
2SK2735(L), 2SK2735(S)

Silicon N Channel MOS FET
High Speed Power Switching

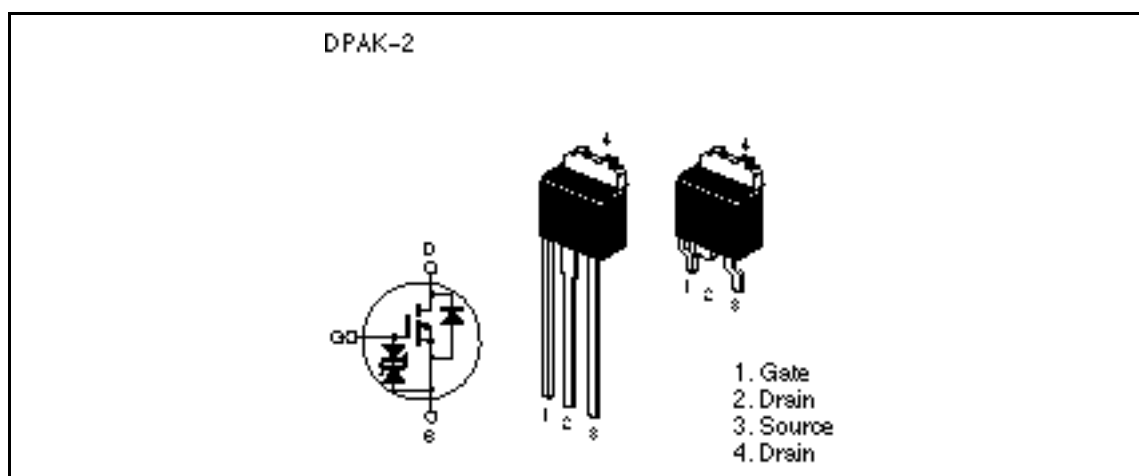
HITACHI

ADE-208-543
1st. Edition

Features

- Σ Low on-resistance
 $R_{DS} = 20 \text{ m}\Omega \text{typ.}$
- Σ High speed switching
- Σ 4V gate drive device can be driven from 5V source

Outline



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Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Drain to source voltage	V_{DS}	30	V
Gate to source voltage	V_{GS}	±20	V
Drain current	I_D	20	A
Drain peak current	$I_{D(pulse)}^{*1}$	80	A
Body to drain diode reverse drain current	I_{DR}	20	A
Channel dissipation	P_{ch}^{*2}	20	W
Channel temperature	T_{ch}	150	°C
Storage temperature	T_{stg}	−55 to +150	°C

