Descriptions

This -20V 2.8A P-Channel MOSFET in a SOT-23 Plastic Package.

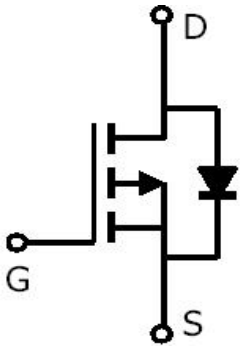
Features

- Super high dense cell design for low $R_{DS(ON)}$
- SOT-23 package
- Halogen-Free product

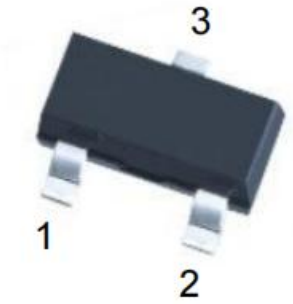
Applications

Primarily the display screen drive applications.

Equivalent Circuit



Pinning



PIN1：Gate　　PIN 2：Source　　PIN 3：Drain

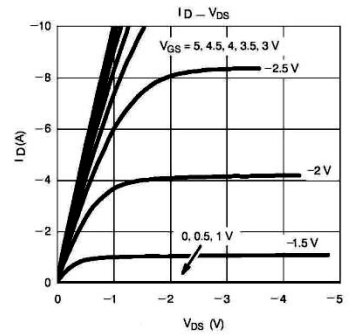
Absolute Maximum Ratings(Ta=25℃)

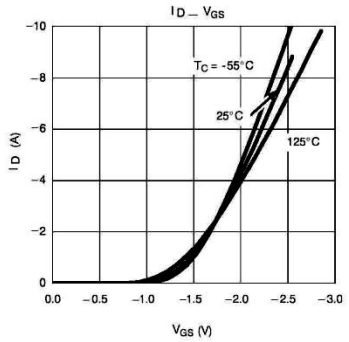
Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DSS}	-20	V
Gate-Source Voltage	V_{GSS}	±8	V
Drain Current – Continuous	I_D	-2.8	A
Drain Current – Continuous	I_D(T_A=70℃)	-1.5	A
Pulsed Drain Current	I_{DM}	-10	A
Continuous Source Current (Diode Conduction)	I_S	-1.6	A
Power Dissipation	P_D	1.25	W
Power Dissipation	P_D(T_A=70℃)	0.8	W
Storage Temperature Range	T_{stg}	-55～+150	℃
Operating Junction Temperature Range	T_j	-55～+150	℃

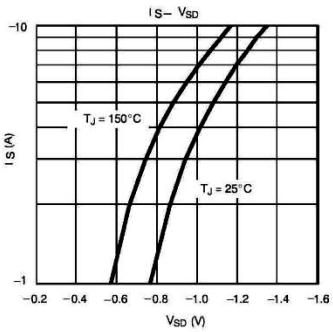
Electrical Characteristics(Ta=25℃)

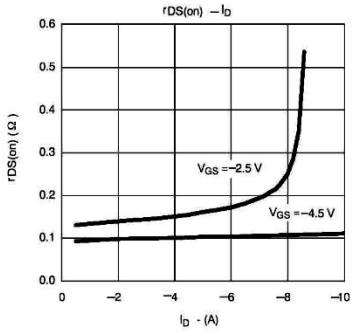
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain–Source Breakdown Voltage	$V_{(BR)DSS}$	V_{GS}=0V I_D=-250μA	-20	-23		V
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS} I_D=-250μA	-0.45		-0.95	V
Static Drain–Source On–Resistance	$R_{DS(on)1}$	V_{GS}=-4.5V I_D=-2.8A		0.068	0.13	Ω
	$R_{DS(on)2}$	V_{GS}=-2.5V I_D=-2.0A		0.096	0.19	Ω
Zero Gate Voltage Drain Current	$I_{DSS(1)}$	V_{DS}=-20V V_{GS}=0V			-1	μA
	$I_{DSS(2)}$	V_{DS}=-20V V_{GS}=0V T_j=55℃			-10	μA
Gate–Body Leakage	I_{GSS}	V_{GS}=±8V V_{DS}=0V			±0.1	μA
Drain–Source Diode Forward Voltage	V_{SD}	I_S=-1.6A V_{GS}=0V		-0.8	-1.2	V
Forward Transconductance	g_{FS}	V_{DS}=-5V I_D=-2.8A		6.5		S
Input Capacitance	C_{iss}	V_{DS}=-6V, V_{GS}=0V f=1MHz		620		pF
Output Capacitance	C_{oss}			390		
Reverse Transfer Capacitance	C_{rss}			230		
Turn–On Delay Time	$t_{d(on)}$	V_{DD}=-6V R_L=6Ω I_D≈-1A R_G=6Ω V_{GEN}=-4.5V		13	25	ns
Turn–On Rise Time	t_r			36	60	
Turn–Off Delay Time	$t_{d(off)}$			42	70	
Turn–Off Fall Time	t_f			34	60	

