KF5N50P/F/PZ/FZ

N CHANNEL MOS FIELD EFFECT TRANSISTOR

General Description

This planar stripe MOSFET has better characteristics, such as fast switching time, low on resistance, low gate charge and excellent avalanche characteristics. It is mainly suitable for electronic ballast and switching mode power supplies.

FEATURES

- V_{DSS}= 500V, I_D= 5.0A
- Drain-Source ON Resistance : $R_{DS(ON)}$=1.4Ω @V_{GS} = 10V
- Qg(typ) = 12nC

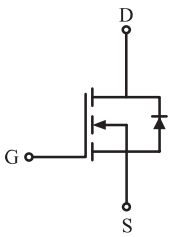
MAXIMUM RATING (Tc=25℃)

CHARACTERISTIC		SYMBOL	RATING		UNIT
			KF5N50P KF5N50PZ	KF5N50F KF5N50FZ	
Drain-Source Voltage		V_{DSS}	500		V
Gate-Source Voltage		V_{GSS}	± 30		V
Drain Current	@T_C=25℃	I_D	5.0	5.0*	A
	@T_C=100℃		2.9	2.9*	
	Pulsed (Note1)	I_{DP}	13	13*	
Single Pulsed Avalanche Energy (Note 2)		E_{AS}	270		mJ
Repetitive Avalanche Energy (Note 1)		E_{AR}	8.6		mJ
Peak Diode Recovery dv/dt (Note 3)		dv/dt	4.5		V/ns
Drain Power Dissipation	Tc=25℃	P_D	83	41.5	W
	Derate above 25℃		0.66	0.33	W/℃
Maximum Junction Temperature		T_j	150		℃
Storage Temperature Range		T_{stg}	-55 ~ 150		℃
Thermal Characteristics					
Thermal Resistance, Junction-to-Case		R_{thJC}	1.5	3.0	℃/W
Thermal Resistance, Junction-to-Ambient		R_{thJA}	62.5	62.5	℃/W

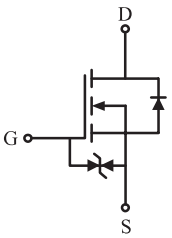
* : Drain current limited by maximum junction temperature.

PIN CONNECTION

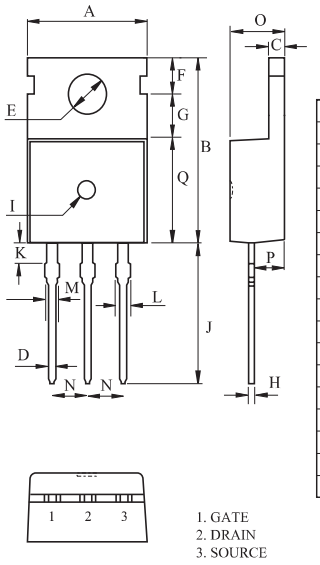
(KF5N50P, KF5N50F)



(KF5N50PZ, KF5N50FZ)



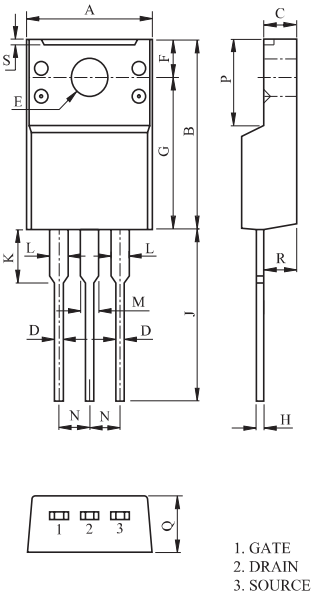
KF5N50P, KF5N50PZ



DIM	MILLIMETERS
A	9.9± 0.2
B	15.95 MAX
C	1.3+0.1/-0.05
D	0.8± 0.1
E	ø 3.6 ±0.2
F	2.8± 0.1
G	3.7
H	0.5+0.1/-0.05
I	ø 1.5
J	13.08± 0.3
K	1.46
L	1.4± 0.1
M	1.27± 0.1
N	2.54± 0.2
O	4.5± 0.2
P	2.4± 0.2
Q	9.2± 0.2

TO-220AB

KF5N50F, KF5N50FZ



DIM	MILLIMETERS
A	10.0±0.3
B	15.0±0.3
C	2.70±0.3
D	0.76+0.09/-0.05
E	Φ3.2±0.2
F	3.0±0.3
G	12.0±0.3
H	0.5+0.1/-0.05
J	13.6±0.5
K	3.7±0.2
L	1.2+0.25/-0.1
M	1.5+0.25/-0.1
N	2.54±0.1
P	6.8±0.1
Q	4.5±0.2
R	2.6±0.2
S	0.5 Typ

TO-220IS