

HAT1026R

Silicon P Channel Power MOS FET
High Speed Power Switching

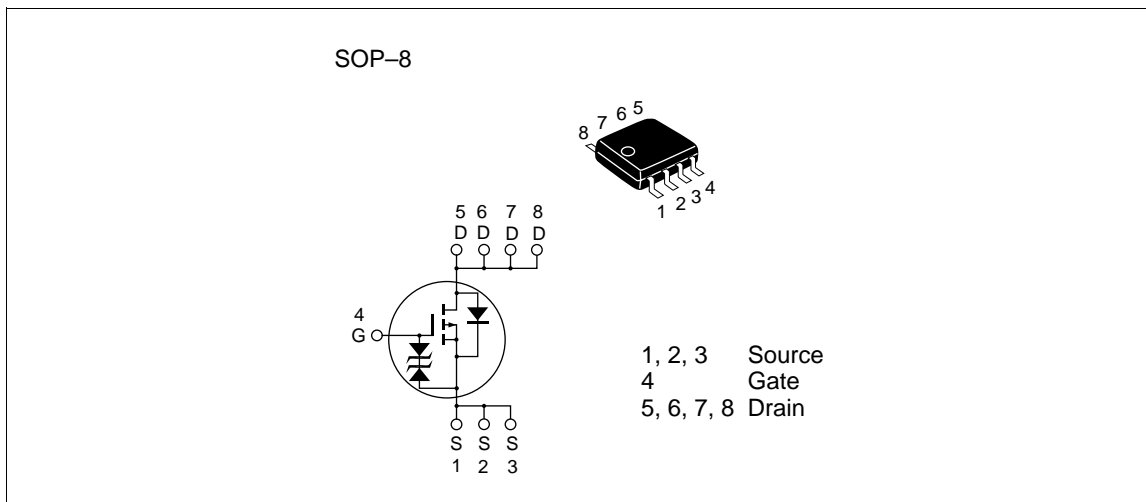
HITACHI

ADE-208-457 D (Z)
5th. Edition
June. 1996

Features

- Low on-resistance
- Capable of 4 V gate drive
- Low drive current
- High density mounting

Outline



HAT1026R

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Drain to source voltage	VDSS	-30	V
Gate to source voltage	VGSS	±20	V
Drain current	ID	-7	A
Drain peak current	ID(pulse)Note1	-56	A
Body-drain diode reverse drain current	IDR	-7	A
Channel dissipation	Pch Note2	2.5	W
Channel temperature	Tch	150	°C
Storage temperature	Tstg	-55 to +150	°C

Note: 1. $PW \leq 10\mu s$, duty cycle $\leq 1\%$
 2. When using the glass epoxy board (FR4 40 x 40 x 1.6 mm), $PW \leq 10s$

