

2SK2885(L), 2SK2885(S)

Silicon N Channel MOS FET
High Speed Power Switching

HITACHI

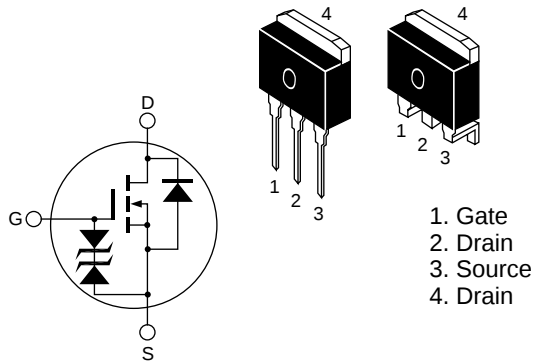
ADE-208-545 A
2nd. Edition

Features

- Low on-resistance
 $R_{DS(on)} = 10m\Omega$ typ.
- 4V gate drive devices.
- High speed switching

Outline

LDBAK



2SK2885(L), 2SK2885(S)

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Drain to source voltage	V _{DSS}	30	V
Gate to source voltage	V _{GSS}	±20	V
Drain current	I _D	45	A
Drain peak current	I _{D(pulse)} ^{*1}	180	A
Body to drain diode reverse drain current	I _{DR}	45	A
Channel dissipation	Pch ^{*2}	75	W
Channel temperature	Tch	150	°C
Storage temperature	Tstg	−55 to +150	°C

