2SK0656 (2SK656)

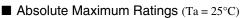
Silicon N-Channel MOS FET

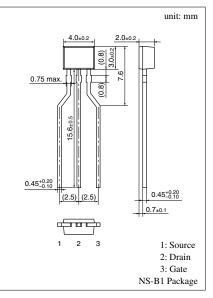
For switching

Features

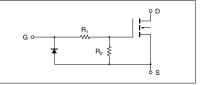
- High-speed switching
- Small drive current owing to high input inpedance
- High electrostatic breakdown voltage

Parameter	Symbol	Ratings	Unit	
Drain to Source breakdown voltage	V _{DSS}	50	V	
Gate to Source voltage	V _{GSO}	8	V	
Drain current	I _D	100	mA	
Max drain current	I _{DP}	200	mA	
Allowable power dissipation	P _D	200	mW	
Channel temperature	T _{ch}	150	°C	
Storage temperature	T _{stg}	-55 to +150	°C	





Internal Connection



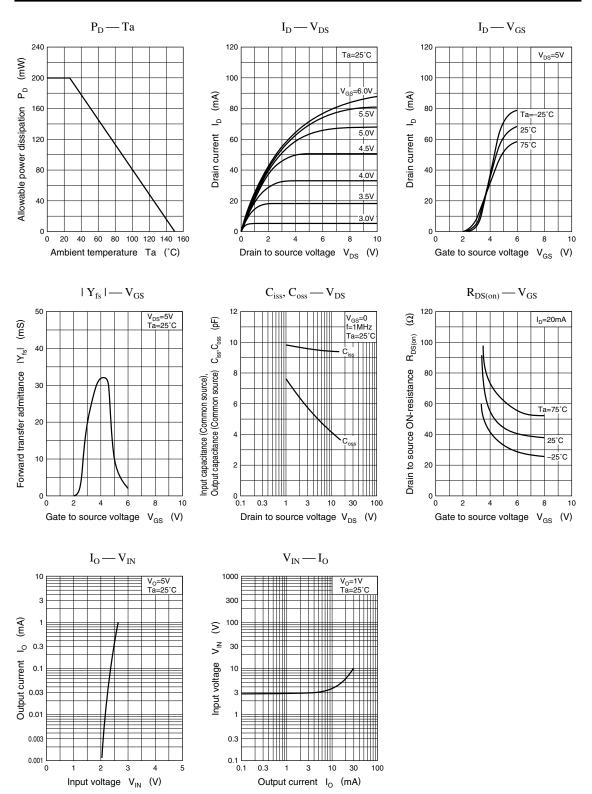
Parameter	Symbol	Conditions	min	typ	max	Unit
Drain to Source cut-off current	I _{DSS}	$V_{DS} = 10V, V_{GS} = 0$			10	μΑ
Gate to Source leakage current	I _{GSS}	$V_{GS} = 8V, V_{DS} = 0$	40		80	μA
Drain to Source breakdown voltage	V _{DSS}	$I_D = 100 \mu A, V_{GS} = 0$	50			V
Gate threshold voltage	V _{th}	$I_D = 100 \mu A, V_{DS} = V_{GS}$	1.5		3.5	V
Drain to Source ON-resistance	R _{DS(on)}	$I_{\rm D} = 20 {\rm mA}, V_{\rm GS} = 5 {\rm V}$			50	Ω
Forward transfer admittance	Y _{fs}	$I_D = 20mA, V_{DS} = 5V, f = 1kHz$	20	35		mS
High level output voltage	V _{OH}	$V_{DD} = 5V, V_{GS} = 1V, R_L = 200\Omega$	4.5			V
Low level output voltage	V _{OL}	$V_{DD} = 5V, V_{GS} = 5V, R_L = 200\Omega$			1	V
Input resistance	$R_1 + R_2^{*1}$		100		200	kΩ
Input capacitance (Common Source)	C _{iss}			9		pF
Output capacitance (Common Source)	C _{oss}	$V_{DS} = 10V, V_{GS} = 0, f = 1MHz$		4.5		pF
Reverse transfer capacitance (Common Source)	C _{rss}			1.1		pF
Turn-on time	ton*2	$V_{DD} = 5V$, $V_{GS} = 0$ to $5V$, $R_L = 200\Omega$			1	μs
Turn-off time	t _{off} *2	$V_{DD} = 5V, V_{GS} = 5 \text{ to } 0V, R_L = 200\Omega$			1	μs

■ Electrical Characteristics (Ta = 25°C)

^{*1} Resistance ratio $R_1/R_2 = 1/50$

*2 Pulse measurement

Note) The part number in the parenthesis shows conventional part number.



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