



**CHINA BASE**  
INTERNATIONAL

# SOT-23

## CB30P7C



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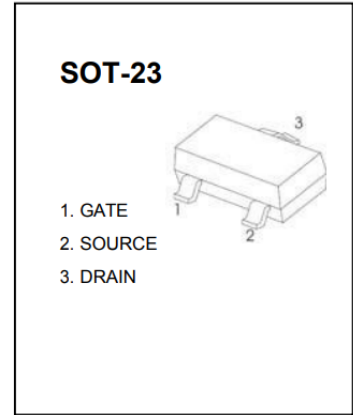
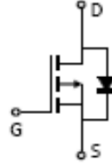
### Plastic-Encapsulate MOSFETS

MOSFET(P-Channel)

#### FEATURES

- V<sub>DS</sub>=-30 V, I<sub>D</sub>=-5A
- R<sub>DS(ON)</sub><35m Ω @ V<sub>GS</sub>=-4.5V
- R<sub>DS(ON)</sub><30m Ω @ V<sub>GS</sub>=-10V
- High Power and current handing capability
- Lead free product is acquired
- Surface Mount Packing

**MARKING:** 30P7



#### MAXIMUM RATINGS (T<sub>A</sub>=25°C unless otherwise noted)

Symbol	Parameter	Value	Units
V <sub>DS</sub>	Drain-Source voltage	-30	V
V <sub>GS</sub>	Gate-Source voltage	±20	V
I <sub>D</sub>	Drain current	-5	A
P <sub>D</sub>	Power Dissipation	1.3	W
T <sub>j</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature	-55-150	°C

#### ELECTRICAL CHARACTERISTICS (T<sub>amb</sub>=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Drain-Source Breakdown Voltage	V <sub>(BR)DSS</sub>	V <sub>GS</sub> =0V, I <sub>D</sub> =-250uA	-30			V
Gate-Threshold Voltage	V <sub>th(GS)</sub>	V <sub>DS</sub> =V <sub>GS</sub> , I <sub>D</sub> =-250 uA	-1.1		-2.2	V
Gate-body Leakage	I <sub>GSS</sub>	V <sub>DS</sub> =0V, V <sub>GS</sub> =±20V			±100	nA
Zero Gate Voltage Drain Current	I <sub>DSS</sub>	V <sub>DS</sub> =-30V, V <sub>GS</sub> =0V			-1	uA
Drain-Source On-Resistance	R <sub>DS(ON)</sub>	V <sub>GS</sub> =-10V, I <sub>D</sub> =-4.1A		25	30	mΩ
		V <sub>GS</sub> =-4.5V, I <sub>D</sub> =-3A		30	35	mΩ
Forward Trans conductance	g <sub>fs</sub>	V <sub>DS</sub> =-5V, I <sub>D</sub> =-3.5A	2			s
Dynamic Characteristics						
Input Capacitance	C <sub>iss</sub>	V <sub>DS</sub> =-4V, V <sub>GS</sub> =0V, f=1MHz	740			pF
Output Capacitance	C <sub>oss</sub>		290			
Reverse Transfer Capacitance	C <sub>rss</sub>		190			
Switching Capacitance						
Turn-on Delay Time	t <sub>d(on)</sub>	V <sub>DD</sub> =-4V, I <sub>D</sub> =-3.3A, V <sub>GS</sub> =-4.5V, R <sub>GEN</sub> =1 Ω	12			nS
Turn-on Rise Time	t <sub>r</sub>		35			nS
Turn-off Delay Time	t <sub>d(off)</sub>		30			nS
Turn-off Fall Time	t <sub>f</sub>		10			nS
Total Gate Charge	Q <sub>g</sub>	V <sub>DS</sub> =-4V, I <sub>D</sub> =-4.1A, V <sub>GS</sub> =-4.5V,	7.8			nC
Gate-Source Charge	Q <sub>gs</sub>		1.2			nC
Gate-Drain Charge	Q <sub>gd</sub>		1.6			nC
Drain-Source Diode Characteristics						
Diode Forward Voltage	V <sub>SD</sub>	V <sub>GS</sub> =0V, I <sub>D</sub> =-1.3A			-1.2	V