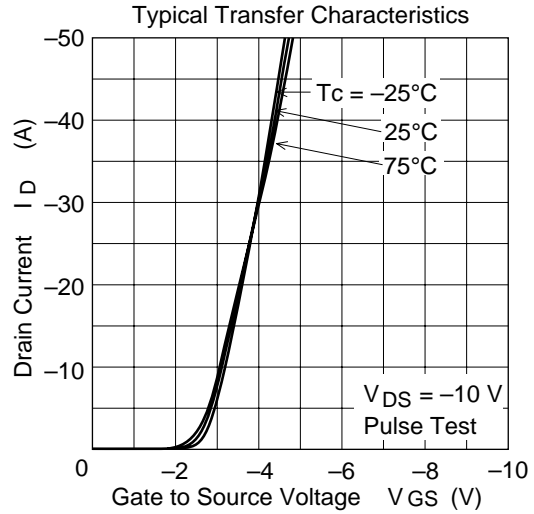
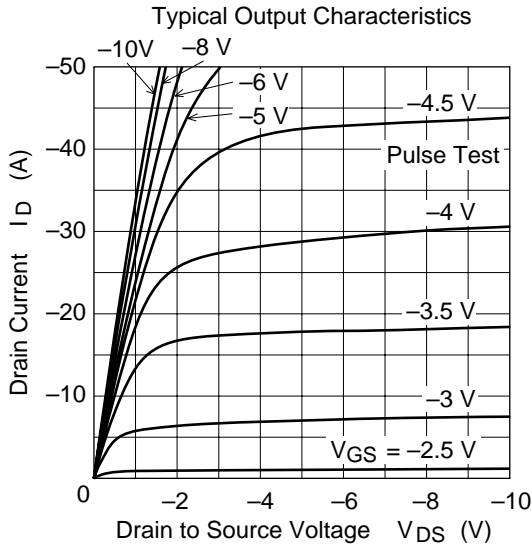
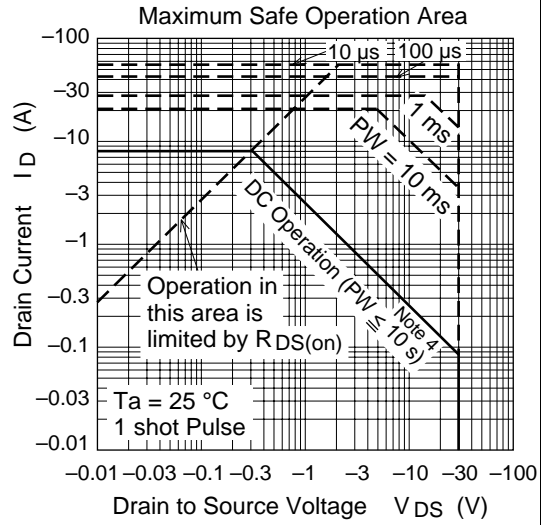
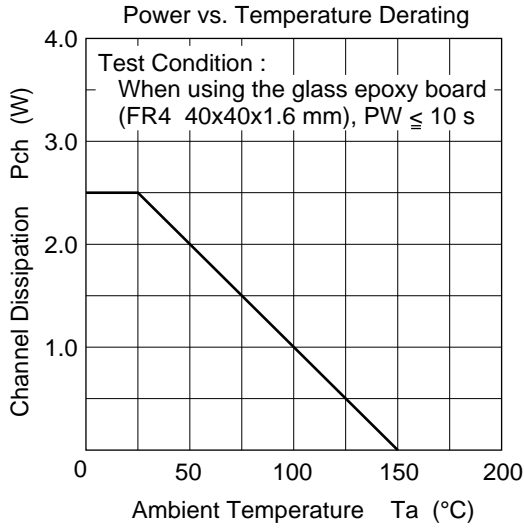
Electrical Characteristics (Ta = 25°C)

