

Isc N-Channel MOSFET Transistor

STP90NF03L

• FEATURES

- Typical $R_{DS(on)}=0.0056\ \Omega$
- Conduction losses reduced
- Switching losses reduced
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• APPLICATIONS

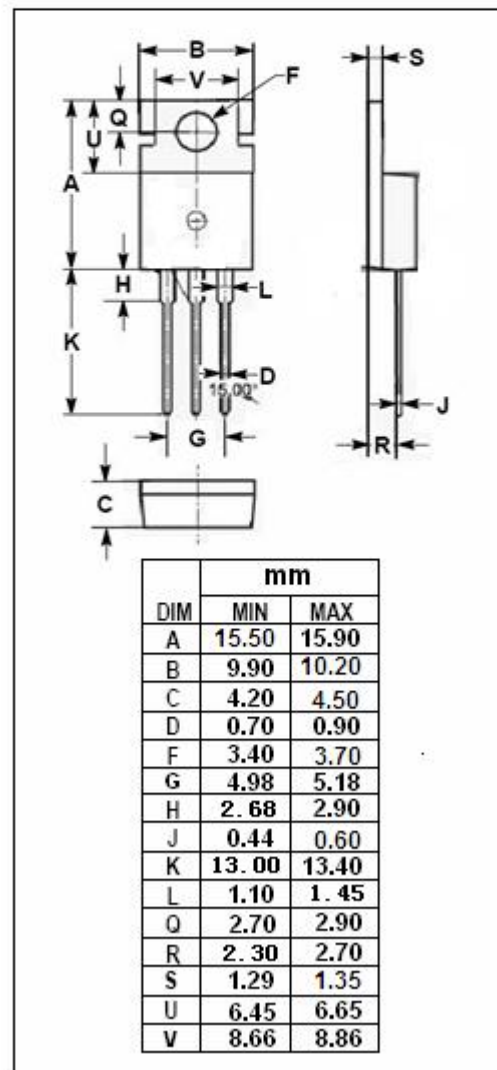
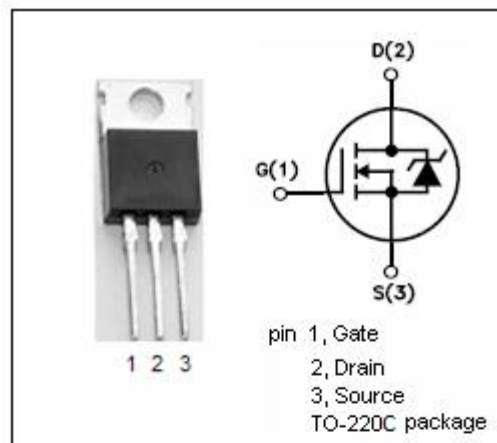
- Switching application

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	30	V
V_{GSS}	Gate-Source Voltage	± 20	V
I_D	Drain Current-Continuous@ $T_c=25^\circ\text{C}$ $T_c=100^\circ\text{C}$	90 65	A
I_{DM}	Drain Current-Single Pulsed	360	A
P_D	Total Dissipation	150	W
T_j	Max. Operating Junction Temperature	175	$^\circ\text{C}$
T_{stg}	Storage Temperature	-65~175	$^\circ\text{C}$

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(ch-c)}$	Channel-to-case thermal resistance	1	$^\circ\text{C/W}$
$R_{th(ch-a)}$	Channel-to-ambient thermal resistance	62.5	$^\circ\text{C/W}$



Isc N-Channel MOSFET Transistor**STP90NF03L****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 = 0.25mA	30			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =±20V; I _D =0.25mA	1		2.5	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V; I _D =45A V _{GS} = 5V; I _D =45A		5.6 7.0	6.5 12	mΩ
I _{GSS}	Gate-Source Leakage Current	V _{GS} = ±20V; V _{DS} = 0V			±0.1	μA
I _{DSS}	Drain-Source Leakage Current	V _{DS} = 30V; V _{GS} = 0V; T _J =25°C T _J =125°C			1 10	μA
V _{SDF}	Diode forward voltage	I _{SD} =90A, V _{GS} = 0 V			1.3	V

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