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TPM3134KS3

N-Channel Enhancement Mode MOSFET

www.sot23.com.tw

Product Summary

BVDSS	RDSON	ID
20V	300mΩ@2.5V	0.9A

Application

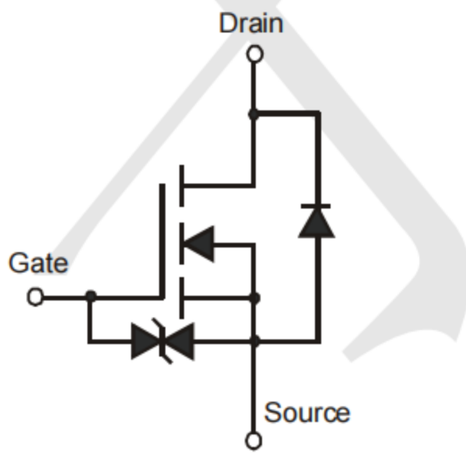
- Load/Power Switching
- Interfacing Switching
- Logic Level Shift

Package and Pin Configuration

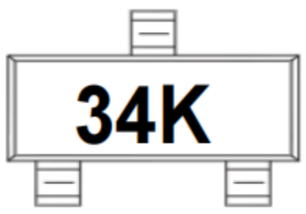
SOT-23



Circuit diagram



Marking:



