

SOT-23 Plastic-Encapsulate Transistors

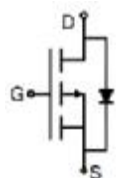
3401 MOSFET(P-Channel)

FEATURES

High Power and current handing capability

Lead free product is acquired

Surface Mount Package



MAXIMUM RATINGS (TA=25°C unless otherwise noted)

Symbol	Parameter	Value	Units
V _{DS}	Drain-Source voltage	-30	V
V _{GS}	Gate-Source voltage	±12	V
I _D	Drain current	-4.2	A
P _D	Power Dissipation	1.2	W
T _j	Junction Temperature	-55-150	°C
T _{stg}	Storage Temperature	-55-150	°C

ELECTRICAL CHARACTERISTICS (T_{amb}=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Drain-Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} =0V, I _D =-250uA	-30			V
Gate-Threshold Voltage	V _{th(GS)}	V _{DS} = V _{GS} , I _D =-250 uA	-0.7	-1	-1.4	V
Gate-body Leakage	I _{GSS}	V _{DS} =0V, V _{GS} = ± 12V			± 100	nA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =-30V, V _{GS} =0V			1	uA
Drain-Source On-Resistance	R _{DS(ON)}	V _{GS} =-2.5V, I _D =-1A			90	m Ω
		V _{GS} =-4.5V, I _D =-4A			75	m Ω
		V _{GS} =-10V, I _D =-4.2A			55	m Ω
Forward Trans conductance	g _{fs}	V _{DS} =-5V, I _D =-4.2A		10		s
Dynamic Characteristics						
Input Capacitance	C _{iss}	V _{DS} =-15V, V _{GS} =0V, f=1MHz		950		pF
Output Capacitance	C _{oss}			115		
Reverse Transfer Capacitance	C _{rss}			75		
Switching Capacitance						
Turn-on Delay Time	t _{d(on)}	V _{DD} =-15V, I _D =-3.2A, V _{GS} =-10V R _{GEN} =6 Ω		7		nS
Turn-on Rise Time	t _r			3		nS
Turn-off Delay Time	t _{d(off)}			30		nS
Turn-off Fall Time	t _f			12		nS
Total Gate Charge	Q _g	V _{DS} =-15V, I _D =-4A, V _{GS} =-4.5V,		9.5		nC
Gate-Source Charge	Q _{gs}			2		nC
Gate-Drain Charge	Q _{gd}			3		nC
Drain-Source Diode Characteristics						
Diode Forward Voltage	V _{SD}	V _{GS} =0V, I _D =-1A			-1.2	V

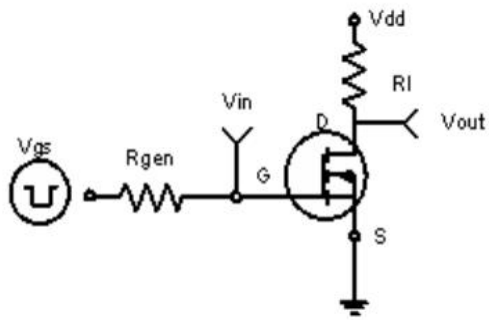


Figure 1: Switching Test Circuit

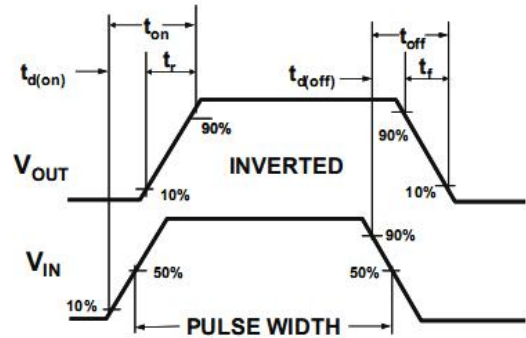


Figure 2: Switching Waveforms

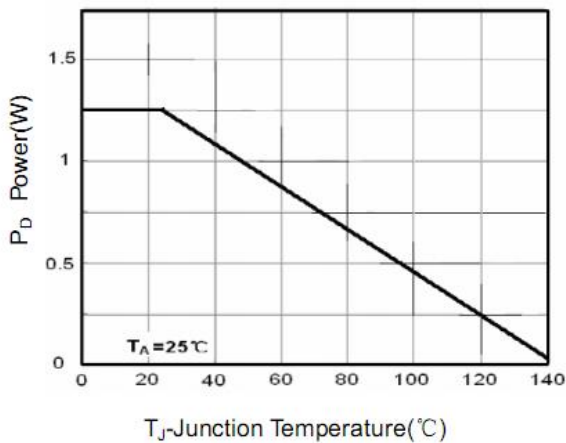


Figure 3 Power Dissipation

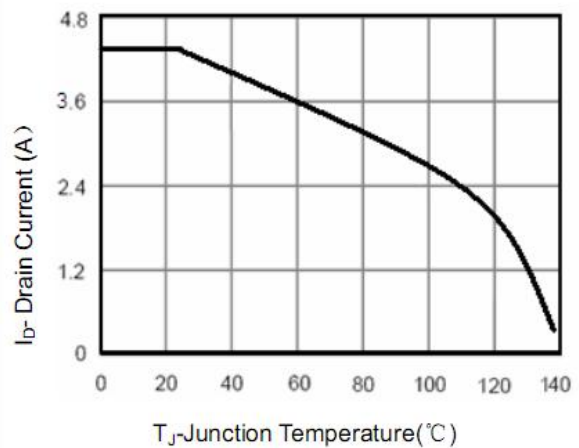


Figure 4 Drain Current

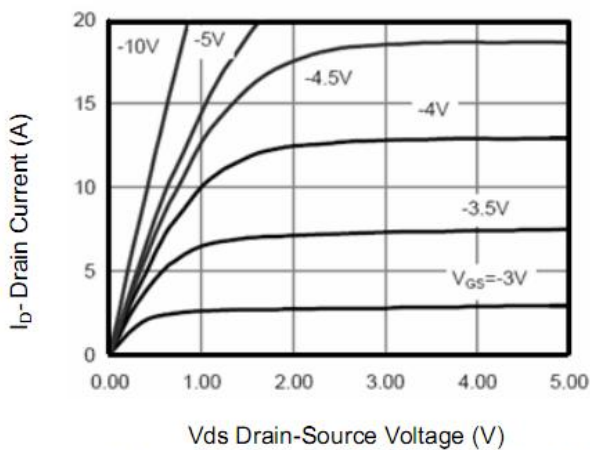


Figure 5 Output CHARACTERISTICS

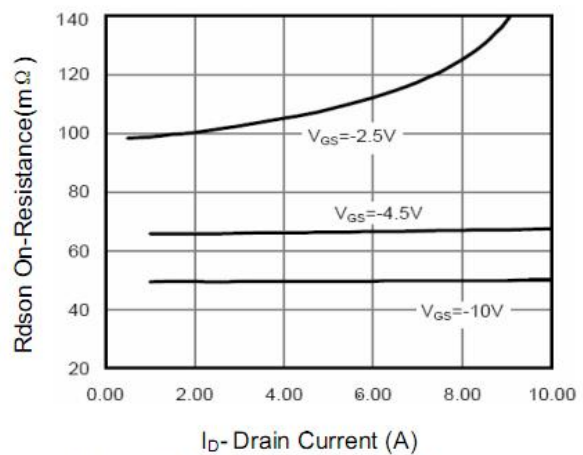


Figure 6 Drain-Source On-Resistance