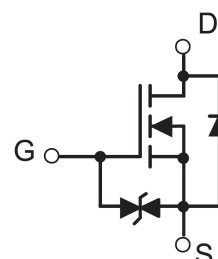


20V N-Channel MOSFET

Product Summary

$V_{(BR)DSS}$	$R_{DS(on)MAX}$	I_D
20V	110mΩ@4.5V	1.2A
	150mΩ@2.5V	

Circuit diagram



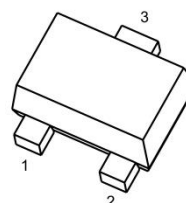
Feature

- Surface Mount Package
- N-Channel Switch with Low $R_{DS(on)}$
- Operated at Low Logic Level Gate Drive
- ESD Protected

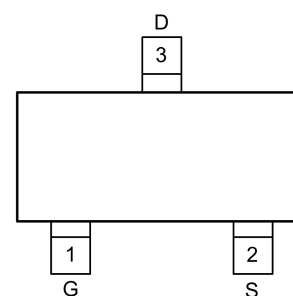
Application

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

Package



SOT-723



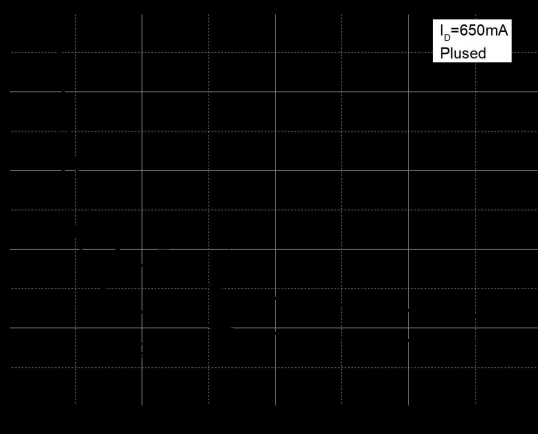
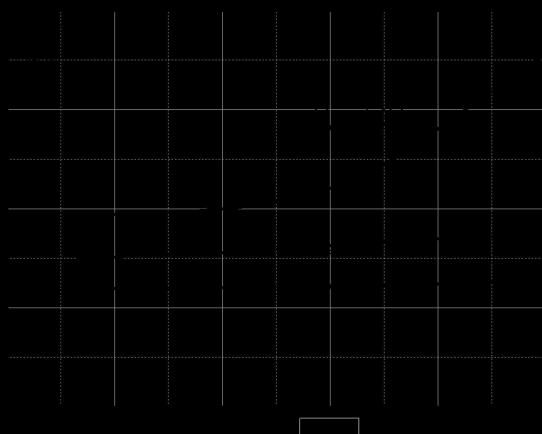
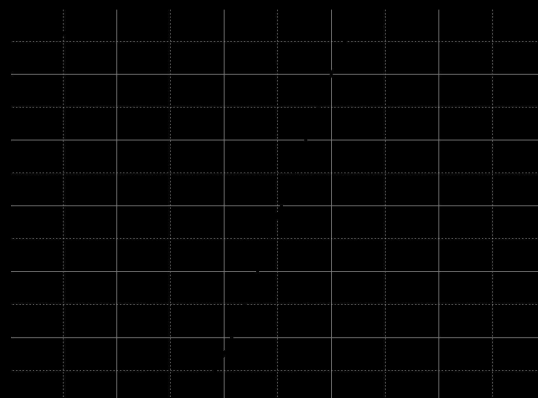
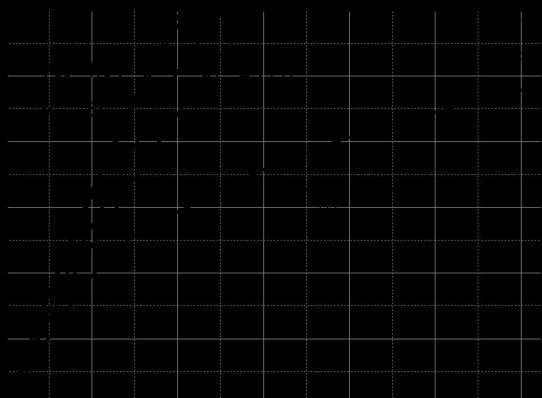
Absolute maximum ratings (Ta=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	20	V
Gate-Source Voltage	V_{GS}	± 12	V
Continuous Drain Current	I_D	1.2	A
Pulsed Drain Current	I_{DM}	1.8	A
Power Dissipation	P_D	0.15	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	833	$^{\circ}\text{C}/\text{W}$
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55~ +150	$^{\circ}\text{C}$

