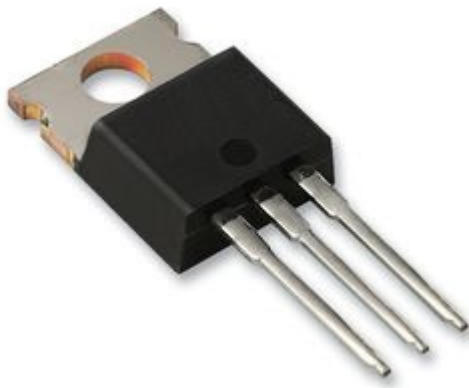


N-Channel Mosfet Transistor

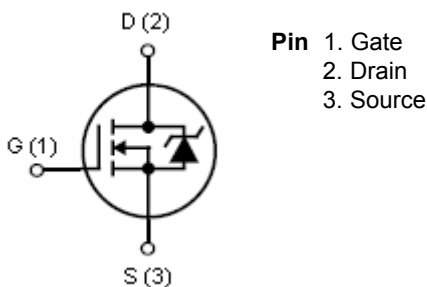


Features:

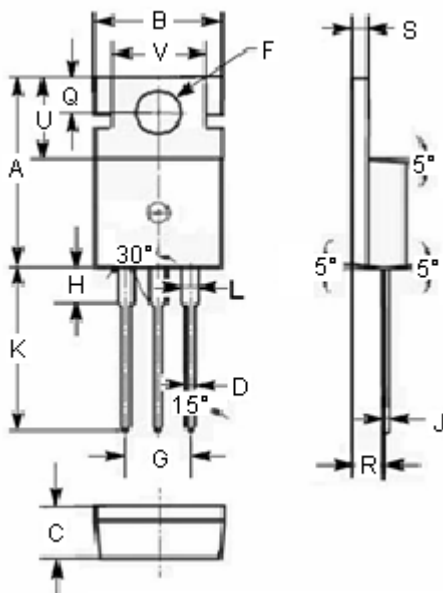
- Drain current : $I_D = 60\text{ A}$ at $T_C = 25^\circ\text{C}$
- Drain source voltage : $V_{DSS} = 60\text{ V}$ (Minimum)
- Static drain - source on - resistance : $R_{DS(on)} = 0.016\ \Omega$ (Maximum)

Applications:

Solenoid and relay drivers
DC motor control
DC-DC converters DC
Automotive environment



TO-220C



Dimensions	mm	
	Minimum	Maximum
A	15.7	15.9
B	9.9	10.1
C	4.2	4.4
D	0.7	0.9
F	3.4	3.6
G	4.98	5.18
H	2.7	2.9
J	0.44	0.46
K	13.2	13.4
L	1.1	1.3
Q	2.7	2.9
R	2.5	2.7
S	1.29	1.31
U	6.45	6.65
V	8.66	8.86

Dimensions : Millimetres



N-Channel Mosfet Transistor



Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Symbol	Parameter	Value	Unit
V_{DSS}	Collector - source voltage	60	V
V_{GS}	Gate - source voltage - continuous	± 20	V
I_D	Drain current-continuous	60	A
I_{DM}	Drain current - single pulse ($t_p \leq 10 \mu\text{s}$)	240	A
P_D	Total dissipation at $T_C = 25^\circ\text{C}$	110	W
T_J	Maximum operating junction temperature	175	$^\circ\text{C}$
T_{stg}	Storage temperature	-65 to 175	$^\circ\text{C}$

Thermal Characteristics

Symbol	Parameter	Maximum	Unit
$R_{th\ j-c}$	Thermal resistance, junction to case	1.36	$^\circ\text{C/W}$
$R_{th\ j-a}$	Thermal resistance, junction to ambient	62.5	$^\circ\text{C/W}$

Electrical Characteristics ($T_C = 25^\circ\text{C}$ Unless Otherwise Specified)

Symbol	Parameter	Conditions	Minimum	Maximum	Unit
$V_{(BR)\ DSS}$	Drain - source breakdown voltage	$V_{GS} = 0$; $I_D = 0.25 \text{ mA}$	60	-	V
$V_{GS(th)}$	Gate threshold voltage	$V_{DS} = V_{GS}$; $I_D = 0.25 \text{ mA}$	2	4	V
$R_{DS(on)}$	Drain - source on - resistance	$V_{GS} = 10 \text{ V}$; $I_D = 30 \text{ A}$	-	0.016	Ω
I_{GSS}	Gate - body leakage current	$V_{GS} = \pm 20 \text{ V}$; $V_{DS} = 0$	-	± 100	nA
I_{DSS}	Zero gate voltage drain current	$V_{DS} = \text{Maximum rating}$ $V_{DS} = \text{Maximum rating}$; $T_J = 125^\circ\text{C}$	-	1 10	μA
V_{SD}	Forward on - voltage	$I_S = 60 \text{ A}$; $V_{GS} = 0$	-	1.3	V

Part Number Table

Description	Part Number
N-Channel Mosfet Transistor	STP60NF06

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