

## SOT-23-3 Plastic-Encapsulate Transistors

### HX3401MOSFET(P-Channel)

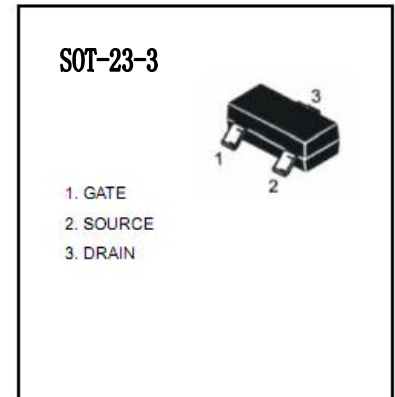
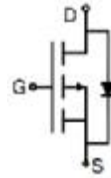
#### FEATURES

High Power and current handing capability

Lead free product is acquired

Surface Mount Package

MARKING: X18V



#### MAXIMUM RATINGS (TA=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	±12	V
I <sub>D</sub>	Drain current	-4.2	A
P <sub>D</sub>	Power Dissipation	1.2	W
T <sub>j</sub>	Junction Temperature	-55-150	°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	-0.7	-1	-1.4	V
Gate-body Leakage	I <sub>GSS</sub>	V <sub>DS</sub> =0V, V <sub>GS</sub> =±12V			±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> =-2.5V, I <sub>D</sub> =-1A		55	90	mΩ
		V <sub>GS</sub> =-4.5V, I <sub>D</sub> =-4A		52	75	mΩ
		V <sub>GS</sub> =-10V, I <sub>D</sub> =-4.2A		48		mΩ
Forward Trans conductance	g <sub>fs</sub>	V <sub>DS</sub> =-5V, I <sub>D</sub> =-4.2A		10		S
Dynamic Characteristics						
Input Capacitance	C <sub>iss</sub>	V <sub>DS</sub> =-15V, V <sub>GS</sub> =0V, f=1MHz		880		pF
Output Capacitance	C <sub>oss</sub>			115		
Reverse Transfer Capacitance	C <sub>rss</sub>			70		
Switching Capacitance						
Turn-on Delay Time	t <sub>d(on)</sub>	V <sub>DD</sub> =-15V, I <sub>D</sub> =-4.2A, V <sub>GS</sub> =-10V R <sub>GEN</sub> =6Ω		7		nS
Turn-on Rise Time	t <sub>r</sub>			3		nS
Turn-off Delay Time	t <sub>d(off)</sub>			30		nS
Turn-off Fall Time	t <sub>f</sub>			12		nS
Total Gate Charge	Q <sub>g</sub>				9.5	
Gate-Source Charge	Q <sub>gs</sub>	V <sub>DS</sub> =-15V, I <sub>D</sub> =-4A, V <sub>GS</sub> =-4.5V,		2		nC
Gate-Drain Charge	Q <sub>gd</sub>			3		nC
Drain-Source Diode Characteristics						
Diode Forward Voltage	V <sub>SD</sub>	V <sub>GS</sub> =0V, I <sub>D</sub> =-1A			-1.2	V