

# isc N-Channel MOSFET Transistor

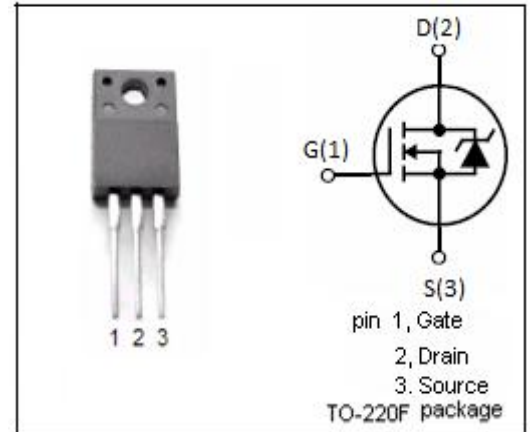
# STP55NF06

## DESCRIPTION

- With TO-220F packaging
- 100% avalanche tested
- Fast switching speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

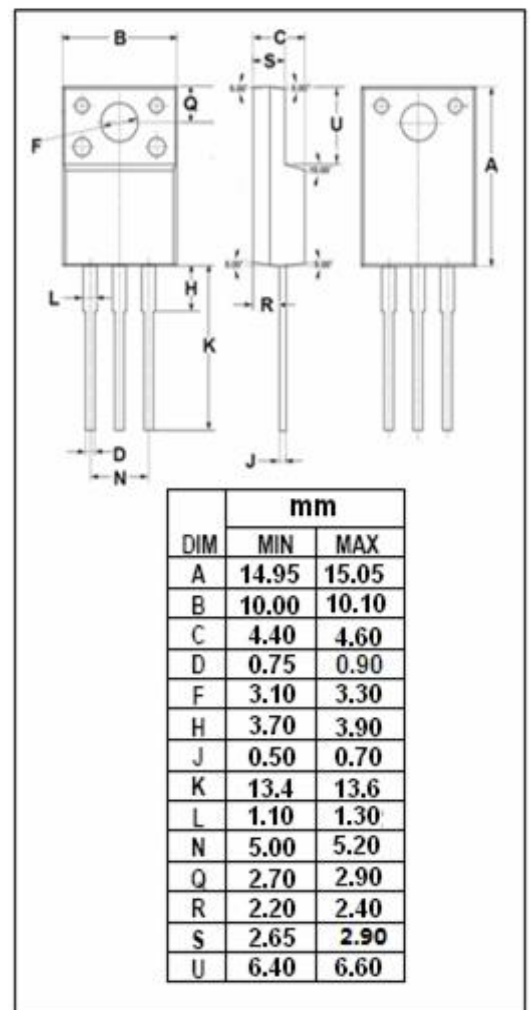
## APPLICATIONS

- Motor control
- Audio amplifiers
- DC-DC&DC-AC converters



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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DSS}$	Drain-Source Voltage ( $V_{GS}=0$ )	60	V
$V_{GS}$	Gate-Source Voltage	$\pm 20$	V
$I_D$	Drain Current-continuous@ $TC=25^{\circ}\text{C}$	50	A
	Drain Current-continuous@ $TC=100^{\circ}\text{C}$	35	
$P_{tot}$	Total Dissipation@ $TC=25^{\circ}\text{C}$	30	W
$T_j$	Max. Operating Junction Temperature	175	$^{\circ}\text{C}$
$T_{stg}$	Storage Temperature Range	-55~175	$^{\circ}\text{C}$



## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	5	$^{\circ}\text{C}/\text{W}$
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	62.5	$^{\circ}\text{C}/\text{W}$

**isc N-Channel Mosfet Transistor****STP55NF06****• ELECTRICAL CHARACTERISTICS (T<sub>c</sub>=25°C)**

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V <sub>(BR)DSS</sub>	Drain-Source Breakdown Voltage	V <sub>GS</sub> = 0; I <sub>D</sub> = 250uA	60		V
V <sub>GS(TH)</sub>	Gate Threshold Voltage	V <sub>DS</sub> = V <sub>GS</sub> ; I <sub>D</sub> = 250uA	2	4	V
R <sub>DS(ON)</sub>	Drain-Source On-stage Resistance	V <sub>GS</sub> = 10V; I <sub>D</sub> = 27.5A		0.018	Ω
I <sub>GSS</sub>	Gate Source Leakage Current	V <sub>GS</sub> = ±20V; V <sub>DS</sub> = 0		±100	nA
I <sub>DSS</sub>	Zero Gate Voltage Drain Current	V <sub>DS</sub> = 60V; V <sub>GS</sub> = 0 V <sub>DS</sub> = 60V; V <sub>GS</sub> = 0, T <sub>c</sub> =125°C		1 10	uA uA
V <sub>SD</sub>	Diode Forward Voltage	I <sub>SD</sub> = 55A; V <sub>GS</sub> = 0		1.5	V

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