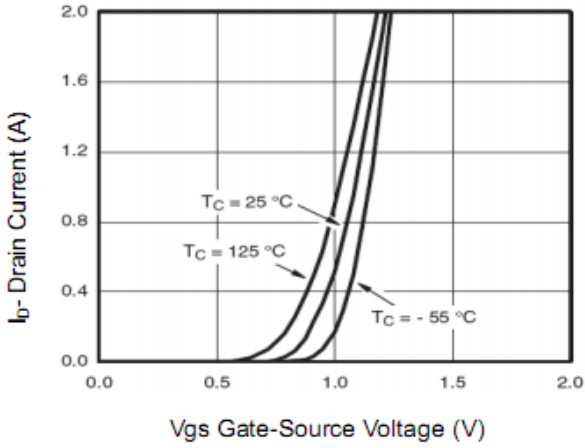


Figure 7 Transfer Characteristics

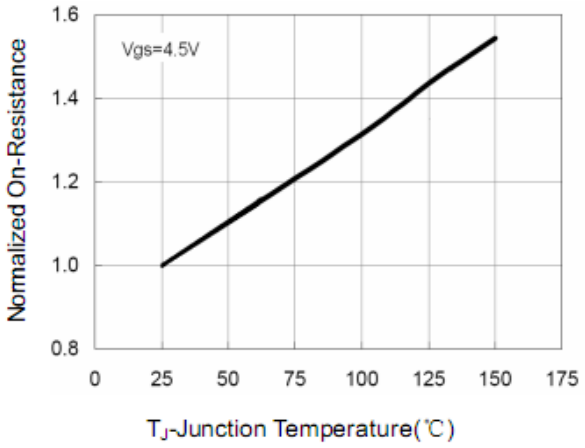


Figure 8 Drain-Source On-Resistance

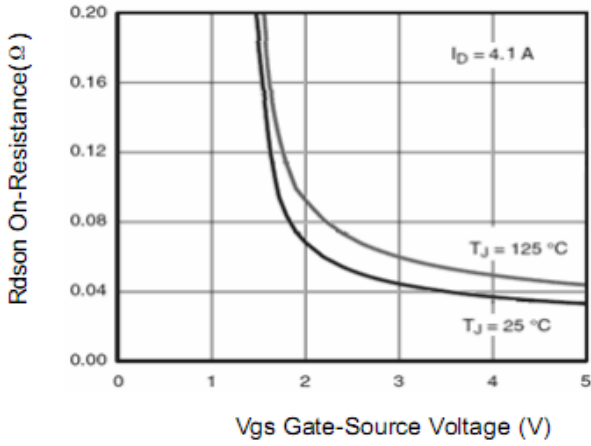


Figure 9 Rdson vs Vgs

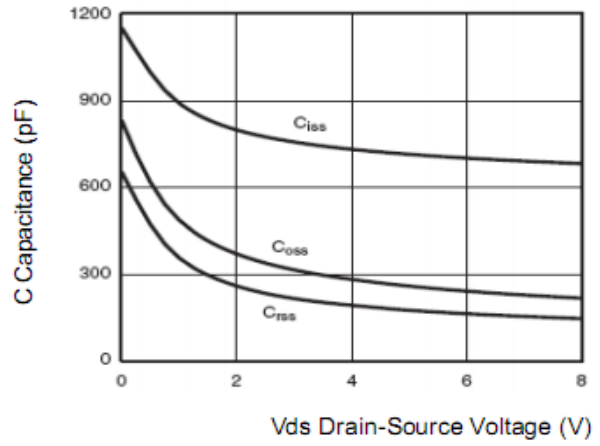


Figure 10 Capacitance vs Vds

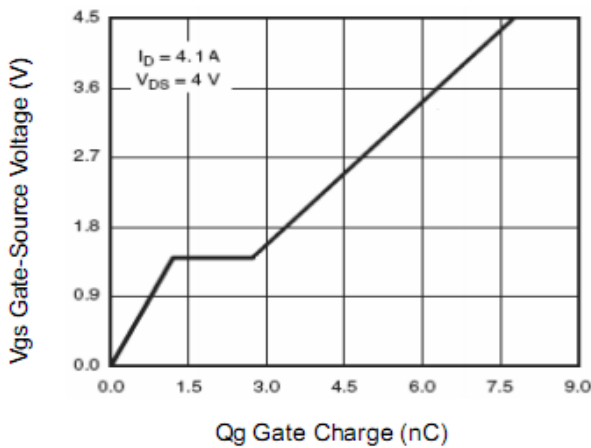


Figure 11 Gate Charge