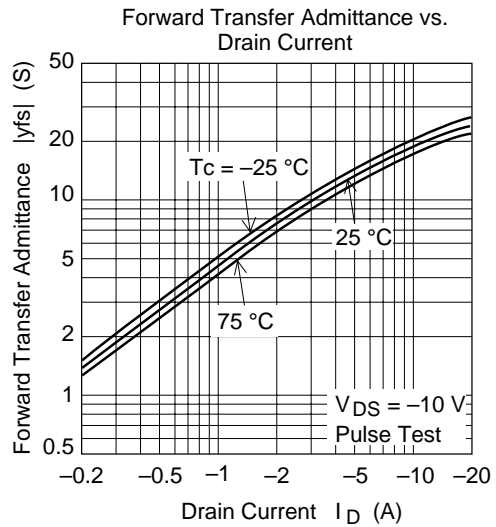
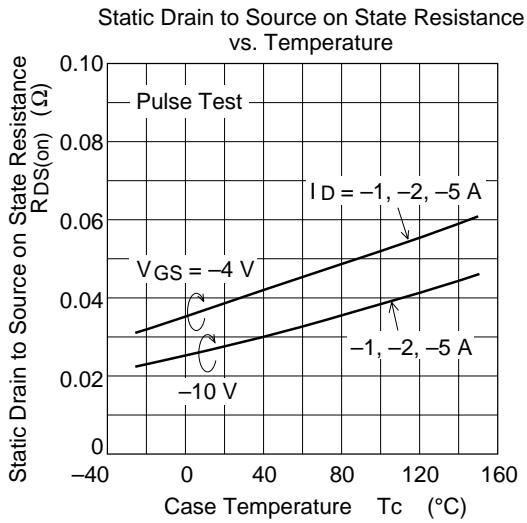
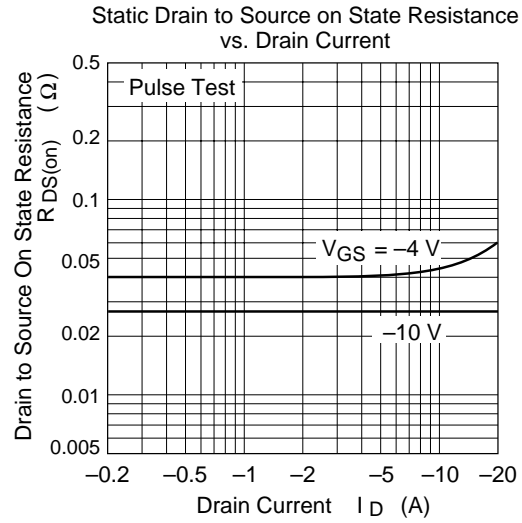
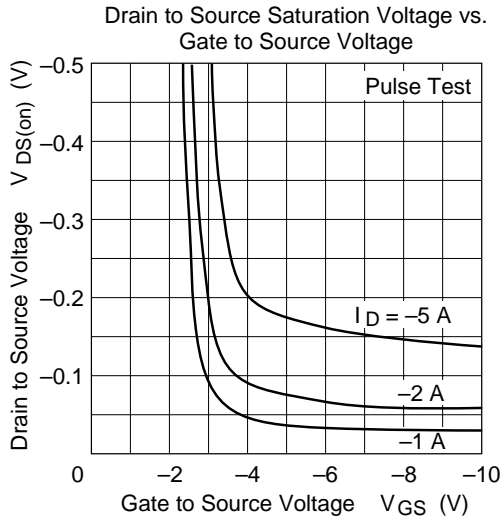
Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Drain to source breakdown voltage	V(BR)DSS	-30	—	—	V	ID = -10mA, VGS = 0
Gate to source breakdown voltage	V(BR)GSS	±20	—	—	V	IG = ±100μA, VDS = 0
Gate to source leak current	IGSS	—	—	±10	μA	VGS = ±16V, VDS = 0
Zero gate voltage drain current	IDSS	—	—	-10	μA	VDS = -30 V, VGS = 0
Gate to source cutoff voltage	VGS(off)	-1.0	—	-2.5	V	VDS = -10V, ID = -1mA
Static drain to source on state resistance	RDS(on)	—	0.028	0.037	Ω	ID = -4A, VGS = -10V Note3
	RDS(on)	—	0.04	0.065	Ω	ID = -4A, VGS = -4V Note3
Forward transfer admittance	yfs	8	12	—	S	ID = -4A, VDS = -10V Note3
Input capacitance	Ciss	—	1700	—	pF	VDS = -10V
Output capacitance	Coss	—	1000	—	pF	VGS = 0
Reverse transfer capacitance	Crss	—	190	—	pF	f = 1MHz
Turn-on delay time	td(on)	—	60	—	ns	VGS = -4V, ID = -4A
Rise time	tr	—	330	—	ns	VDD \hat{A} -10V
Turn-off delay time	td(off)	—	80	—	ns	
Fall time	tf	—	120	—	ns	
Body-drain diode forward voltage	VDF	—	-0.9	-1.4	V	IF = -7A, VGS = 0
Body-drain diode reverse recovery time	trr	—	70	—	ns	IF = -7A, VGS = 0 dIF/ dt = 20A/μs