Notes: 1. PW ≤ 10μs, duty cycle ≤ 1 %
2. Value at Tc = 25°C

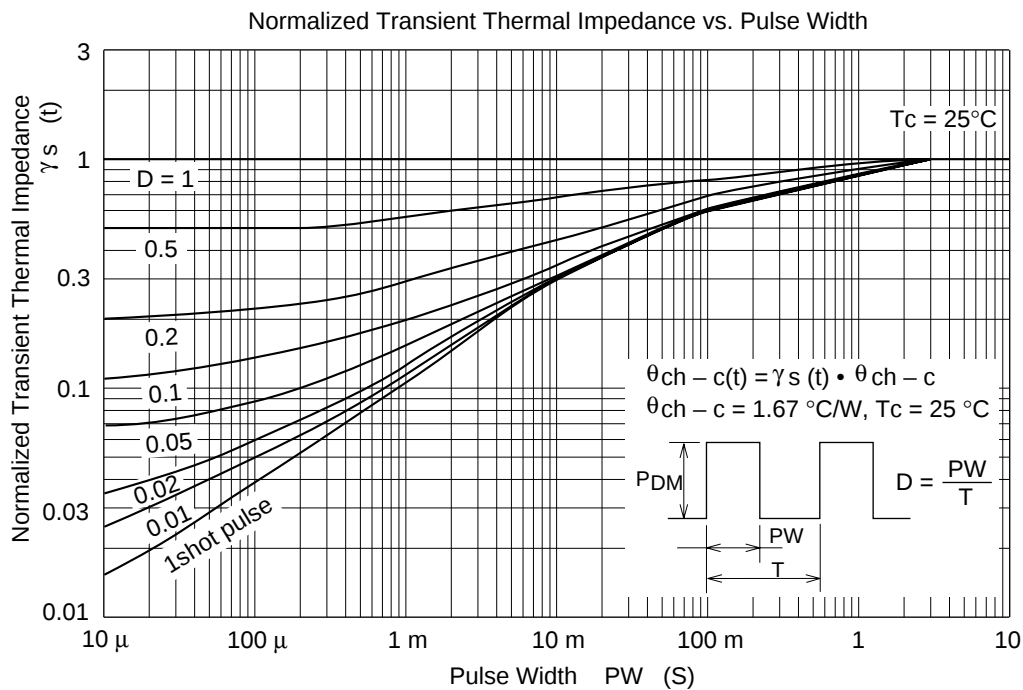
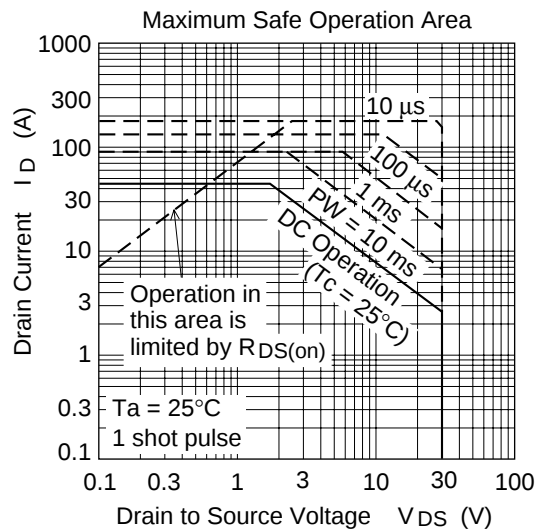
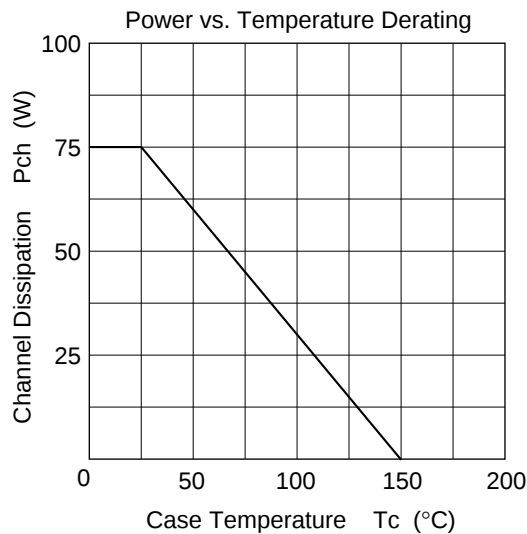
Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Drain to source breakdown voltage	$V_{(BR)DSS}$	30	—	—	V	$I_D = 10\text{mA}$, $V_{GS} = 0$
Gate to source breakdown voltage	$V_{(BR)GSS}$	±20	—	—	V	$I_G = \pm 100\mu\text{A}$, $V_{DS} = 0$
Zero gate voltage drain current	I_{DSS}	—	—	10	μA	$V_{DS} = 30\text{V}$, $V_{GS} = 0$
Gate to source leak current	I_{GSS}	—	—	±10	μA	$V_{GS} = \pm 16\text{V}$, $V_{DS} = 0$
Gate to source cutoff voltage	$V_{GS(off)}$	1.0	—	2.0	V	$I_D = 1\text{mA}$, $V_{DS} = 10\text{V}$
Static drain to source on state resistance	$R_{DS(on)}$	—	10	14	mΩ	$I_D = 20\text{A}$, $V_{GS} = 10\text{V}^{*1}$
	$R_{DS(on)}$	—	15	25	mΩ	$I_D = 20\text{A}$, $V_{GS} = 4\text{V}^{*1}$
Forward transfer admittance	$ y_{fs} $	20	30	—	S	$I_D = 20\text{A}$, $V_{DS} = 10\text{V}^{*1}$
Input capacitance	C_{iss}	—	1570	—	pF	$V_{DS} = 10\text{V}$
Output capacitance	C_{oss}	—	1100	—	pF	$V_{GS} = 0$
Reverse transfer capacitance	C_{rss}	—	410	—	pF	$f = 1\text{MHz}$
Turn-on delay time	$t_{d(on)}$	—	32	—	ns	$V_{GS} = 10\text{V}$, $I_D = 20\text{A}$
Rise time	t_r	—	300	—	ns	$R_L = 0.5\Omega$
Turn-off delay time	$t_{d(off)}$	—	180	—	ns	
Fall time	t_f	—	200	—	ns	
Body to drain diode forward voltage	V_{DF}	—	1.0	—	V	$I_F = 45\text{A}$, $V_{GS} = 0$
Body to drain diode reverse recovery time	t_{rr}	—	75	—	ns	$I_F = 45\text{A}$, $V_{GS} = 0$ $diF/dt = 50\text{A}/\mu\text{s}$

