

2SK2797(Tentative)

Silicon N-Channel MOS

For high-speed switching

For high-frequency power amplification

■ Features

- Avalanche energy capability guaranteed : EAS > 10mJ
- High-speed switching : $t_f=15\text{ns}$
- No secondary breakdown

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

Parameter	Symbol	Rating	Unit
Drain-Source breakdown voltage	V_{DS}	200	V
Gate-Source voltage	V_{GS}	± 30	V
Drain current	DC	I_D	± 2 A
	Pulse	I_{DP}	± 4 A
Avalanche energy capability	EAS *1	10	mJ
Allowable power dissipation	P_D *2	10	W
Channel temperature	T_{ch}	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

* 1 Avalanche energy capability guaranteed * 2 $T_c=25^\circ\text{C}$

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

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Drain-Source cut-off current	I_{DSS}	$V_{DS}=160\text{V}, V_{GS}=0$			100	μA
Drain reverse current	Continuous	I_{DR}			2	A
	Pulse	I_{DRP}			4	A
Gate-Source leakage current	I_{GSS}	$V_{GS}=\pm 30\text{V}, V_{DS}=0$			± 1	μA
Drain-Source breakdown voltage	V_{DSS}	$I_D=1\text{mA}, V_{GS}=0$	200			V
Gate threshold voltage	V_{th}	$V_{DS}=25\text{V}, I_D=1\text{mA}$	1		5	V
Diode forward voltage	V_{DSF}	$I_{DR}=2\text{A}, V_{GS}=0$			-1.6	V
Drain-Source ON-resistance	$R_{DS(on)}$	$V_{GS}=10\text{V}, I_D=1\text{A}$		2.1	3.5	Ω
Forward transadmittance	$ Y_{fs} $	$V_{DS}=25\text{V}, I_D=1\text{A}$	0.5	1		S
Input capacitance	C_{iss}	$V_{DS}=20\text{V}, V_{GS}=0, f=1\text{MHz}$		140		pF
Output capacitance	C_{oss}			30		pF
Feedback capacitance	C_{rss}			5		pF
Turn-on time (delay time)	$t_{d(on)}$	$V_{GS}=10\text{V}, I_D=1\text{A}$ $R_L=100\Omega, V_{DD}=100\text{V}$		10		ns
Rise time	t_r			10		ns
Fall time	t_f			20		ns
Turn-off time (delay time)	$t_{d(off)}$			15		ns
Channel-Case heat resistance	$R_{th(ch-c)}$				12.5	$^\circ\text{C/W}$