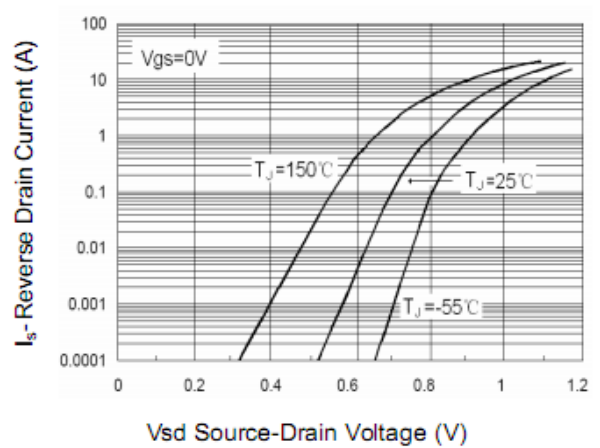
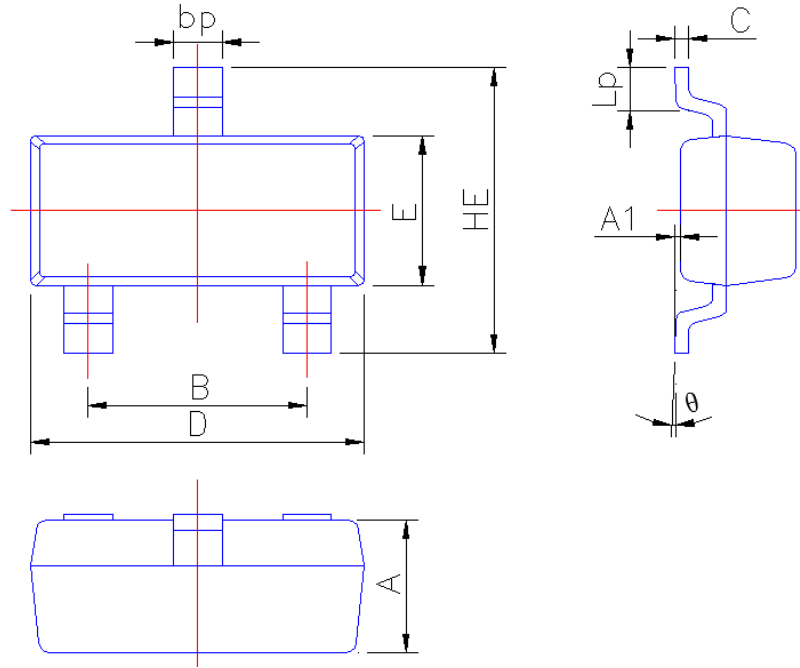


Figure 12 Source- Drain Diode Forward

### PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

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Symbol	Dimension in Millimeters	
	Min	Max
A	0.90	1.10
A1	0.013	0.100
B	1.80	2.00
bp	0.35	0.50
C	0.09	0.150
D	2.80	3.00
E	1.20	1.40
HE	2.20	2.80
Lp	0.20	0.50
θ	0°	5°