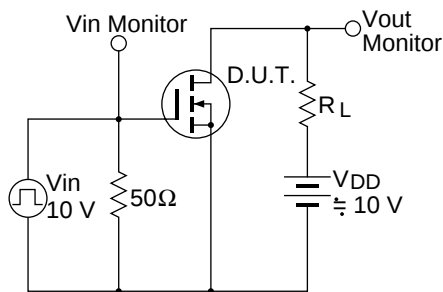
Note: 1. Pulse test

See characteristics curves of 2SK2737

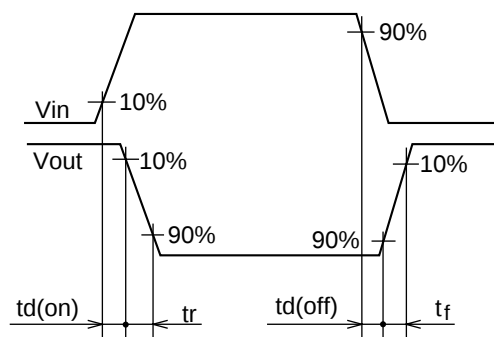
Main Characteristics



Switching Time Test Circuit

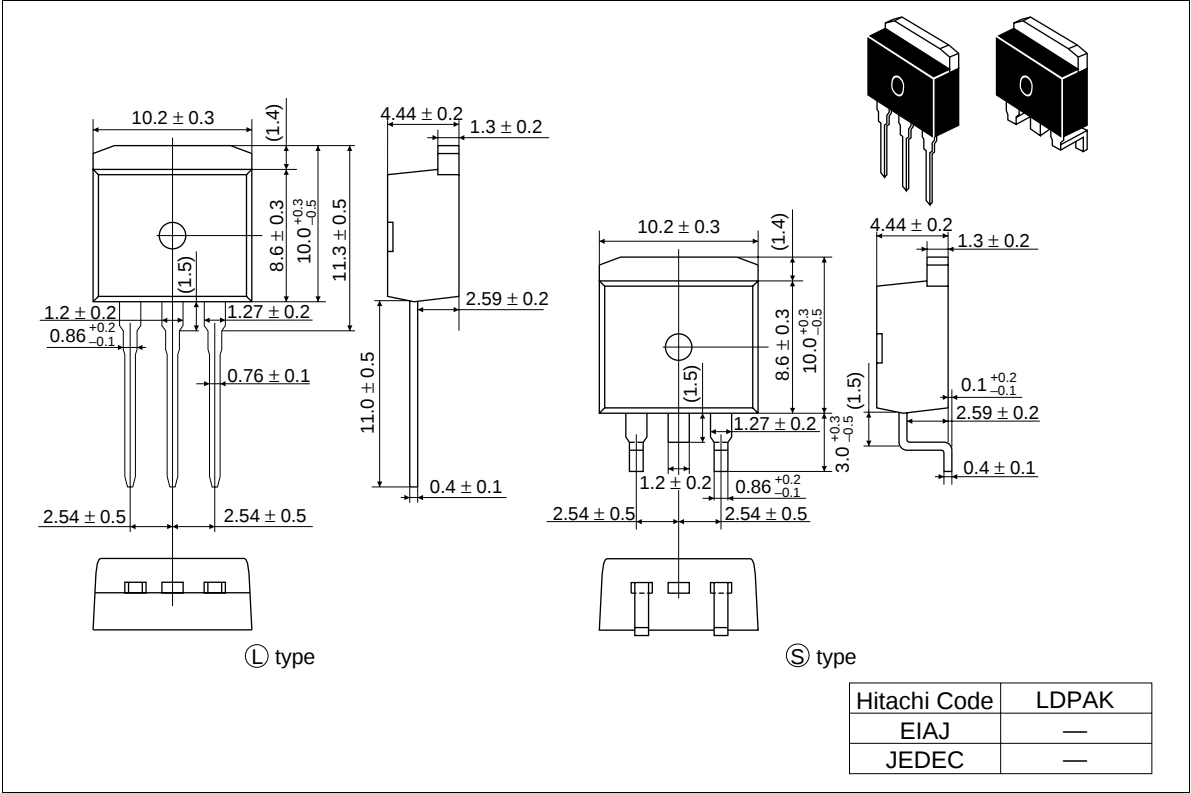


Switching Time Waveforms



Package Dimensions

Unit: mm



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