2SK2935

Silicon N Channel MOS FET
High Speed Power Switching

HITACHI

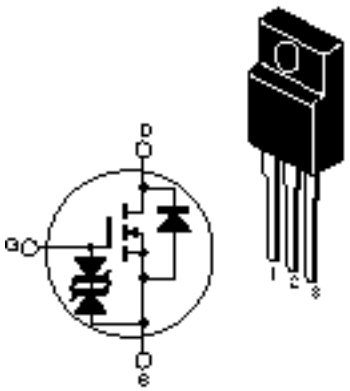
ADE-208-558
Target Specification 1st. Edition

Features

- Low on-resistance
  R_{DS} = 0.020 Ω typ.
- High speed switching
- 4V gate drive device can be driven from 5V source

Outline

TO-220CFM



1. Gate
2. Drain
3. Source

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Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Drain to source voltage	V_{DSS}	60	V
Gate to source voltage	V_{GSS}	±20	V
Drain current	I_D	35	A
Drain peak current	$I_{D(pulse)}$*[1]	140	A
Body to drain diode reverse drain current	I_{DR}	35	A
Avalanche current	I_{AP}*[3]	35	A
Avalanche energy	E_{AR}*[3]	105	mJ
Channel dissipation	Pch*[2]	30	W
Channel temperature	Tch	150	°C
Storage temperature	Tstg	–55 to +150	°C

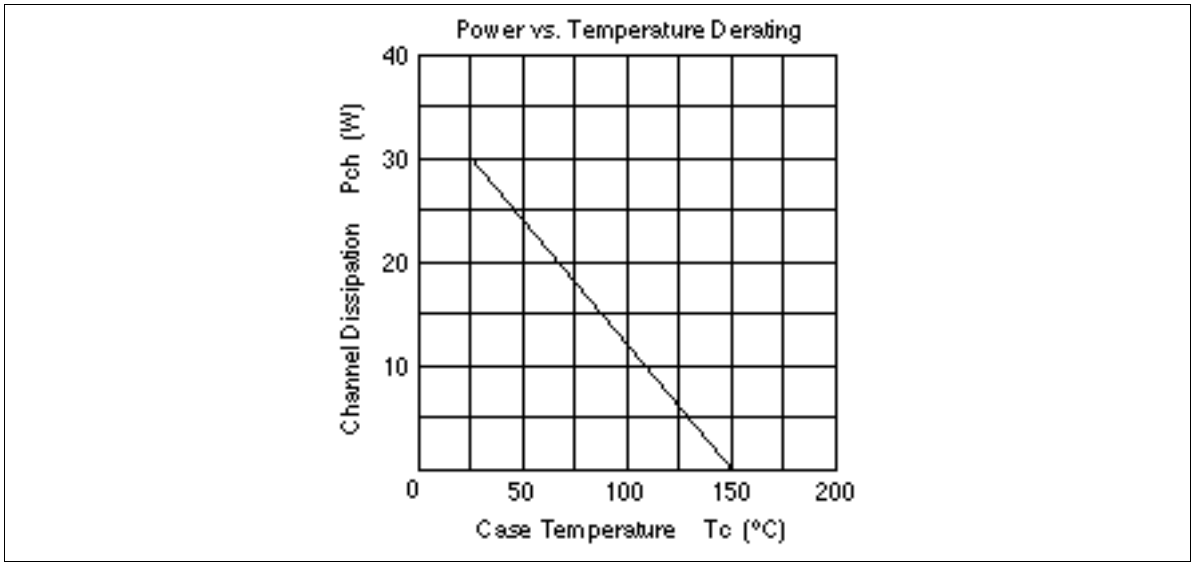
Notes: 1. PW ≤ 10μs, duty cycle ≤ 1 %
2. Value at Tc = 25°C
3. Value at Tch = 25°C, Rg 50Ω

Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Drain to source breakdown voltage	$V_{(BR)DSS}$	60	—	—	V	I_D = 10mA, V_{GS} = 0
Gate to source breakdown voltage	$V_{(BR)GSS}$	±20	—	—	V	I_G = ±100µA, V_{DS} = 0
Gate to source leak current	I_{GSS}	—	—	±10	µA	V_{GS} = ±16V, V_{DS} = 0
Zero gate voltege drain current	I_{DSS}	—	—	10	µA	V_{DS} = 60 V, V_{GS} = 0
Gate to source cutoff voltage	$V_{GS(off)}$	1.5	—	2.5	V	I_D = 1mA, V_{DS} = 10V
Static drain to source on state resistance	$R_{DS(on)}$	—	0.020	0.026	Ω	I_D = 15A, V_{GS} = 10V*[1]
	$R_{DS(on)}$	—	0.032	0.050	Ω	I_D = 15A, V_{GS} = 4V*[1]
Forward transfer admittance	$\|y_{fs}\|$	14	23	—	S	I_D = 15A, V_{DS} = 10V*[1]
Input capacitance	Ciss	—	1100	—	pF	V_{DS} = 10V
Output capacitance	Coss	—	540	—	pF	V_{GS} = 0
Reverse transfer capacitance	Crss	—	200	—	pF	f = 1MHz
Turn-on delay time	$t_{d(on)}$	—	15	—	ns	I_D = 15A, V_{GS} = 10V
Rise time	t_r	—	180	—	ns	R_L = 2Ω
Turn-off delay time	$t_{d(off)}$	—	175	—	ns	
Fall time	t_f	—	195	—	ns	
Body to drain diode forward voltage	V_{DF}	—	0.95	—	V	I_F = 35A, V_{GS} = 0
Body to drain diode reverse recovery time	t_{rr}	—	40	—	ns	I_F = 35A, V_{GS} = 0 diF/ dt = 50A/µs

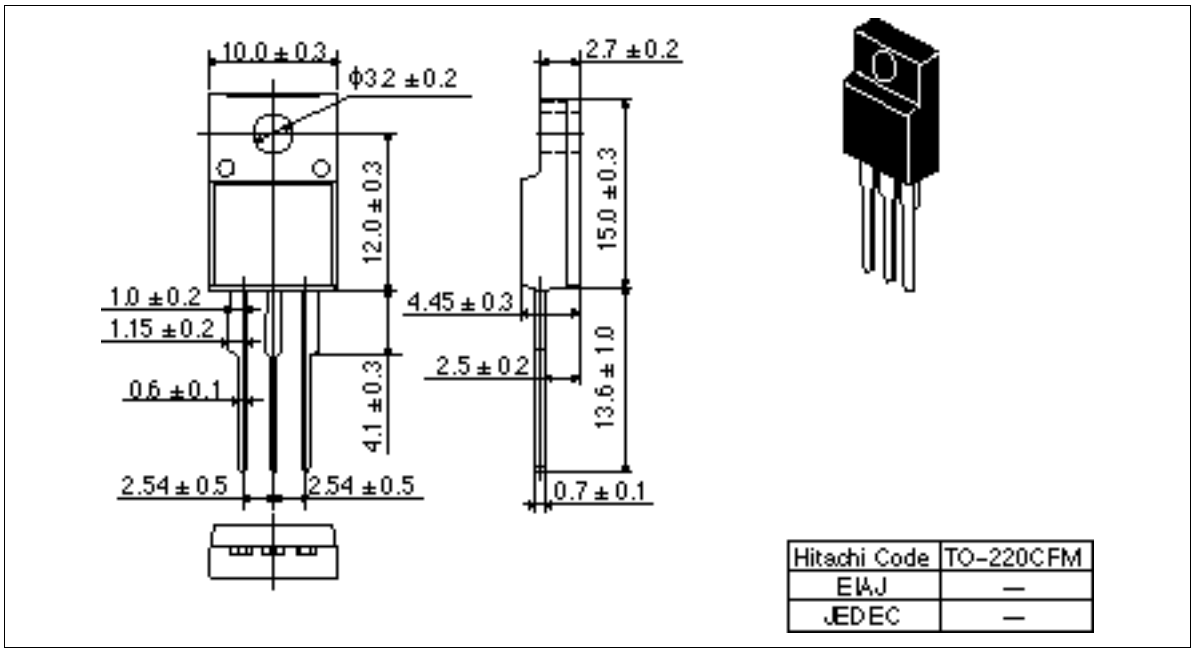
Note: 1. Pulse test

Main Characteristics



Package Dimentions

Unit: mm



Hitachi Code	TO-220CFM
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