

2SK2342

Silicon N-Channel MOS

For motor drive

For DC-DC converter

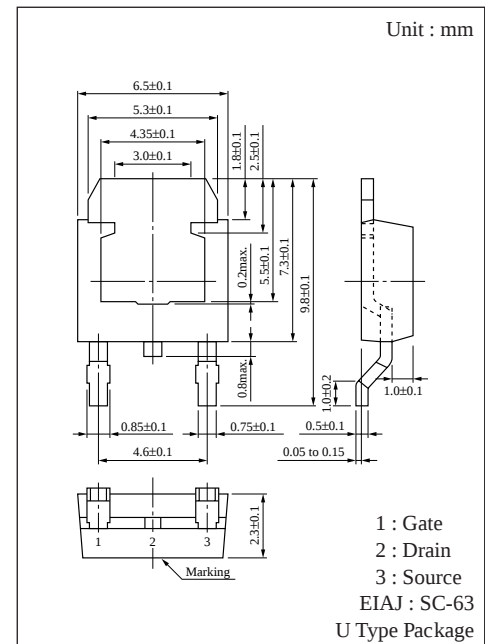
■ Features

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

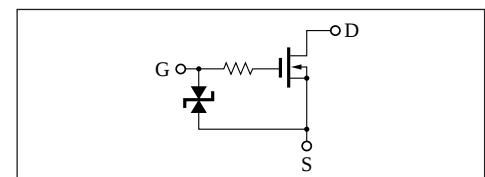
■ Absolute Maximum Ratings ($T_c = 25^\circ\text{C}$)

Parameter	Symbol	Rating	Unit
Drain-Source breakdown voltage	V_{DSS}	30	V
Gate-Source voltage	V_{GSS}	± 15	V
Drain current	I_D	± 2	A
	I_{DP}^{*1}	± 8	A
Allowable power dissipation	P_D	0.75	W
	P_D^{*2}	10	W
Channel temperature	T_{ch}	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

* 1 $t \leq 200\mu\text{s}$, Duty Cycle $< 10\%$ * 2 $T_c = 25^\circ\text{C}$



■ Internal Connection



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

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}	$I_D = 0.1\text{mA}$, $V_{GS} = 0$	30			V
Gate threshold voltage	V_{th}	$V_{DS} = 5\text{V}$, $I_D = 1\text{mA}$	0.8		2	V
Drain-Source ON-resistance	$R_{DS(on)1}$	$V_{GS} = 4\text{V}$, $I_D = 1\text{A}$		0.32	0.45	Ω
	$R_{DS(on)2}$	$V_{GS} = 10\text{V}$, $I_D = 1\text{A}$		0.26	0.35	Ω
Forward transadmittance	$ Y_{fs} $	$V_{DS} = 10\text{V}$, $I_D = 1\text{A}$	1			S
Input capacitance	C_{iss}	$V_{DS} = 10\text{V}$, $V_{GS} = 0$, $f = 1\text{MHz}$		185		pF
Output capacitance	C_{oss}			90		pF
Feedback capacitance	C_{rss}			35		pF
Turn-on time	t_{on}	$V_{GS} = 10\text{V}$, $I_D = 1\text{A}$, $V_{DD} = 10\text{V}$ $R_L = 10\Omega$		40		ns
Fall time	t_f			100		ns
Turn-off time (delay time)	$t_{d(off)}$			180		ns