

2SJ0398

Silicon P-Channel MOS

For DC-DC converter

For motor drive

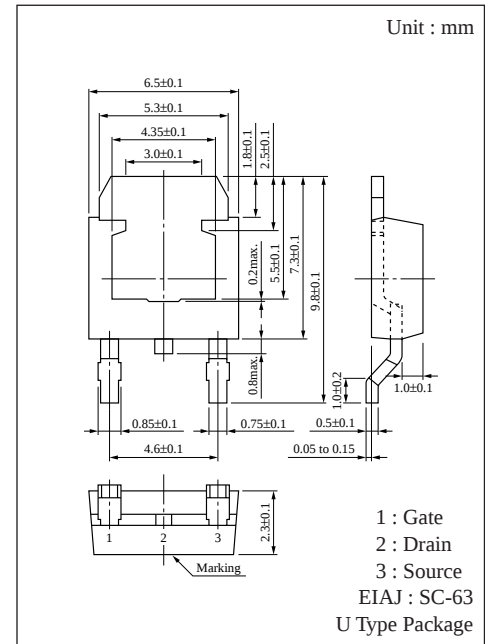
■ Features

- Low ON-resistance $R_{DS(on)}$
- High-speed switching

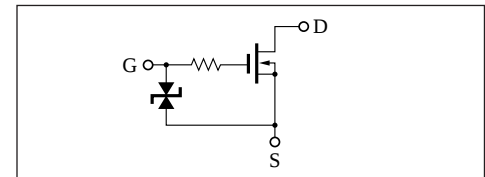
■ Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter		Symbol	Rating	Unit
Drain-Source breakdown voltage		V_{DSS}	-30	V
Gate-Source voltage		V_{GSS}	± 15	V
Drain current	DC	I_D	-2	A
	Pulse	I_{DP}^*	-8	A
Allowable power dissipation	Ta = 25°C	P_D	0.75	W
	Tc = 25°C	P_D	10	
Channel temperature		Tch	150	°C
Storage temperature		Tstg	-55 to +150	°C

* $t \leq 200\mu\text{s}$, Duty Cycle $< 10\%$



■ Internal Connection



■ Electrical Characteristics ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Drain-Source cut-off current	I_{DSS}	$V_{DS} = -25\text{V}$, $V_{GS} = 0$			-10	μA
Gate-Source leakage current	I_{GSS}	$V_{GS} = \pm 15\text{V}$, $V_{DS} = 0$			± 10	μA
Drain-Source breakdown voltage	V_{DSS}	$I_D = -0.1\text{mA}$, $C_{V_{GS}} = 0$	-30			V
Gate threshold voltage	V_{th}	$V_{DS} = -5\text{V}$, $I_D = -1\text{mA}$	-0.8		-2.0	V
Drain-Source ON-resistance	$R_{DS(on)1}$	$V_{GS} = 4\text{V}$, $I_D = 1\text{A}$		0.35	0.5	Ω
	$R_{DS(on)2}$	$V_{GS} = 10\text{V}$, $I_D = 1\text{A}$		0.25	0.4	Ω
Forward transadmittance	$ Y_{fs} $	$V_{DS} = 10\text{V}$, $I_D = 1\text{A}$	1.5			S
Input capacitance	C_{iss}	$V_{DS} = 10\text{V}$, $V_{GS} = 0$, $f = 1\text{MHz}$		320		pF
Output capacitance	C_{oss}			200		pF
Feedback capacitance	C_{rss}			105		pF
Turn-on time	t_{on}	$V_{GS} = 10\text{V}$, $I_D = 1\text{A}$ $V_{DD} = 10\text{V}$, $R_L = 10\Omega$		60		ns
Fall time	t_f			280		ns
Turn-off time (delay time)	$t_d(off)$			280		ns