

RJK4007DPP

Nch Power MOS FET
High-Speed Switching Use

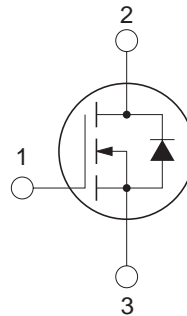
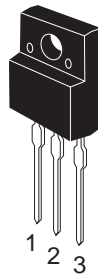
REJ03G0581-0100
Under development
Rev.1.00
Mar.24.2005

Features

- V_{DS} : 400 V
- $r_{DS(ON)}$: 0.55 Ω (MAX.)
- I_D : 7.6 A
- Lead Mount Type (TO-220FN)

Outline

RENESAS Package code: PRSS0003AB-A
(Package name : TO-220FN)



1. Gate
2. Drain
3. Source

Applications

- Inverter lighting equipment, SMPS, etc.

Maximum Ratings

(Tc = 25°C)

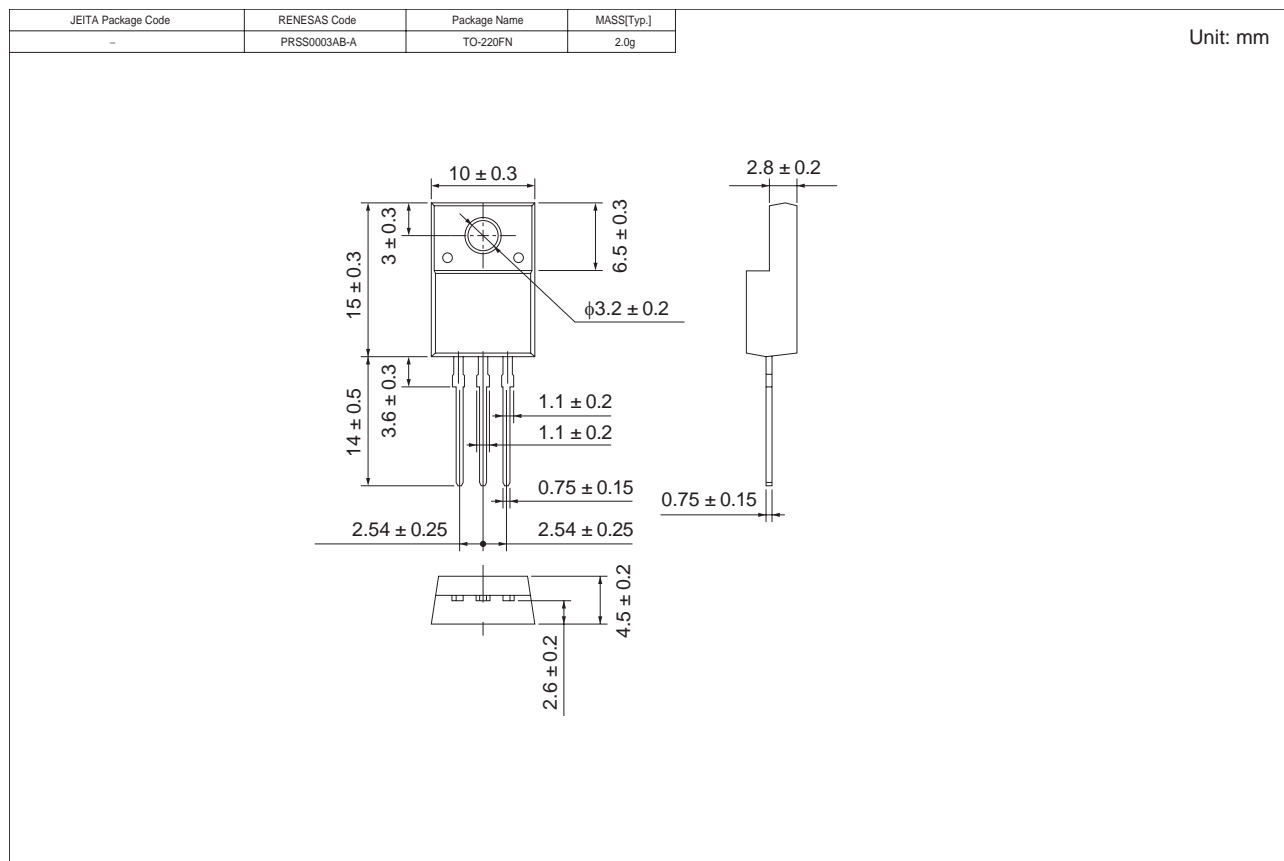
Parameter	Symbol	Ratings	Unit	Conditions
Drain-source voltage	V_{DS}	400	V	$V_{GS} = 0$ V
Gate-source voltage	V_{GS}	± 30	V	$V_{DS} = 0$ V
Drain current (DC)	I_D	7.6	A	
Drain current (Pulsed)	$I_{D(pulse)}$	30	A	
Avalanche current	I_{DA}	14	A	$L = 200$ μ H
Maximum power dissipation	P_{DS}	32	W	
Channel temperature	Tch	-55 to +150	°C	
Storage temperature	Tstg	-55 to +150	°C	