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

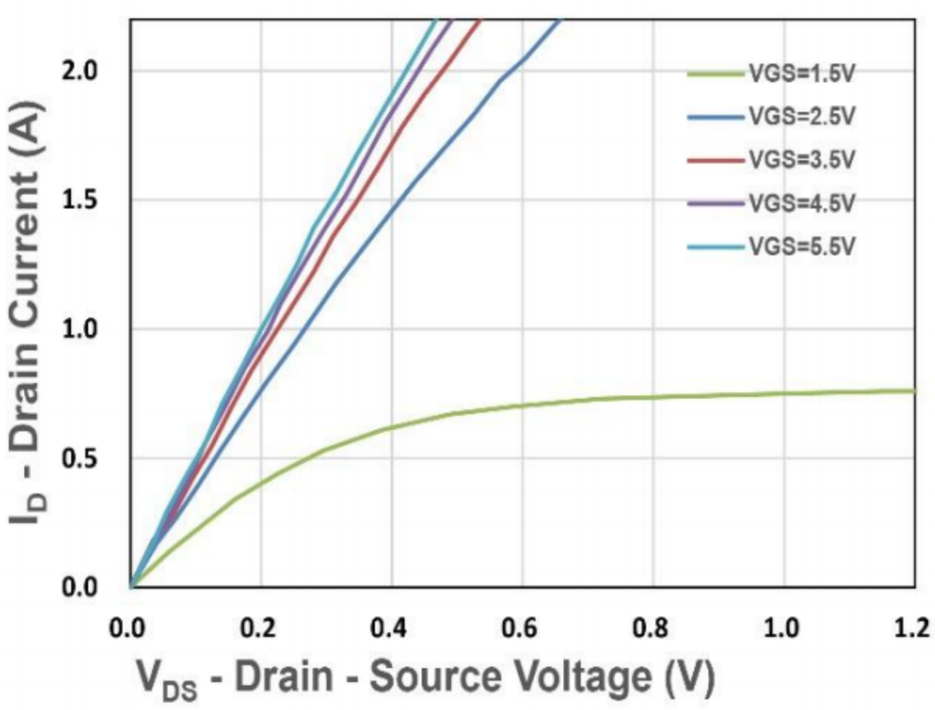


Figure 1. Output Characteristics

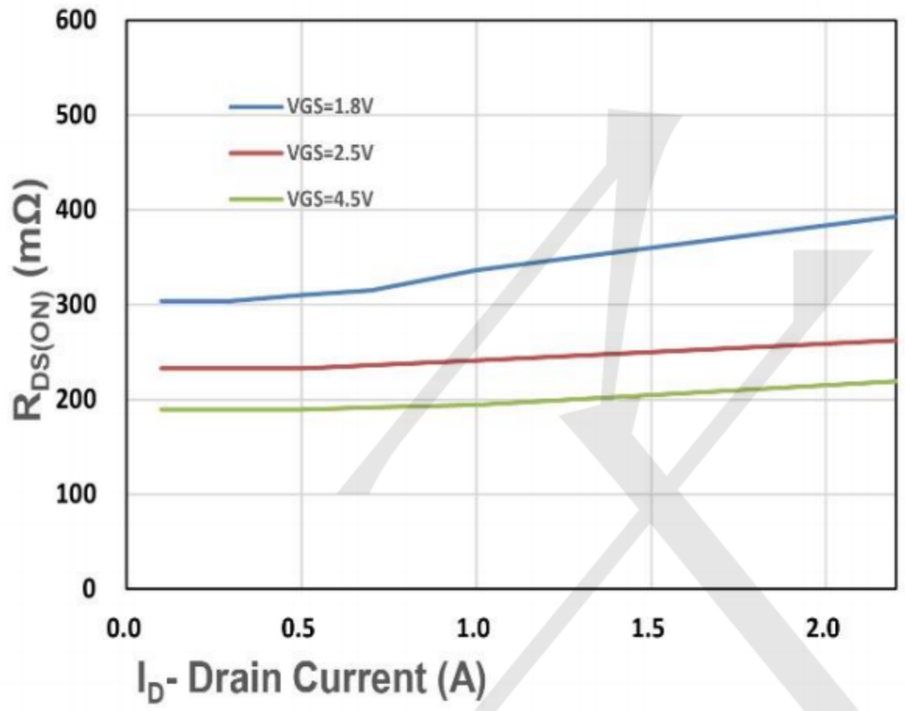


Figure 2. On-Resistance vs. ID