Note: 3. Pulse test

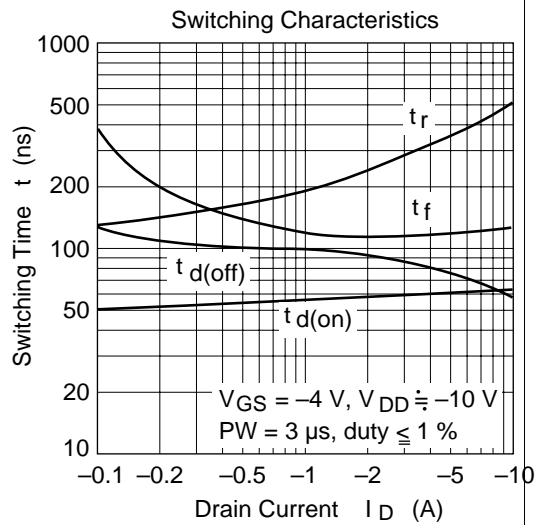
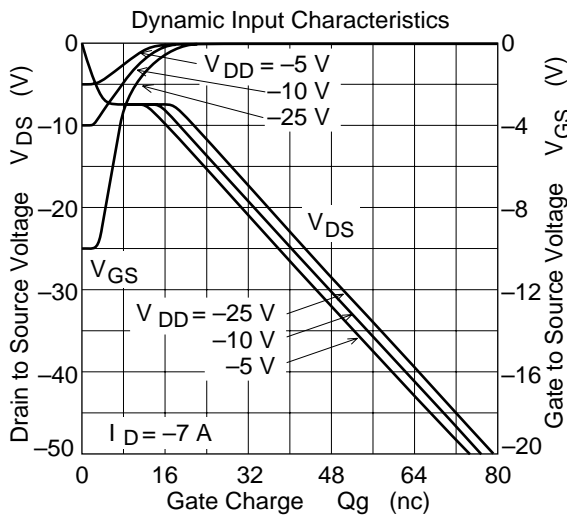
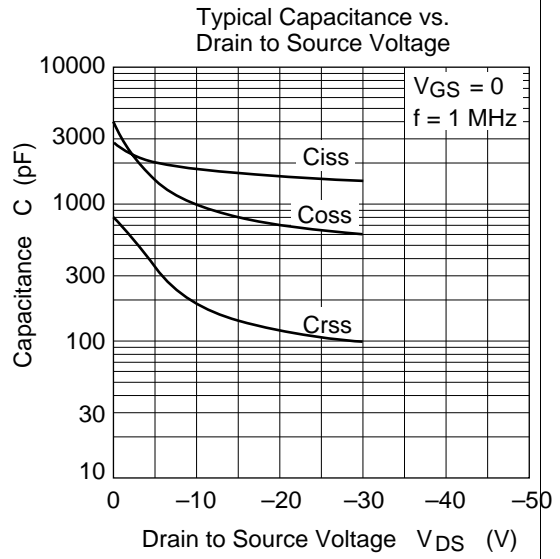
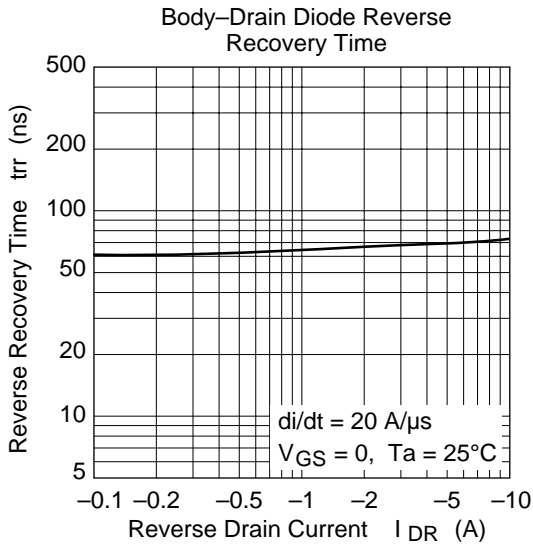
HAT1026R

