

FY3ACJ-03F

HIGH-SPEED SWITCHING USE

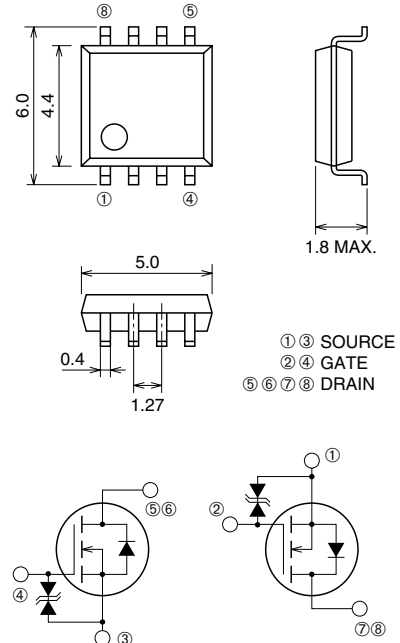
FY3ACJ-03F



- 4V DRIVE
- V_{DS} 30V
- $r_{DS(ON)}(MAX)$ 70m Ω
- I_D 3A
- Dual type

OUTLINE DRAWING

Dimensions in mm



SOP-8

APPLICATION

Motor control, Lamp control, Solenoid control
DC-DC converter, etc.

MAXIMUM RATINGS (T_c = 25°C)

Symbol	Parameter	Conditions	Ratings	Unit
V_{DS}	Drain-source voltage	$V_{GS} = 0V$	30	V
V_{GSS}	Gate-source voltage	$V_{DS} = 0V$	± 20	V
I_D	Drain current		3	A
I_{DM}	Drain current (Pulsed)		21	A
I_{DA}	Avalanche drain current (Pulsed)	$L = 10\mu H$	3	A
I_S	Source current		1.4	A
I_{SM}	Source current (Pulsed)		5.6	A
P_D	Maximum power dissipation		1.5	W
T_{ch}	Channel temperature		-55~+150	°C
T_{stg}	Storage temperature		-55~+150	°C
—	Weight	Typical value	0.07	g

ELECTRICAL CHARACTERISTICS (Tch = 25°C)

Symbol	Parameter	Test conditions	Limits			Unit
			Min.	Typ.	Max.	
V (BR)DSS	Drain-source breakdown voltage	ID = 1mA, VGS = 0V	30	—	—	V
V (BR)GSS	Gate-source breakdown voltage	IG = ±100μA, VDS = 0V	±20	—	—	V
IGSS	Gate-source leakage current	VGS = ±20V, VDS = 0V	—	—	±10	μA
IDSS	Drain-source leakage current	VDS = 30V, VGS = 0V	—	—	0.1	mA
VGS (th)	Gate-source threshold voltage	ID = 1mA, VDS = 10V	1.0	1.5	2.0	V
rDS (ON)	Drain-source on-state resistance	ID = 3A, VGS = 10V	—	50	70	mΩ
rDS (ON)	Drain-source on-state resistance	ID = 1.5A, VGS = 4V	—	80	120	mΩ
VDS (ON)	Drain-source on-state voltage	ID = 3A, VGS = 10V	—	150	210	mV
Ciss	Input capacitance	VDS = 10V, VGS = 0V, f = 1MHz	—	260	—	pF
Coss	Output capacitance		—	—	—	pF
Crss	Reverse transfer capacitance		—	—	—	pF
td (on)	Turn-on delay time	VDD = 15V, ID = 1.5A, VGS = 10V, RGEN = RGS = 50Ω	—	4.0	—	ns
tr	Rise time		—	6.5	—	ns
td (off)	Turn-off delay time		—	21.0	—	ns
tf	Fall time		—	8.5	—	ns
VSD	Source-drain voltage	IS = 1.4A, VGS = 0V	—	0.75	1.10	V
Rth (ch-a)	Thermal resistance	Channel to ambient	—	—	83.3	°C/W