
2SK1328, 2SK1329

Silicon N-Channel MOS FET

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Application

High speed power switching

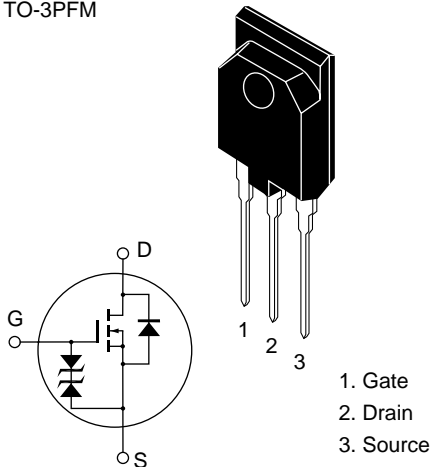
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Features

- Low on-resistance
- High speed switching
- Low drive current
- No secondary breakdown
- Suitable for switching regulator and DC-DC converter

Outline

TO-3PFM



2SK1328, 2SK1329

Absolute Maximum Ratings (Ta = 25°C)

Item		Symbol	Rated	Unit
Drain to source voltage	2SK1328	V_{DSS}	450	V
	2SK1329		500	
Gate to source voltage		V_{GSS}	±30	V
Drain current		I_D	12	A
Drain peak current		$I_{D(pulse)}^{*1}$	48	A
Body to drain diode reverse drain current		I_{DR}	12	A
Channel dissipation		P_{ch}^{*2}	60	W
Channel temperature		Tch	150	°C
Storage temperature		Tstg	-55 to +150	°C

Notes: 1. $PW \leq 10 \mu s$, duty cycle $\leq 1\%$

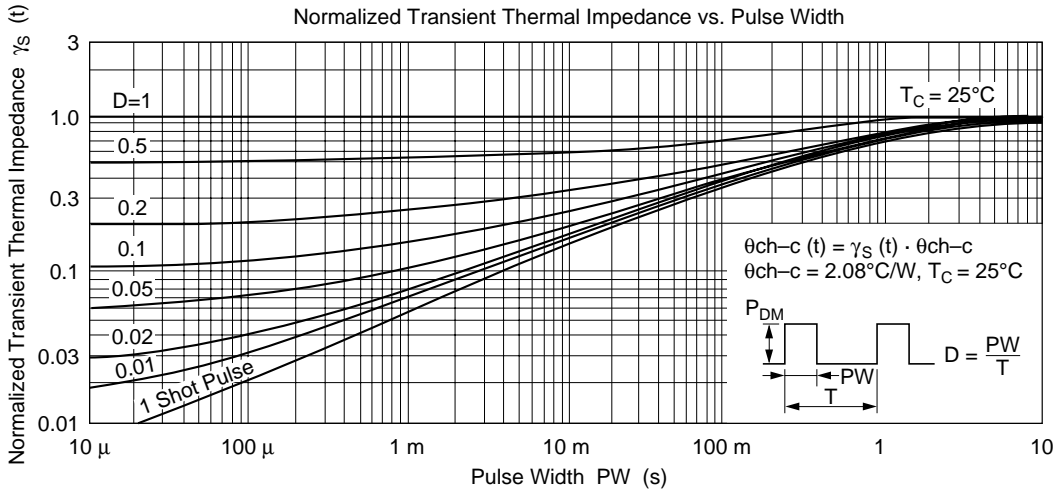
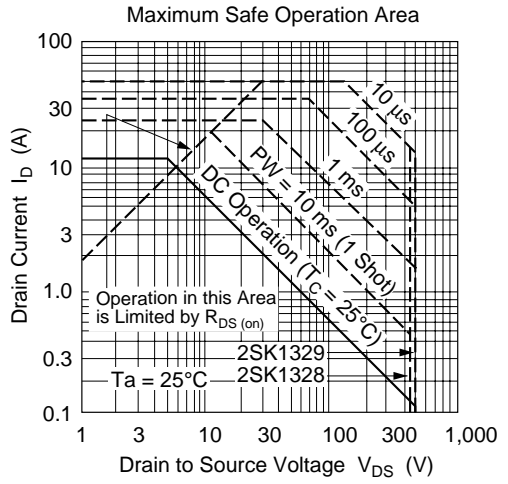
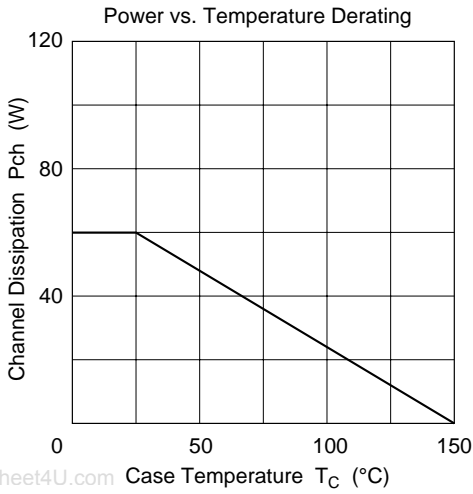
2. Value at $T_c = 25^\circ C$

