

2SJ410

Silicon P Channel MOS FET

REJ03G0863-0300

Rev.3.00

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Description

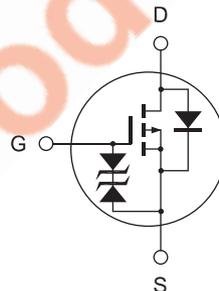
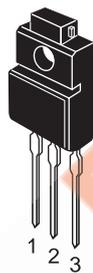
High speed power switching

Features

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

Outline

RENESAS Package code: PRSS0003AD-A
(Package name: TO-220FM)



1. Gate
2. Drain
3. Source

Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Drain to source voltage	V _{DSS}	-200	V
Gate to source voltage	V _{GSS}	±20	V
Drain current	I _D	-6	A
Drain peak current	I _{D (pulse)} ^{Note 1}	-24	A
Body to drain diode reverse drain current	I _{DR}	-6	A
Channel dissipation	P _{ch} ^{Note 2}	30	W
Channel temperature	T _{ch}	150	°C
Storage temperature	T _{stg}	-55 to +150	°C

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

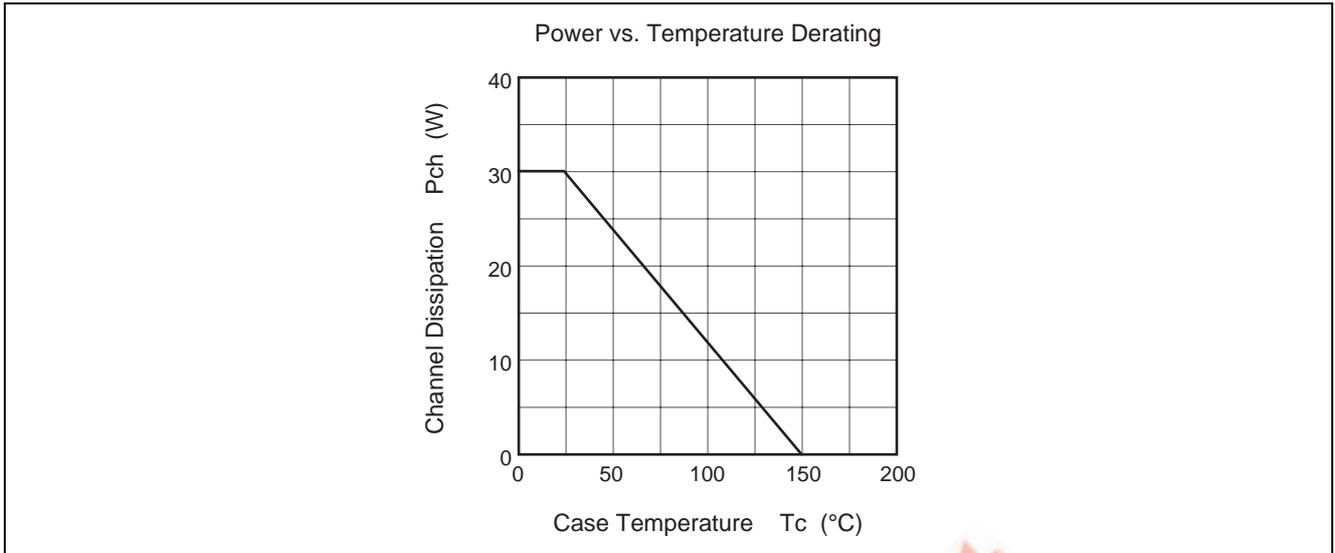
Electrical Characteristics

(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Drain to source breakdown voltage	V _{(BR) DSS}	-200	—	—	V	I _D = -10 mA, V _{GS} = 0
Gate to source breakdown voltage	V _{(BR) GSS}	±20	—	—	V	I _G = ±100 μA, V _{DS} = 0
Gate to source leak current	I _{GSS}	—	—	±10	μA	V _{GS} = ±16 V, V _{DS} = 0
Zero gate voltage drain current	I _{DSS}	—	—	-250	μA	V _{DS} = -160 V, V _{GS} = 0
Gate to source cutoff voltage	V _{GS (off)}	-2.0	—	-4.0	V	I _D = -1 mA, V _{DS} = -10 V
Static drain to source on state resistance	R _{DS (on)}	—	0.7	0.85	Ω	I _D = -3 A, V _{GS} = -10 V ^{Note 3}
Forward transfer admittance	y _{fs}	2.0	3.2	—	S	I _D = -3 A, V _{DS} = -10 V ^{Note 3}
Input capacitance	C _{iss}	—	900	—	pF	V _{DS} = -10 V
Output capacitance	C _{oss}	—	280	—	pF	V _{GS} = 0
Reverse transfer capacitance	C _{rss}	—	65	—	pF	f = 1 MHz
Turn-on delay time	t _{d (on)}	—	18	—	ns	I _D = -3 A
Rise time	t _r	—	50	—	ns	V _{GS} = -10 V
Turn-off delay time	t _{d (off)}	—	90	—	ns	R _L = 10 Ω
Fall time	t _f	—	40	—	ns	
Body to drain diode forward voltage	V _{DF}	—	-1.0	—	V	I _F = -6 A, V _{GS} = 0
Body to drain diode reverse recovery time	t _{rr}	—	220	—	ns	I _F = -6 A, V _{GS} = 0 di _F /dt = 50 A/μs