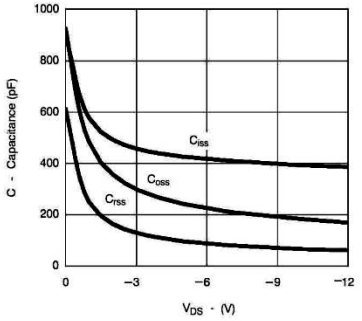
Electrical Characteristic Curve

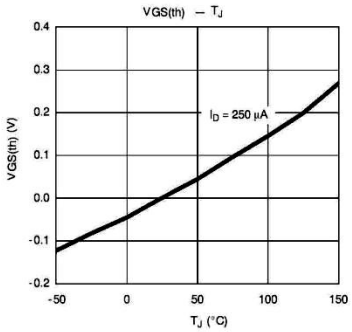


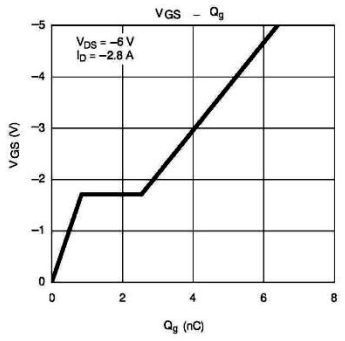


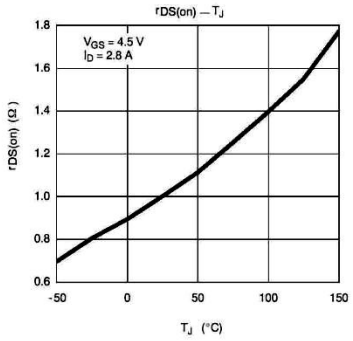


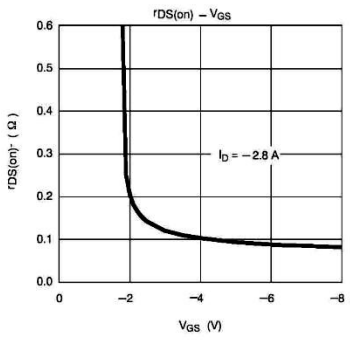


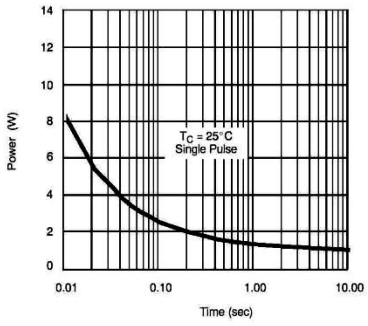




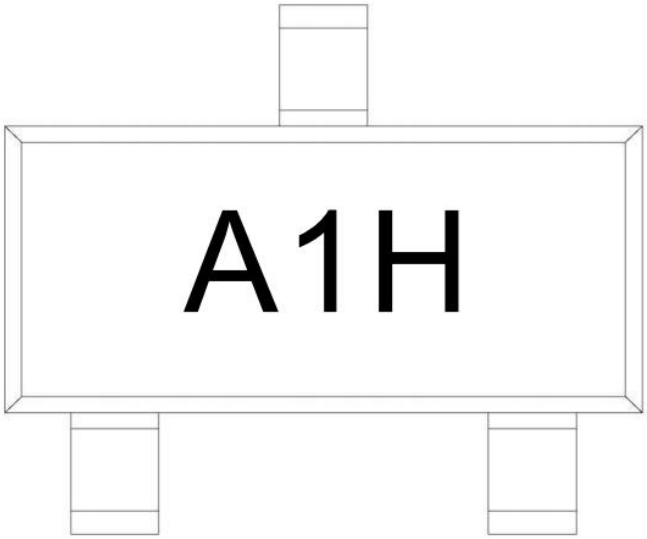








Marking Instructions



Note:

A1: Product Type Code

H: Company Code.

Packaging SPEC

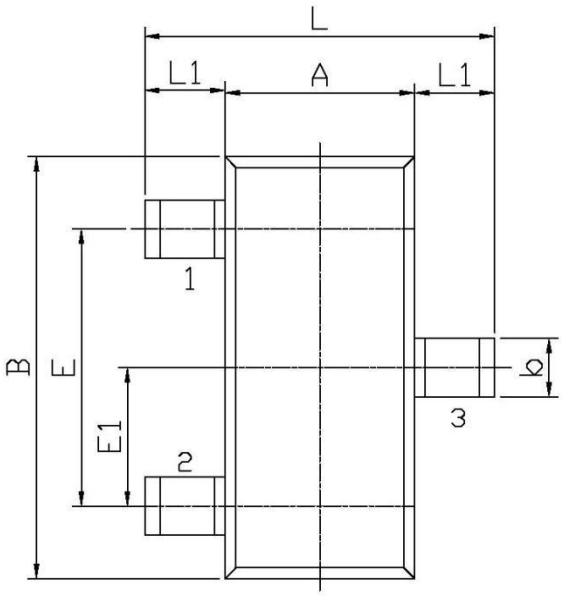
REEL INFORMATION

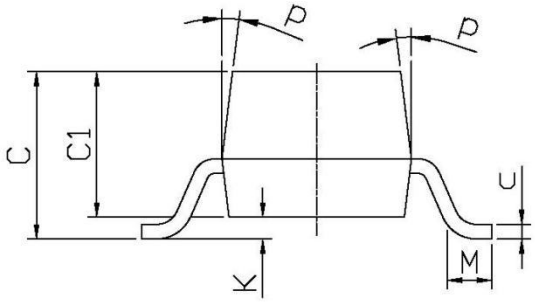
Package Type	Units					Dimension (unit：mm³)		
	Units/Reel	Reels/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Reel	Inner Box	Outer Box
SOT-23	3,000	10	30,000	6	180,000	7″ ×8	180×120×180	390×385×205

Package Outline Dimensions

SOT-23

单位：mm





Symbol	Dimensions In Millmeters		Symbol	Dimensions In Millmeters	
	Min	Max		Min	Max
L	2.2	2.7	C	1.30Max	
L1	0.45	0.65	C1	0.90	1.20
A	1.15	1.50	c	0.05	0.20
B	2.70	3.10	K	0	0.10
E	1.70	2.10	M	0.20MIN	
E1	0.85	1.05	P	7°	
b	0.35	0.55			