Notes: 1. PW ≤ 10ms, duty cycle ≤ 1 %

2. Value at Tc = 25°C

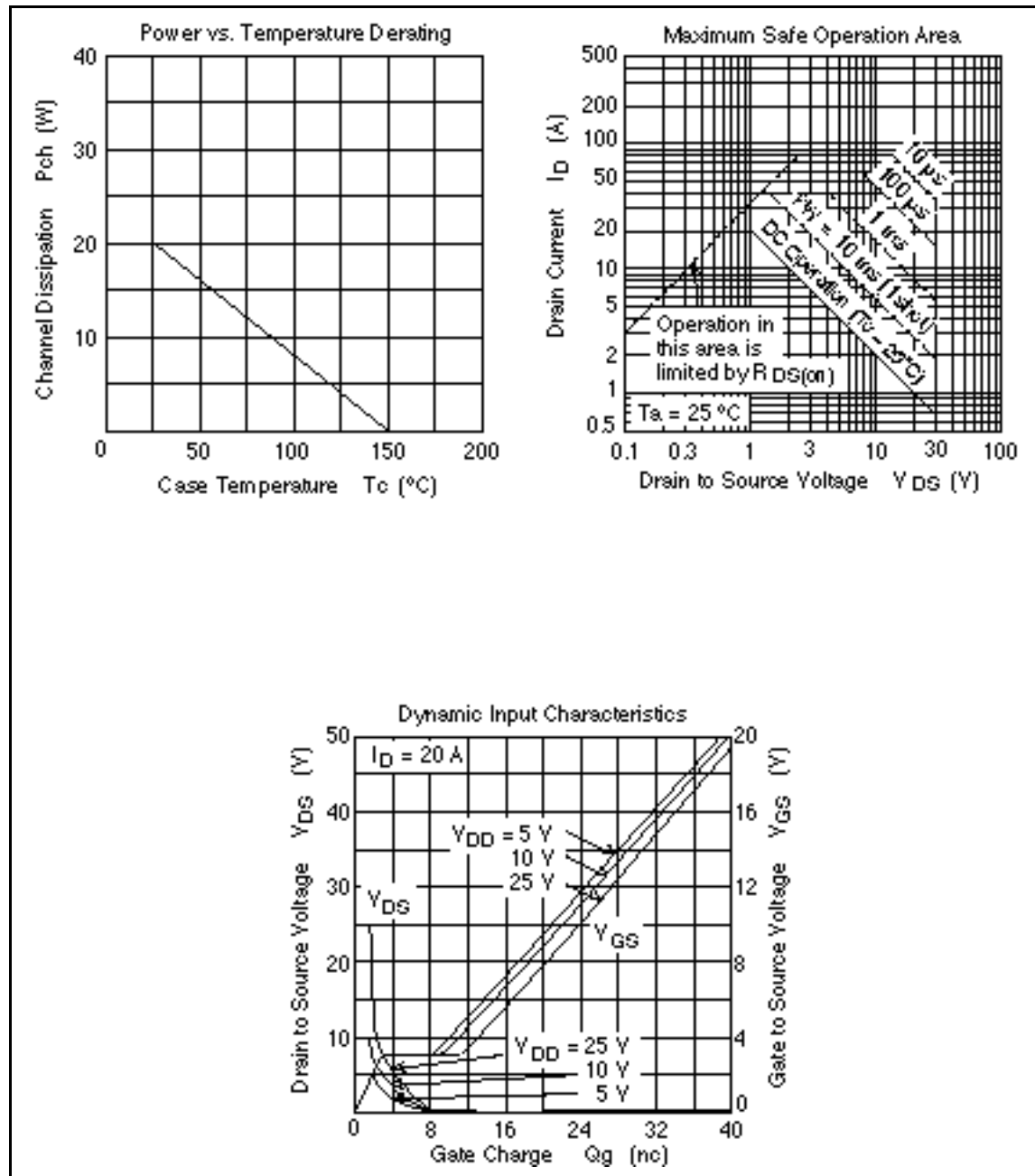
Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Drain to source breakdown voltage	$V_{(BR)DS}$	30	—	—	V	$I_D = 10mA, V_{GS} = 0$
Gate to source breakdown voltage	$V_{(BR)GS}$	±20	—	—	V	$I_G = ±100mA, V_{DS} = 0$
Gate to source leak current	I_{GSS}	—	—	±10	mA	$V_{GS} = ±16V, V_{DS} = 0$
Zero gate voltage drain current	I_{DSS}	—	—	10	mA	$V_{DS} = 30V, V_{GS} = 0$
Gate to source cutoff voltage	$V_{GS(off)}$	1.0	—	2.0	V	$I_D = 1mA, V_{DS} = 10V$
Static drain to source on state resistance	$R_{DS(on)}$	—	20	28	mW	$I_D = 10A, V_{GS} = 10V^{*1}$
	$R_{DS(on)}$	—	35	50	mW	$I_D = 10A, V_{GS} = 4V^{*1}$
Forward transfer admittance	$ y_{fs} $	8	16	—	S	$I_D = 10A, V_{DS} = 10V^{*1}$
Input capacitance	C_{iss}	—	750	—	pF	$V_{DS} = 10V$
Output capacitance	C_{oss}	—	520	—	pF	$V_{GS} = 0$
Reverse transfer capacitance	C_{rss}	—	210	—	pF	$f = 1MHz$
Turn-on delay time	$t_{d(on)}$	—	16	—	ns	$I_D = 10A, V_{GS} = 10V$
Rise time	t_r	—	225	—	ns	$R_L = 1W$
Turn-off delay time	$t_{d(off)}$	—	85	—	ns	
Fall time	t_f	—	90	—	ns	
Body to drain diode forward voltage	V_{DF}	—	1.0	—	V	$I_F = 20A, V_{GS} = 0$ $diF/dt = 50A/μs$
Body to drain diode reverse recovery time	t_{rr}	—	40	—	V	$I_F = 20A, V_{GS} = 0$ $diF/dt = 50A/μs$