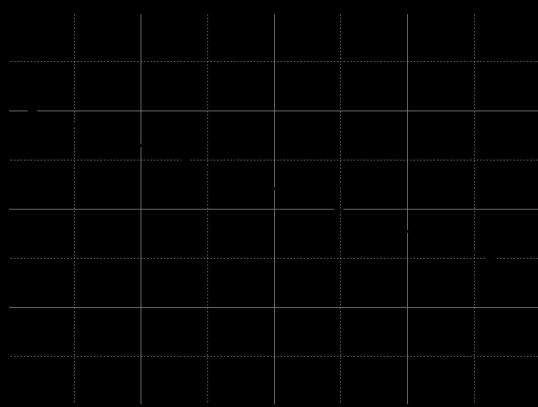
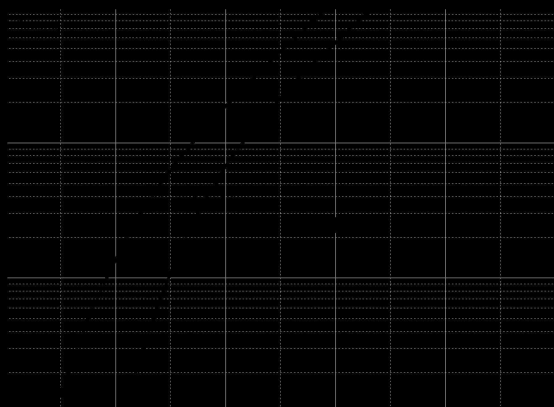
Electrical characteristics (T_A=25 °C, unless otherwise noted)

