

Isc N-Channel MOSFET Transistor

STP6NK90ZFP

• FEATURES

- Typical $R_{DS(on)}=1.56 \Omega$
- With low gate drive requirements
- Easy to drive
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• APPLICATIONS

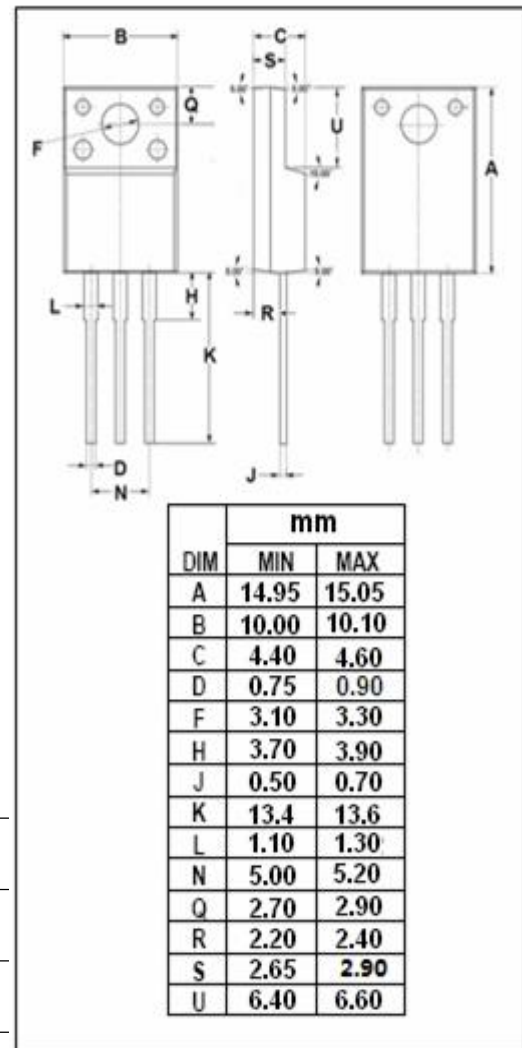
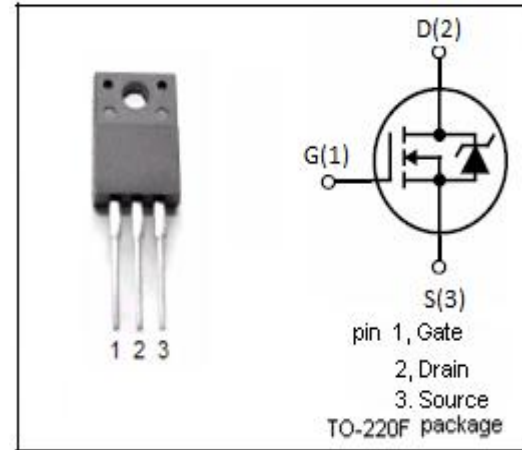
- Ideal for off-line powersupplies adaptors and PFC
- Lighting
- High current, high speed switching

• ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	900	V
V_{GSS}	Gate-Source Voltage	± 30	V
I_D	Drain Current-Continuous@ $T_c=25^\circ\text{C}$ $T_c=100^\circ\text{C}$	5.8 3.65	A
I_{DM}	Drain Current-Single Pulsed	23.2	A
P_D	Total Dissipation	30	W
T_j	Operating Junction Temperature	-55~150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55~150	$^\circ\text{C}$

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(ch-c)}$	Channel-to-case thermal resistance	4.2	$^\circ\text{C/W}$
$R_{th(ch-a)}$	Channel-to-ambient thermal resistance	62.5	$^\circ\text{C/W}$



Isc N-Channel MOSFET Transistor**STP6NK90ZFP****ELECTRICAL CHARACTERISTICS**T_C=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V; I _D = 1mA	900			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =±30V; I _D =0.1mA	3		4.5	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V; I _D =2.9A		1.56	2	Ω
I _{GSS}	Gate-Source Leakage Current	V _{GS} = ±20V; V _{DS} = 0V			± 10	μ A
I _{DSS}	Drain-Source Leakage Current	V _{DS} = 900V; V _{GS} = 0V; T _J =25°C T _J =125°C			1 50	μ A
V _{SDF}	Diode forward voltage	I _{SD} =5.8A, V _{GS} = 0 V			1.6	V

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