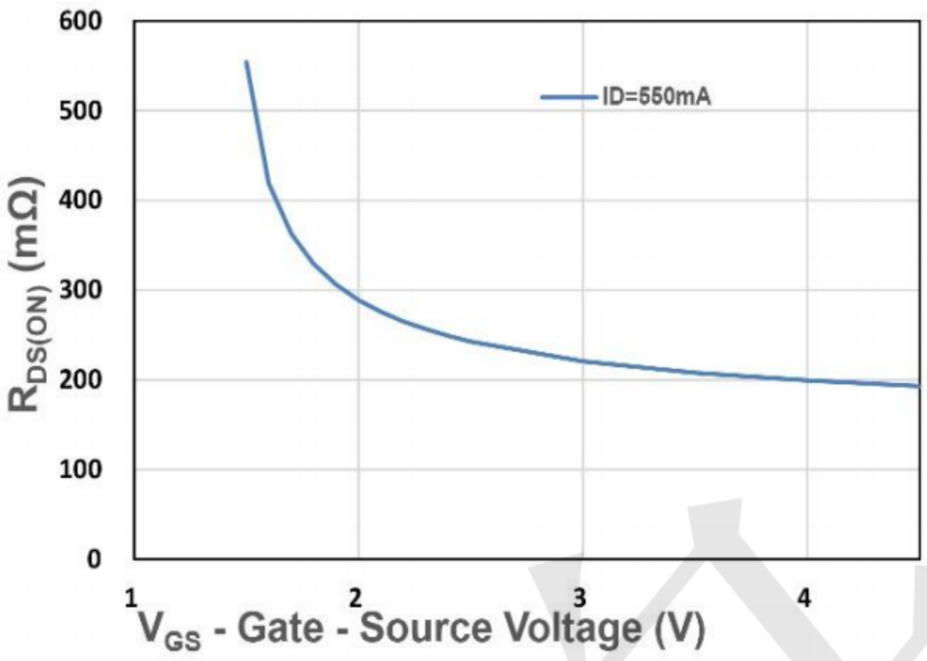


Figure 3. On-Resistance vs. VGS

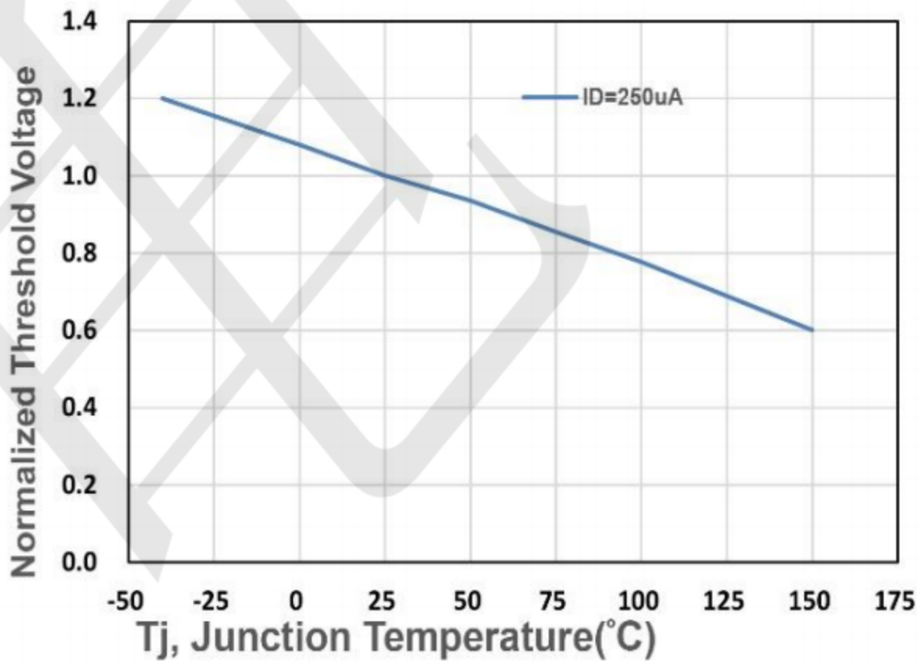


Figure 4. Gate Threshold Voltage

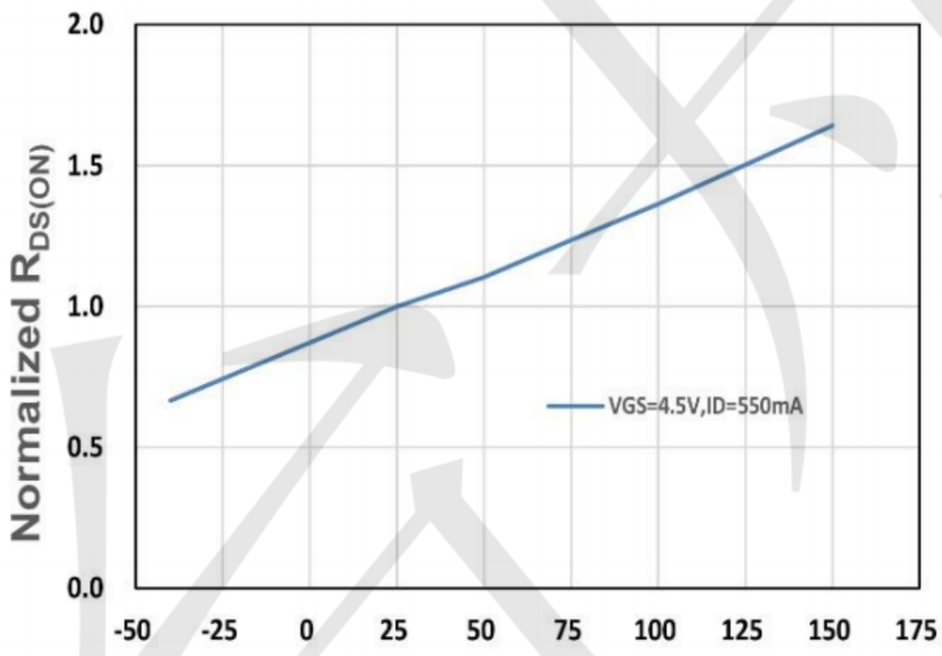