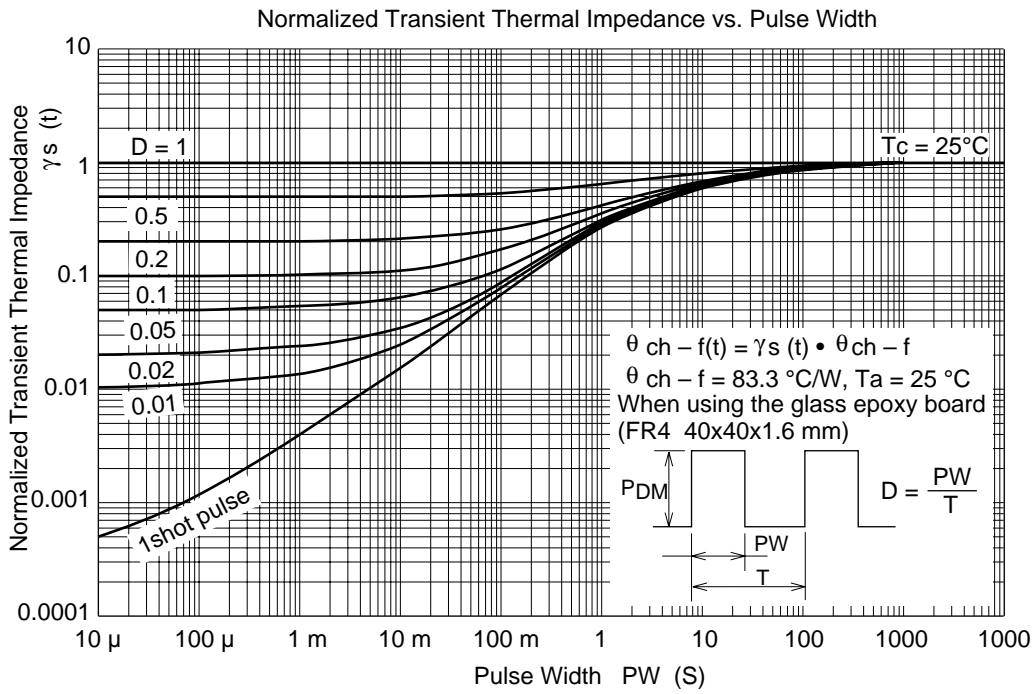
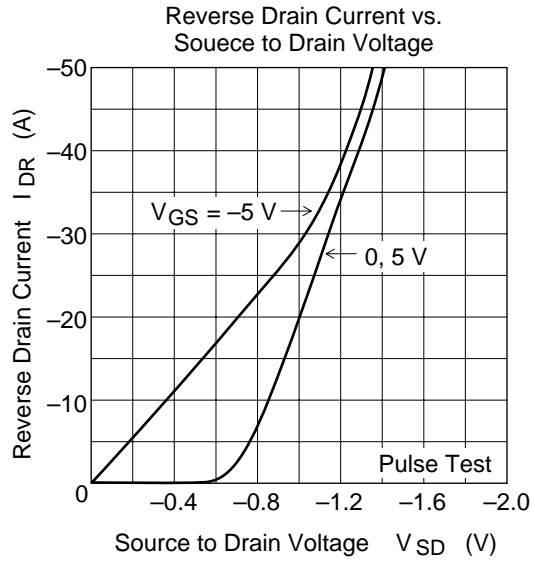
Main Characteristics





HAT1026R





HAT1026R

Package Dimentions

Unit: mm