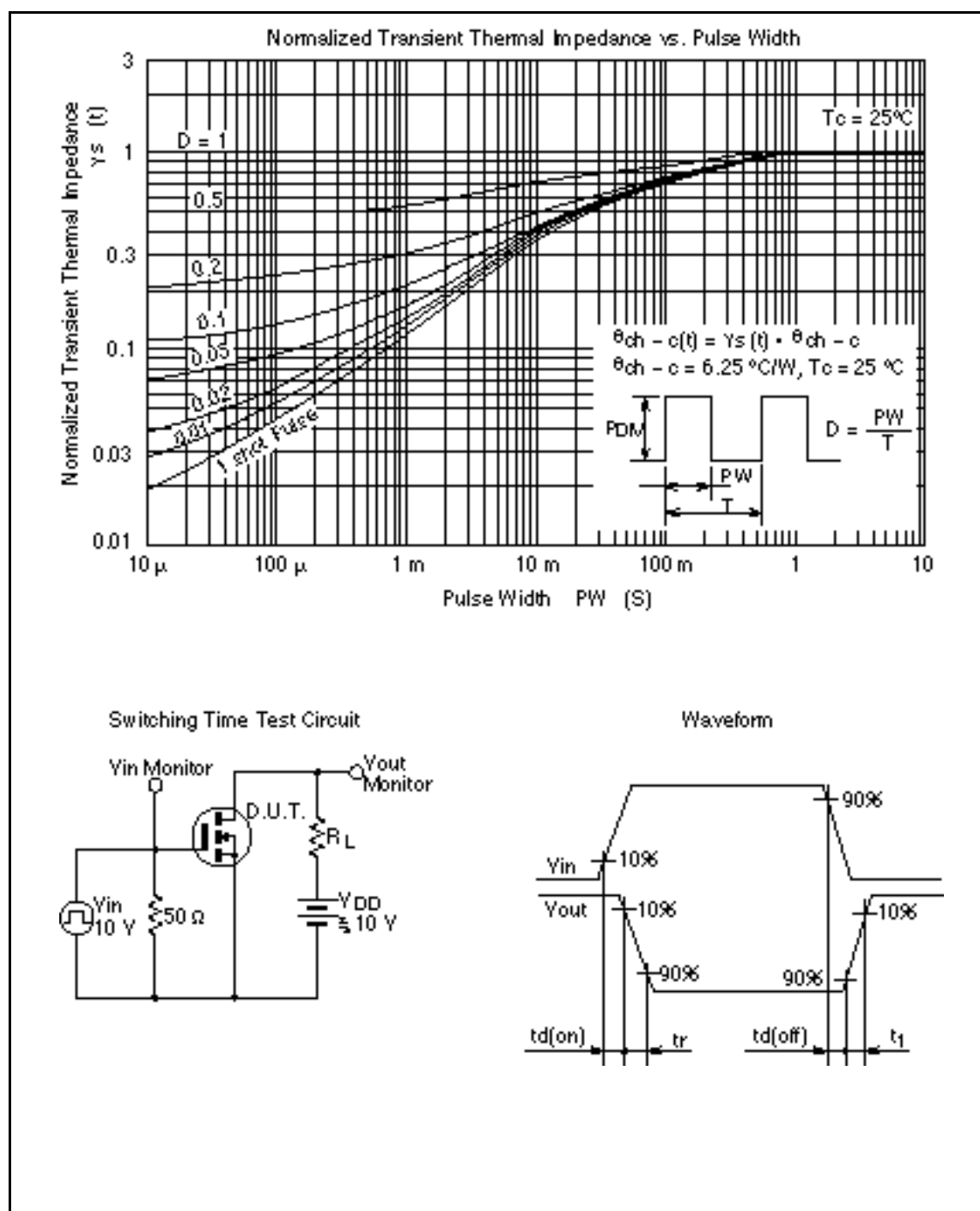
Note: 1. Pulse test

See characteristics curves of 2SK2684

Main Characteristics



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