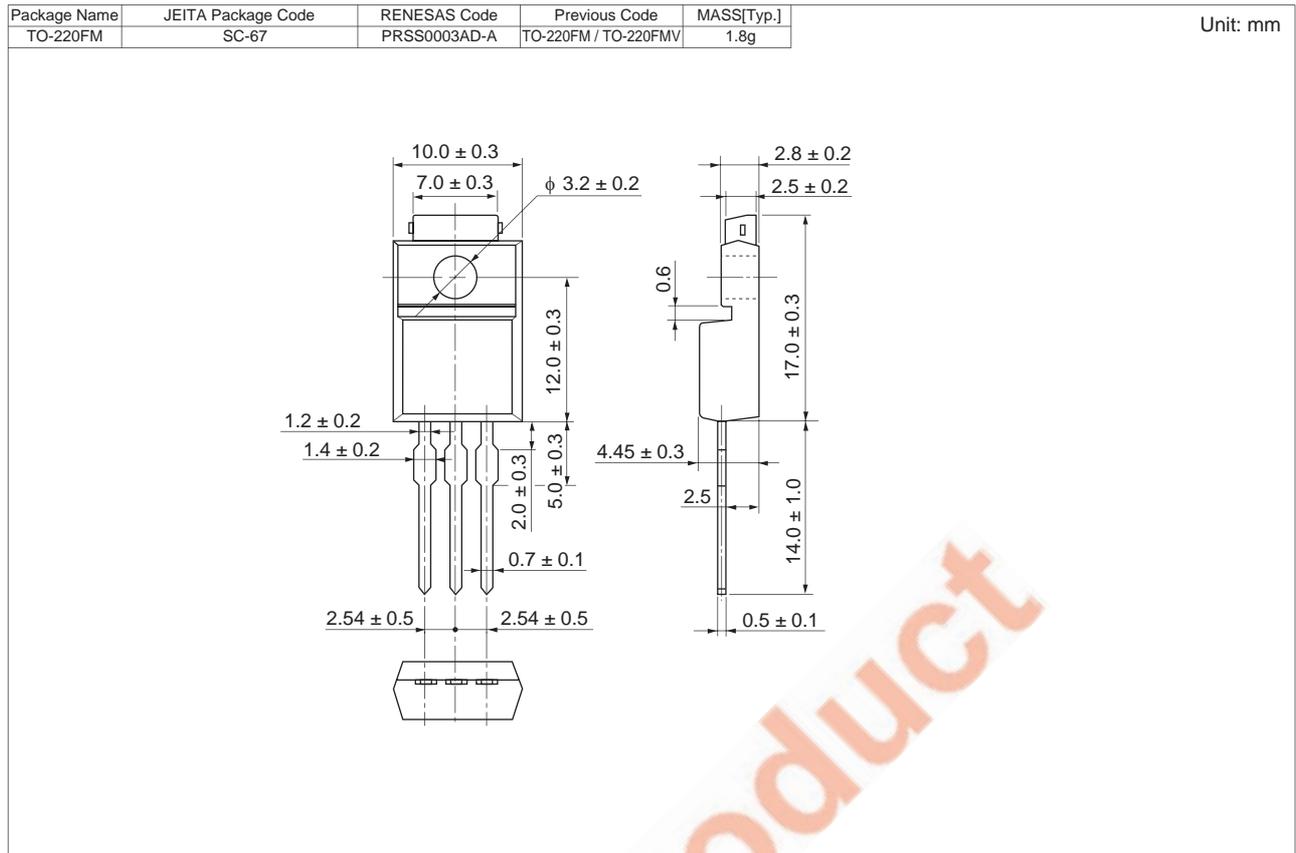
Note: 3. Pulse test

Main Characteristics



EOL Product

Package Dimensions



Ordering Information

Part Name	Quantity	Shipping Container
2SJ410-E	500 pcs	Box (Sack)

Note: For some grades, production may be terminated. Please contact the Renesas sales office to check the state of production before ordering the product.

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