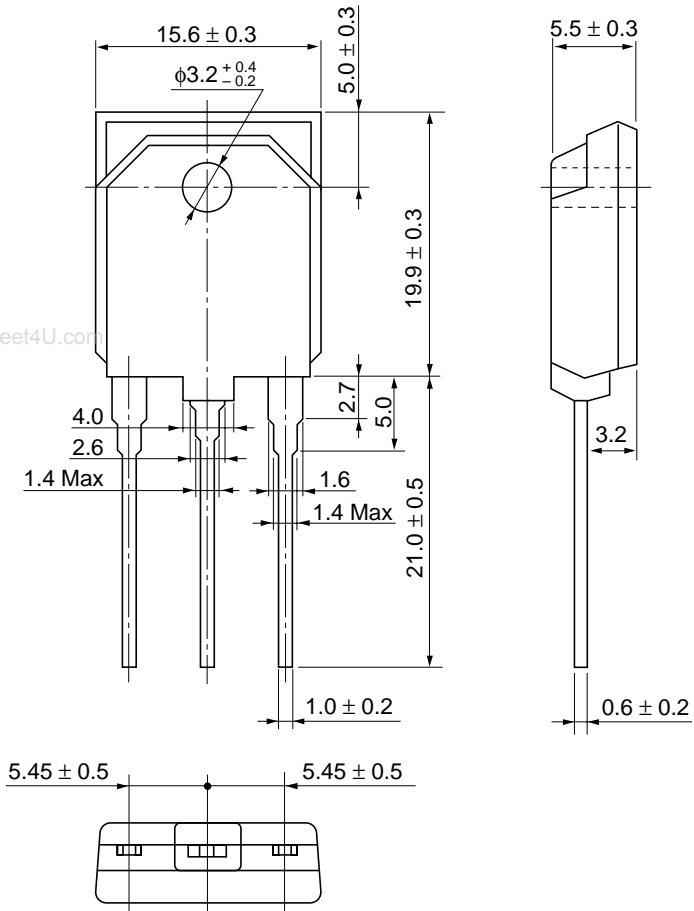
Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Drain to source breakdown voltage	2SK1328 $V_{(BR)DSS}$	450	—	—	V	$I_D = 10 \text{ mA}, V_{GS} = 0$
	2SK1329	500				
Gate to source breakdown voltage	$V_{(BR)GSS}$	±30	—	—	V	$I_G = \pm 100 \mu\text{A}, V_{DS} = 0$
Gate to source leak current	I_{GSS}	—	—	±10	μA	$V_{GS} = \pm 25 \text{ V}, V_{DS} = 0$
Zero gate voltage drain current	2SK1328 I_{DSS}	—	—	250	μA	$V_{DS} = 360 \text{ V}, V_{GS} = 0$
	2SK1329					$V_{DS} = 400 \text{ V}, V_{GS} = 0$
Gate to source cutoff voltage	$V_{GS(off)}$	2.0	—	3.0	V	$I_D = 1 \text{ mA}, V_{DS} = 10 \text{ V}$
Static Drain to source on state resistance	2SK1328 $R_{DS(on)}$	—	0.40	0.55	Ω	$I_D = 6 \text{ A}, V_{GS} = 10 \text{ V}^{*1}$
	2SK1329	—	0.45	0.60		
Forward transfer admittance	yfs	6.0	10	—	S	$I_D = 6 \text{ A}, V_{DS} = 10 \text{ V}^{*1}$
Input capacitance	Ciss	—	1450	—	pF	$V_{DS} = 10 \text{ V}, V_{GS} = 0,$
Output capacitance	Coss	—	410	—	pF	$f = 1 \text{ MHz}$
Reverse transfer capacitance	Crss	—	55	—	pF	
Turn-on delay time	$t_{d(on)}$	—	20	—	ns	$I_D = 6 \text{ A}, V_{GS} = 10 \text{ V},$
Rise time	t_r	—	70	—	ns	$R_L = 5 \Omega$
Turn-off delay time	$t_{d(off)}$	—	120	—	ns	
Fall time	t_f	—	60	—	ns	
Body to drain diode forward voltage	V_{DF}	—	1.0	—	V	$I_F = 12 \text{ A}, V_{GS} = 0$
Body to drain diode reverse recovery time	t_{rr}	—	450	—	ns	$I_F = 12 \text{ A}, V_{GS} = 0,$ $di_p/dt = 100 \text{ A}/\mu\text{s}$

Note: 1. Pulse test

See characteristic curves of 2SK1165, 2SK1166.





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JEDEC	—
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Weight (reference value)	5.6 g

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