Electrical Characteristics

(T_{ch} = 25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test conditions
Drain-source breakdown voltage	$V_{(BR)DSS}$	400	—	—	V	$I_D = 1 \text{ mA}$, $V_{GS} = 0 \text{ V}$
Drain-source leakage current	I_{DSS}	—	—	1	mA	$V_{DS} = 400 \text{ V}$, $V_{GS} = 0 \text{ V}$
Gate-source leakage current	I_{GSS}	—	—	± 0.1	μA	$V_{GS} = \pm 25 \text{ V}$, $V_{DS} = 0 \text{ V}$
Gate-source threshold voltage	$V_{GS(th)}$	3.0	3.5	4.0	V	$I_D = 1 \text{ mA}$, $V_{DS} = 10 \text{ V}$
Drain-source on-state resistance	$r_{DS(ON)}$	—	0.47	0.55	Ω	$I_D = 7 \text{ A}$, $V_{GS} = 10 \text{ V}$
Drain-source on-state voltage	$V_{DS(ON)}$	—	3.29	3.85	V	$I_D = 7 \text{ A}$, $V_{GS} = 10 \text{ V}$
Input capacitance	C_{iss}	—	850	—	pF	$V_{DS} = 25 \text{ V}$, $V_{GS} = 0 \text{ V}$, $f = 1 \text{ MHz}$
Output capacitance	C_{oss}	—	140	—	pF	
Reverse transfer capacitance	C_{rss}	—	20	—	pF	
Turn-on delay time	$t_{d(on)}$	—	35	—	ns	$V_{DD} = 200 \text{ V}$, $I_D = 7 \text{ A}$, $V_{GS} = 10 \text{ V}$, $R_{GEN} = R_{GS} = 50 \Omega$
Turn-on rise time	t_r	—	30	—	ns	
Turn-off delay time	$t_{d(off)}$	—	95	—	ns	
Turn-off fall time	t_f	—	35	—	ns	
Source-drain voltage	V_{SD}	—	1.0	1.5	V	$I_S = 7 \text{ A}$, $V_{GS} = 0 \text{ V}$
Thermal resistance	$R_{th(ch-c)}$	—	—	3.9	$^{\circ}\text{C/W}$	Channel to case

Package Dimensions



Order Code

Lead form	Standard packing	Quantity	Standard order code	Standard order code example
Straight type	Vinyl sack	50	Type name - 00T	RJK4007DPP-00T
Lead form	Vinyl sack	50	Type name - Lead forming code (1 figure of alphanumeric characters) + 0T	RJK4007DPP-80T

Note: It is the case of a standard. In addition, please confirm the packing specification for every product about the contents of packing.

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