

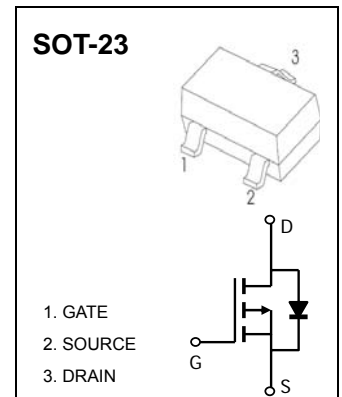
SOT-23 Plastic-Encapsulate MOSFETS

CJ3401A P-Channel Enhancement Mode Field Effect Transistor

FEATURE

- High dense cell design for extremely low $R_{DS(ON)}$.
- Exceptional on-resistance and maximum DC current capability

MARKING: R1A



Maximum ratings ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	-30	V
Gate-Source Voltage	V_{GS}	± 12	V
Continuous Drain Current	I_D	-4.2	A
Power Dissipation	P_D	400	mW
Thermal Resistance from Junction to Ambient ($t < 5\text{s}$)	$R_{\theta JA}$	313	$^{\circ}\text{C}/\text{W}$
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55~+150	$^{\circ}\text{C}$

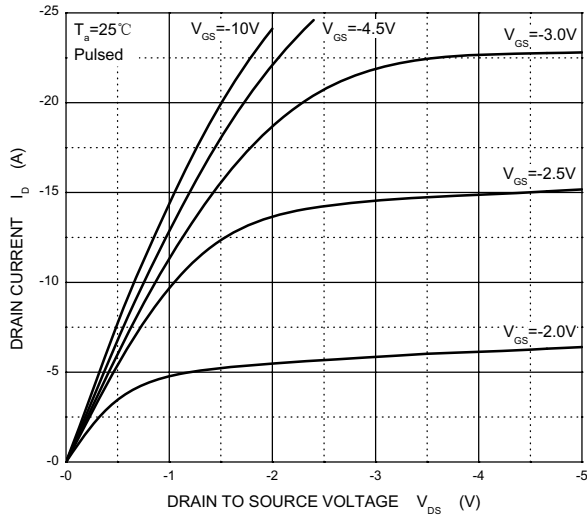
Electrical characteristics ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Off characteristics						
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = -250\mu A$	-30			V
Zero gate voltage drain current	I_{DSS}	$V_{DS} = -24V, V_{GS} = 0V$			-1	μA
Gate-source leakage current	I_{GSS}	$V_{GS} = \pm 12V, V_{DS} = 0V$			± 100	nA
On characteristics						
Drain-source on-resistance (note 1)	$R_{DS(on)}$	$V_{GS} = -10V, I_D = -4.2A$			60	m Ω
		$V_{GS} = -4.5V, I_D = -4A$			70	m Ω
		$V_{GS} = -2.5V, I_D = -1A$			85	m Ω
Forward transconductance (note 1)	g_{FS}	$V_{DS} = -5V, I_D = -5A$	7			S
Gate threshold voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = -250\mu A$	-0.7		-1.3	V
Dynamic characteristics (note 2)						
Input capacitance	C_{iss}	$V_{DS} = -15V, V_{GS} = 0V, f = 1MHz$		1050		pF
Output capacitance	C_{oss}			127		pF
Reverse transfer capacitance	C_{rss}			85		pF
Switching characteristics (note 2)						
Turn-on delay time	$t_{d(on)}$	$V_{GS} = -10V, V_{DS} = -15V,$ $R_L = 3.6\Omega, R_{GEN} = 6\Omega$			6.5	ns
Turn-on rise time	t_r				3.5	ns
Turn-off delay time	$t_{d(off)}$				40	ns
Turn-off fall Time	t_f				13	ns
Drain-source diode characteristics and maximum ratings						
Diode forward voltage (note 1)	V_{SD}	$I_S = -1A, V_{GS} = 0V$			-1	V

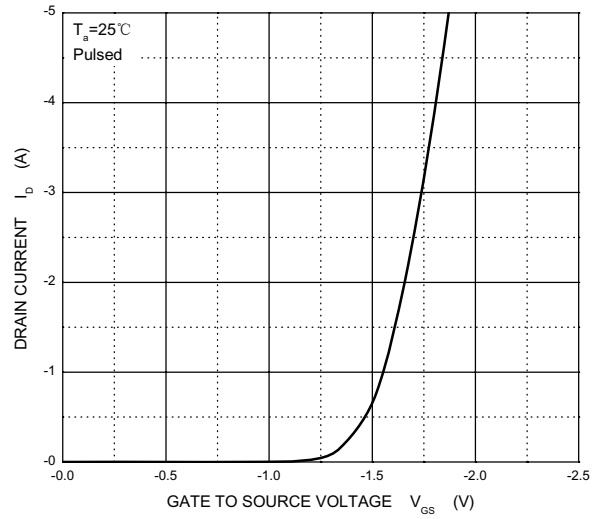
Note :

1. Pulse Test : Pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$.
2. These parameters have no way to verify.

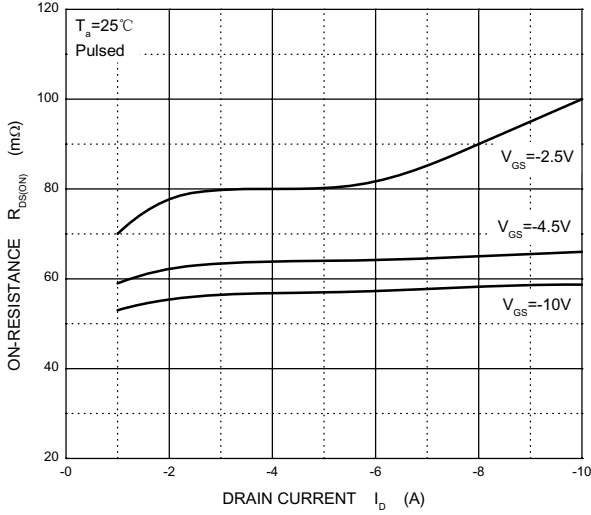
Output Characteristics



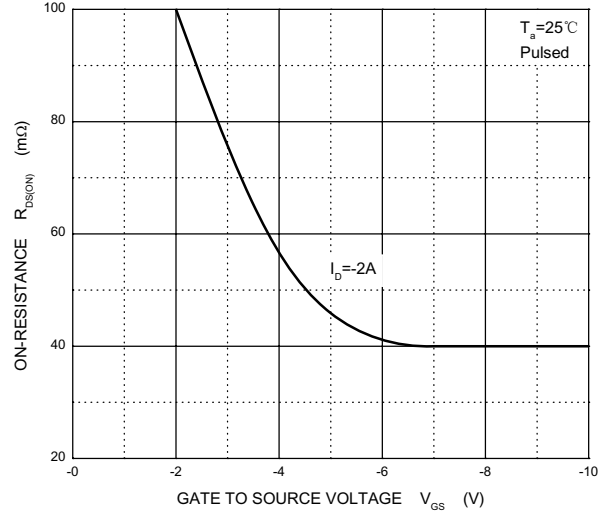
Transfer Characteristics



$R_{DS(ON)}$ — I_D



$R_{DS(ON)}$ — V_{GS}



I_S — V_{SD}

