

2SJ117

Silicon P-Channel MOS FET

HITACHI

ADE-208-1180 (Z)

1st. Edition

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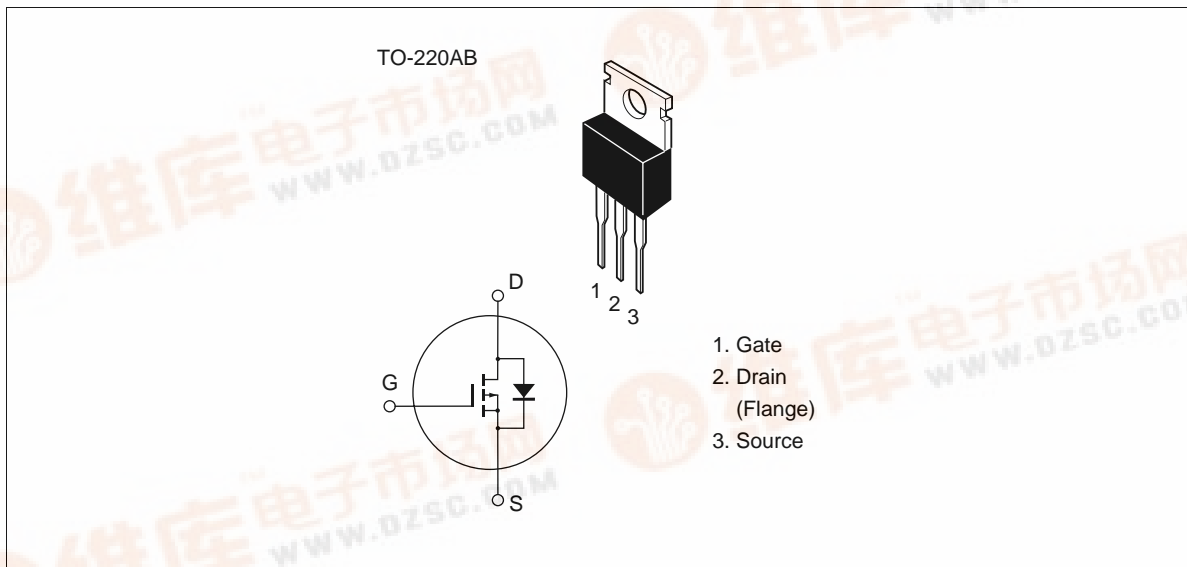
Application

High speed power switching

Features

- High speed switching
- Good frequency characteristics
- Wide area of safe operation
- Suitable for switching regulator, DC-DC converter and ultrasonic power oscillators.

Outline



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Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Drain to source voltage	V _{DSS}	-400	V
Gate to source voltage	V _{GSS}	±20	V
Drain current	I _D	-2	A
Drain peak current	I _{D(pulse)}	-4	A
Body to drain diode reverse drain current	I _{DR}	-2	A
Channel dissipation	Pch*1	40	W
Channel temperature	Tch	150	°C
Storage temperature	Tstg	-55 to +150	°C

Notes: 1. Value at T_C = 25°C

Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Drain to source breakdown voltage	V _{(BR)DSS}	-400	—	—	V	I _D = -10 mA, V _{GS} = 0
Gate to source leak current	I _{GSS}	—	—	±1	μA	V _{GS} = ±20 V, V _{DS} = 0
Zero gate voltage drain current	I _{DSS}	—	—	-1	mA	V _{DS} = -320 V, V _{GS} = 0
Gate to source cutoff voltage	V _{GS(off)}	-2.0	—	-5.0	V	I _D = -1 mA, V _{DS} = -10 V
Static drain to source on state resistance	R _{DS(on)}	—	5	7		I _D = -1 A, V _{GS} = -15 V*1
Forward transfer admittance	y _{fs}	0.4	0.7	—	S	I _D = -1 A, V _{DS} = -20 V*1
Input capacitance	C _{iss}	—	520	—	pF	V _{DS} = -10 V, V _{GS} = 0,
Output capacitance	C _{oss}	—	110	—	pF	f = 1 MHz
Reverse transfer capacitance	C _{rss}	—	15	—	pF	
Turn-on delay time	t _{d(on)}	—	10	—	ns	I _D = -2 A, V _{GS} = -15 V,
Rise time	t _r	—	25	—	ns	R _L = 15
Turn-off delay time	t _{d(off)}	—	45	—	ns	
Fall time	t _f	—	35	—	ns	
Body to drain diode forward voltage	V _{DF}	—	-0.8	—	V	I _F = -1 A, V _{GS} = 0
Body to drain diode reverse recovery time	t _{rr}	—	300	—	ns	I _F = -1 A, V _{GS} = 0, di _F /dt = 100 A/μs

Note: 1. Pulse test

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