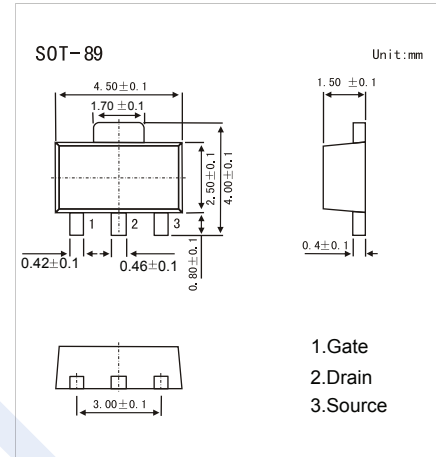
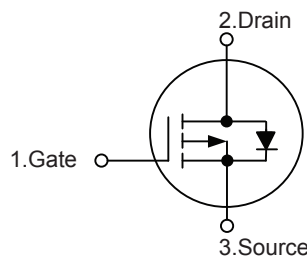


P-Channel MOSFET

2SJ9435

■ Features

- $V_{DS} (V) = -30V$
- $I_D = -4.2 A$
- $R_{DS(ON)} < 50m\Omega$ ($V_{GS} = -10V$)
- $R_{DS(ON)} < 90m\Omega$ ($V_{GS} = -4.5V$)

■ Absolute Maximum Ratings ($T_a = 25^\circ C$)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	-30	V
Gate-Source Voltage	V_{GS}	± 20	
Continuous Drain Current	I_D	-4.2	A
Pulsed Drain Current (Note 1, 2)	I_{DM}	-20	
Power Dissipation	P_D	1.25	W
Thermal Resistance Junction- to-Ambient (Note 3)	R_{thJA}	100	$^\circ C/W$
Junction Temperature	T_J	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55 to 150	

Notes: 1. Pulse width limited by $T_{J(MAX)}$

2. Pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$.

3: Surface mounted on 1 in^2 copper pad of FR4 board, $t \leq 10s$.

P-Channel MOSFET

2SJ9435

■ Electrical Characteristics ($T_J = 25^\circ\text{C}$, unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V_{DS}	$I_D = -250\mu\text{A}$, $V_{GS} = 0\text{V}$	-30			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = -30\text{V}$, $V_{GS} = 0\text{V}$			-1	μA
Gate-Body Leakage Current	I_{GSS}	$V_{DS} = 0\text{V}$, $V_{GS} = \pm 20\text{V}$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}$, $I_D = -250\mu\text{A}$	-1		-3	V
Static Drain-Source On-Resistance (Note 1)	$R_{DS(on)}$	$V_{GS} = -10\text{V}$, $I_D = -4\text{A}$			50	m Ω
		$V_{GS} = -4.5\text{V}$, $I_D = -2\text{A}$			90	
Input Capacitance	C_{iss}	$V_{GS} = 0\text{V}$, $V_{DS} = -25\text{V}$, $f = 1\text{MHz}$		520	830	pF
Output Capacitance	C_{oss}			180		
Reverse Transfer Capacitance	C_{rss}			130		
Total Gate Charge (Note 1)	Q_g	$V_{GS} = -4.5\text{V}$, $V_{DS} = -25\text{V}$, $I_D = -4\text{A}$		10	16	nC
Gate Source Charge	Q_{gs}			2		
Gate Drain Charge	Q_{gd}			6		
Turn-On DelayTime (Note 1)	$t_{d(on)}$	$V_{GS} = -10\text{V}$, $V_{DS} = -15\text{V}$, $I_D = 1\text{A}$, $R_G = 3.3\Omega$, $R_D = 15\Omega$		10	48	ns
Turn-On Rise Time	t_r			7	40	
Turn-Off DelayTime	$t_{d(off)}$			26	292	
Turn-Off Fall Time	t_f			14	112	
Body Diode Reverse Recovery Time	t_{rr}			30		
Body Diode Reverse Recovery Charge	Q_{rr}	$I_S = -4\text{A}$, $V_{GS} = 0\text{V}$, $dI/dt = 100\text{A}/\mu\text{s}$		24		nC
Diode Forward Voltage	V_{SD}	$I_S = -1\text{A}$, $V_{GS} = 0\text{V}$			-1.3	V

Notes 1. Pulse width $\leq 300\mu\text{s}$, duty cycle $\leq 2\%$.

■ Marking

Marking	9435
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P-Channel MOSFET

2SJ9435

■ Typical Characteristics