Figure 5. Drain-Source On Resistance

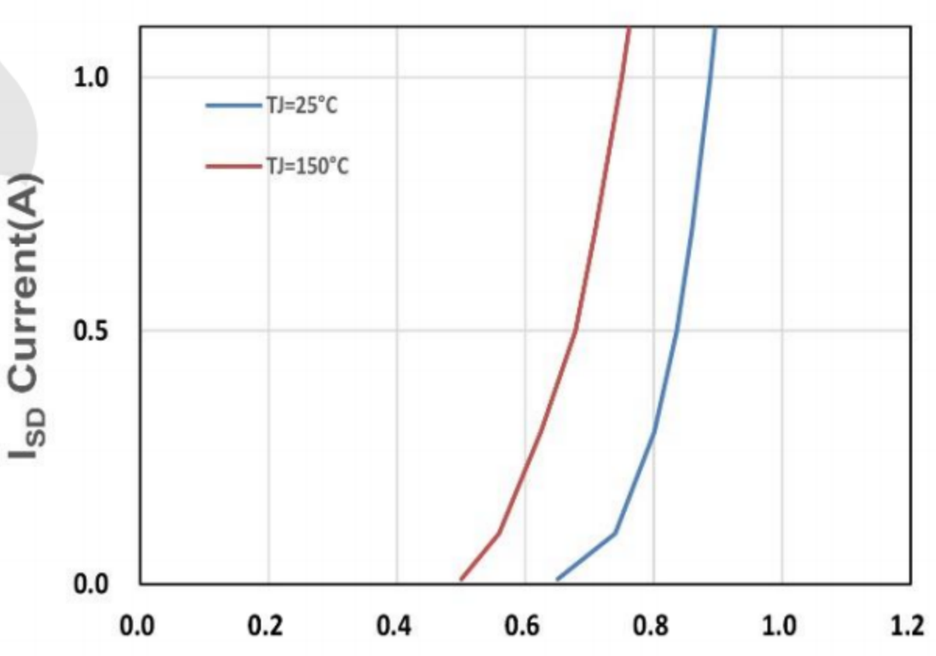
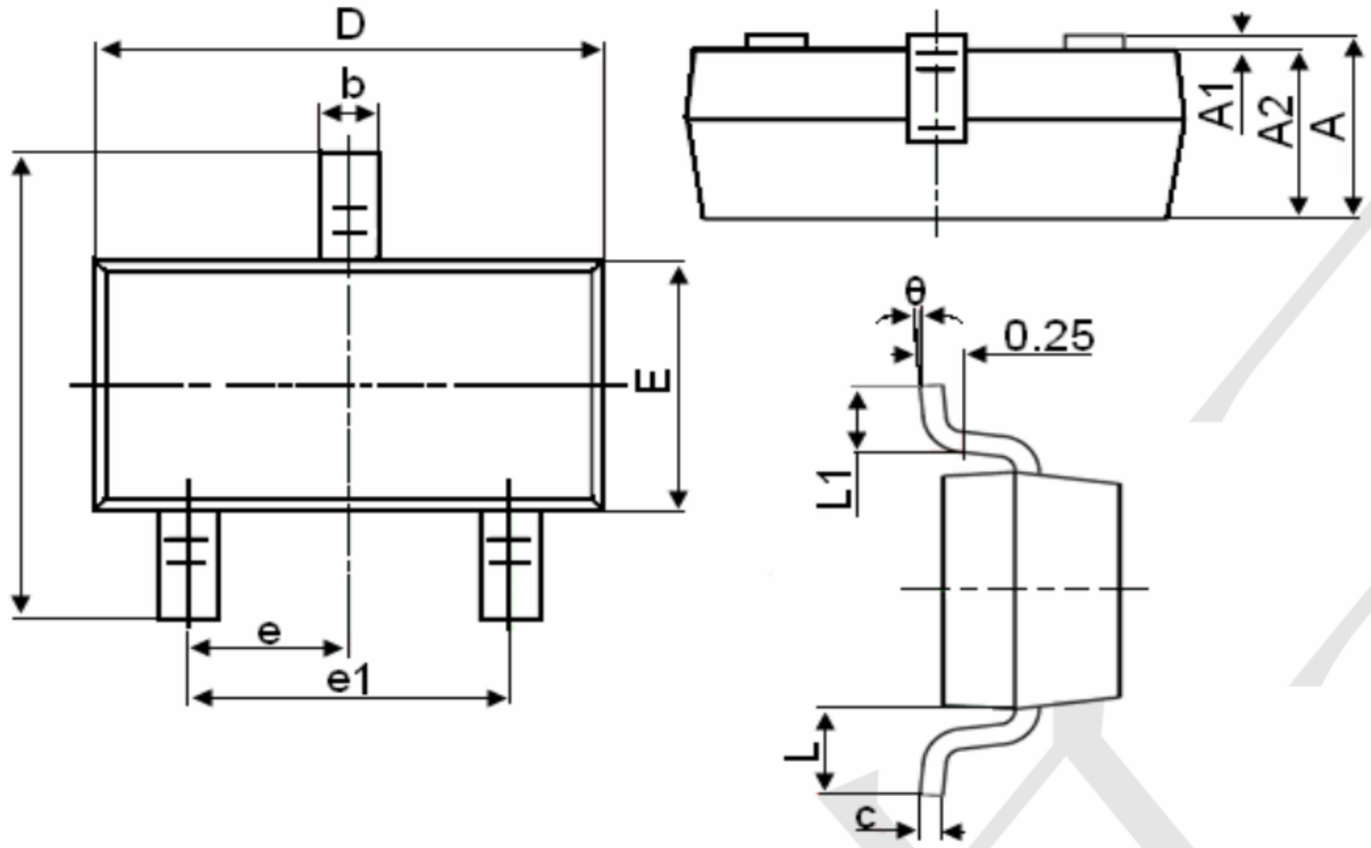


Figure 6. Source-Drain Diode Forward

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°