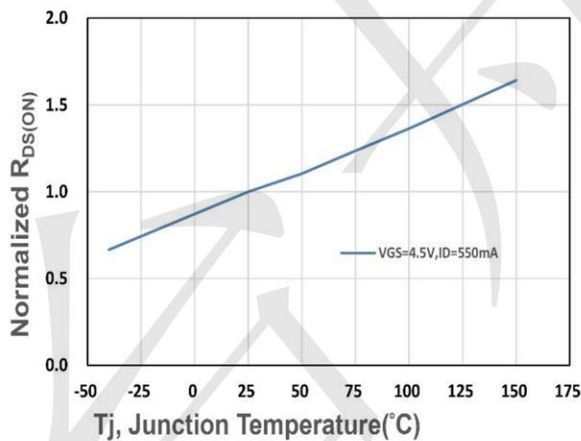Figure 3. On-Resistance vs. VGS

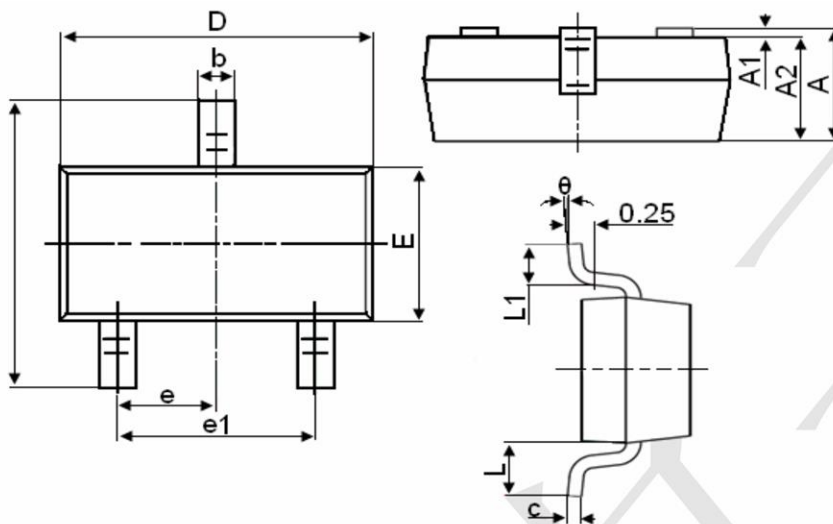Figure 4. Gate Threshold Voltage

Figure 5. Drain-Source On Resistance

Figure 6. Source-Drain Diode Forward

SOT-23 Package Information

Symbol	Dimensions in Millimeters	
	MIN.	MAX.
A	0.900	1.150
A1	0.000	0.100
A2	0.900	1.050
b	0.300	0.500
c	0.080	0.150
D	2.800	3.000
E	1.200	1.400
E1	2.250	2.550
e	0.950TYP	
e1	1.800	2.000
L	0.550REF	
L1	0.300	0.500
θ	0°	8°