

N-Channel MOSFET Transistor

STP16NF06, ISTD16NF06

DESCRIPTION

- Drain Current $I_D = 16A @ T_C = 25^\circ C$
- Static Drain-Source On-Resistance
: $R_{DS(on)} = 100m\Omega$ (Max)
- Fast Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

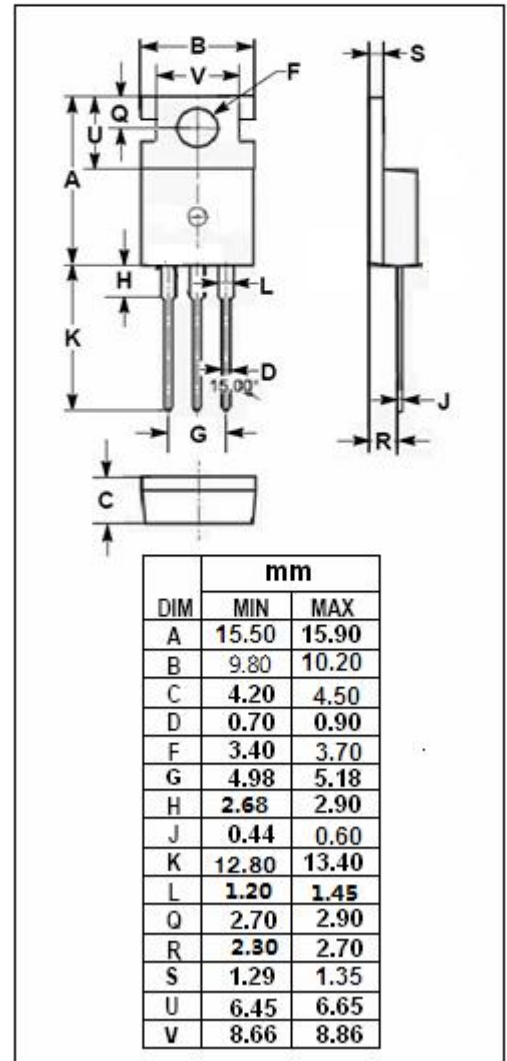
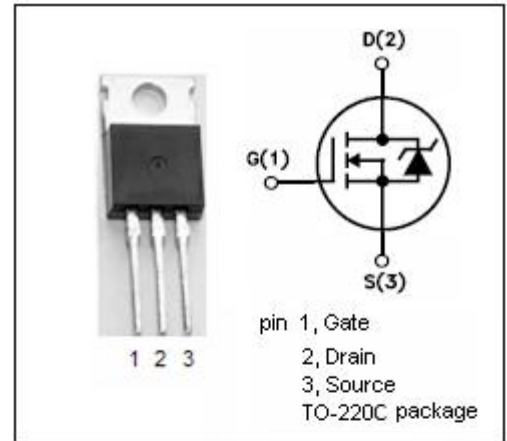
- high packing density for low on-resistance, rugged avalanche characteristics and less critical alignment steps therefore remarkable manufacturing reproducibility

ABSOLUTE MAXIMUM RATINGS($T_C = 25^\circ C$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{DS}	Drain-Source Voltage ($V_{GS} = 0$)	60	V
V_{GS}	Gate-Source Voltage	± 20	V
I_D	Drain Current-continuous@ $T_C = 25^\circ C$	16	A
	Drain Current-continuous@ $T_C = 100^\circ C$	11	
$I_{D(puls)}$	Pulse Drain Current	64	A
P_{tot}	Total Dissipation@ $T_C = 25^\circ C$	45	W
T_j	Max. Operating Junction Temperature	175	$^\circ C$
T_{stg}	Storage Temperature Range	-55~175	$^\circ C$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	3.33	$^\circ C/W$
$R_{th j-a}$	Thermal Resistance, Junction to Ambient	62.5	$^\circ C/W$



N-Channel MOSFET Transistor**STP16NF06,ISTP16NF06****• ELECTRICAL CHARACTERISTICS (T_c=25°C)**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYPE	MAX	UNIT
V _{(BR)DSS}	Drain-Source Breakdown Voltage	V _{GS} = 0; I _D = 250μA	60			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = V _{GS} ; I _D =250μA	24			V
V _{SD}	Diode Forward On-Voltage	I _S =16A ;V _{GS} = 0			1.3	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V; I _D =8A			100	mΩ
I _{GSS}	Gate-Body Leakage Current	V _{GS} = ±20V			± 100	nA
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} = 60V; V _{GS} = 0			1	μA

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