


# FY3ACJ-03F

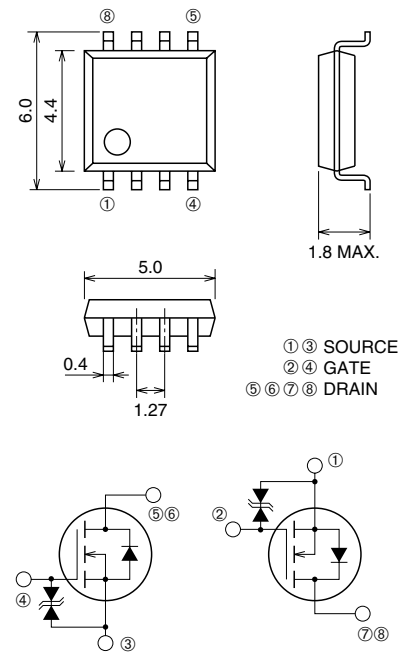
HIGH-SPEED SWITCHING USE

**FY3ACJ-03F**



- 4V DRIVE
- V<sub>DSS</sub> ..... 30V
- r<sub>DS (ON)</sub> (MAX) ..... 70mΩ
- I<sub>D</sub> ..... 3A
- Dual type

**OUTLINE DRAWING** Dimensions in mm



① ③ SOURCE  
② ④ GATE  
⑤ ⑥ ⑦ ⑧ DRAIN

**SOP-8**

**APPLICATION**

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

**MAXIMUM RATINGS** (T<sub>c</sub> = 25°C)

Symbol	Parameter	Conditions	Ratings	Unit
V <sub>DSS</sub>	Drain-source voltage	V <sub>GS</sub> = 0V	30	V
V <sub>GSS</sub>	Gate-source voltage	V <sub>DS</sub> = 0V	±20	V
I <sub>D</sub>	Drain current		3	A
I <sub>DM</sub>	Drain current (Pulsed)		21	A
I <sub>DA</sub>	Avalanche drain current (Pulsed)	L = 10μH	3	A
I <sub>S</sub>	Source current		1.4	A
I <sub>SM</sub>	Source current (Pulsed)		5.6	A
P <sub>D</sub>	Maximum power dissipation		1.5	W
T <sub>ch</sub>	Channel temperature		-55~+150	°C
T <sub>stg</sub>	Storage temperature		-55~+150	°C
—	Weight	Typical value	0.07	g

**ELECTRICAL CHARACTERISTICS** (T<sub>ch</sub> = 25°C)

Symbol	Parameter	Test conditions	Limits			Unit
			Min.	Typ.	Max.	
V (BR)DSS	Drain-source breakdown voltage	I <sub>D</sub> = 1mA, V <sub>GS</sub> = 0V	30	—	—	V
V (BR)GSS	Gate-source breakdown voltage	I <sub>G</sub> = ±100μA, V <sub>DS</sub> = 0V	±20	—	—	V
I <sub>GSS</sub>	Gate-source leakage current	V <sub>GS</sub> = ±20V, V <sub>DS</sub> = 0V	—	—	±10	μA
I <sub>DSS</sub>	Drain-source leakage current	V <sub>DS</sub> = 30V, V <sub>GS</sub> = 0V	—	—	0.1	mA
V <sub>GS</sub> (th)	Gate-source threshold voltage	I <sub>D</sub> = 1mA, V <sub>DS</sub> = 10V	1.0	1.5	2.0	V
r <sub>DS</sub> (ON)	Drain-source on-state resistance	I <sub>D</sub> = 3A, V <sub>GS</sub> = 10V	—	50	70	mΩ
r <sub>DS</sub> (ON)	Drain-source on-state resistance	I <sub>D</sub> = 1.5A, V <sub>GS</sub> = 4V	—	80	120	mΩ
V <sub>DS</sub> (ON)	Drain-source on-state voltage	I <sub>D</sub> = 3A, V <sub>GS</sub> = 10V	—	150	210	mV
C <sub>iss</sub>	Input capacitance	V <sub>DS</sub> = 10V, V <sub>GS</sub> = 0V, f = 1MHz	—	260	—	pF
C <sub>oss</sub>	Output capacitance		—	—	—	pF
C <sub>rss</sub>	Reverse transfer capacitance		—	—	—	pF
t <sub>d</sub> (on)	Turn-on delay time		—	4.0	—	ns
t <sub>r</sub>	Rise time	V <sub>DD</sub> = 15V, I <sub>D</sub> = 1.5A, V <sub>GS</sub> = 10V, R <sub>GEN</sub> = R <sub>GS</sub> = 50Ω	—	6.5	—	ns
t <sub>d</sub> (off)	Turn-off delay time		—	21.0	—	ns
t <sub>f</sub>	Fall time		—	8.5	—	ns
V <sub>SD</sub>	Source-drain voltage		I <sub>S</sub> = 1.4A, V <sub>GS</sub> = 0V	—	0.75	1.10
R <sub>th</sub> (ch-a)	Thermal resistance	Channel to ambient	—	—	83.3	°C/W