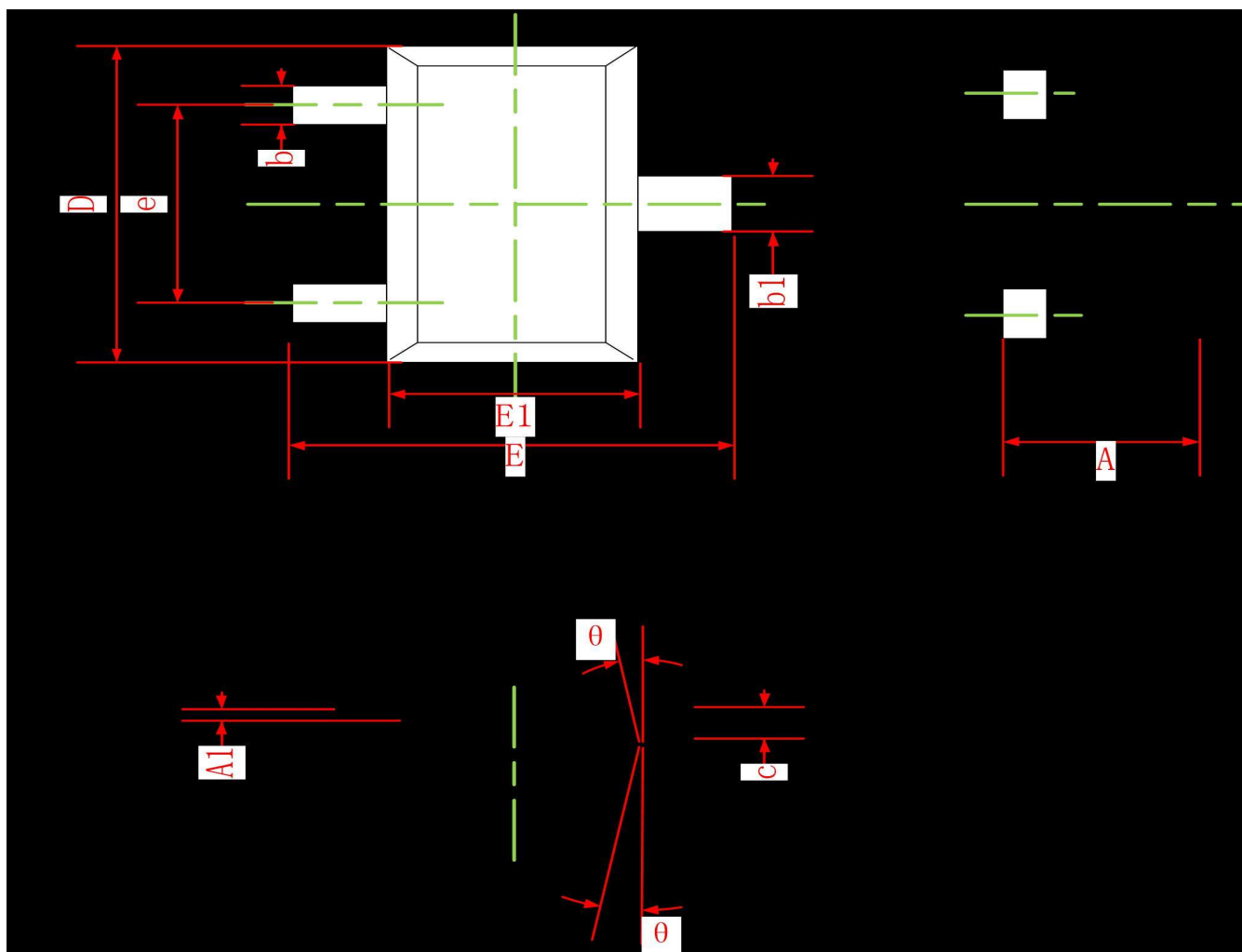
Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-source breakdown voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D =250μA	20			V
Zero gate voltage drain current	I _{DSS}	V _{DS} =16V, V _{GS} = 0V			1	μA
Gate-body leakage current	I _{GSS}	V _{GS} =±10V, V _{DS} = 0V			±10	uA
Gate threshold voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250μA	0.3	0.65	1	V
Drain-source on-resistance	R _{DS(on)}	V _{GS} = 4.5V, I _D = 1.2A		90	110	mΩ
		V _{GS} =2.5V, I _D = 0.8A		115	150	
		V _{GS} =1.8V, I _D = 0.3A		165	215	
Dynamic characteristics						
Input Capacitance	C _{iss}	V _{DS} =16V, V _{GS} =0V, f=1MHz		79	120	pF
Output Capacitance	C _{oss}			13	20	
Reverse Transfer Capacitance	C _{rss}			9	15	
Switching Characteristics						
Turn-on delay time	t _{d(on)}	V _{GS} =4.5V, V _{DS} =10V, I _D =500mA, R _{GEN} =10Ω		6.7		ns
Turn-on rise time	t _r			4.8		
Turn-off delay time	t _{d(off)}			17.3		
Turn-off fall time	t _f			7.4		
Source-Drain Diode characteristics						
Body Diode Voltage	V _{SD}	I _S =0.5A, V _{GS} = 0V		0.7	1.3	V

Typical Characteristics



$I_D = 650\text{mA}$
Pulsed



SOT-723 Package Information


Symbol	Dimensions In Millimeters	
	Min.	Max.
A	0.430	0.500
A1	0.000	0.050
b	0.170	0.270
b1	0.270	0.370
c	0.080	0.150
D	1.150	1.250
E	1.150	1.250
E1	0.750	0.850
e	0.800TYP.	
θ	7° REF.	