

isc N-Channel MOSFET Transistor

125N10T

DESCRIPTION

- Drain Current $I_D=120A@T_C=25^\circ C$
- Drain Source Voltage-
: $V_{DSS}=100V(\text{Min})$
- Static Drain-Source On-Resistance
: $R_{DS(on)} = 5.8m\Omega (\text{Max})@V_{GS}= 10V; I_D= 40A$
- Fast Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

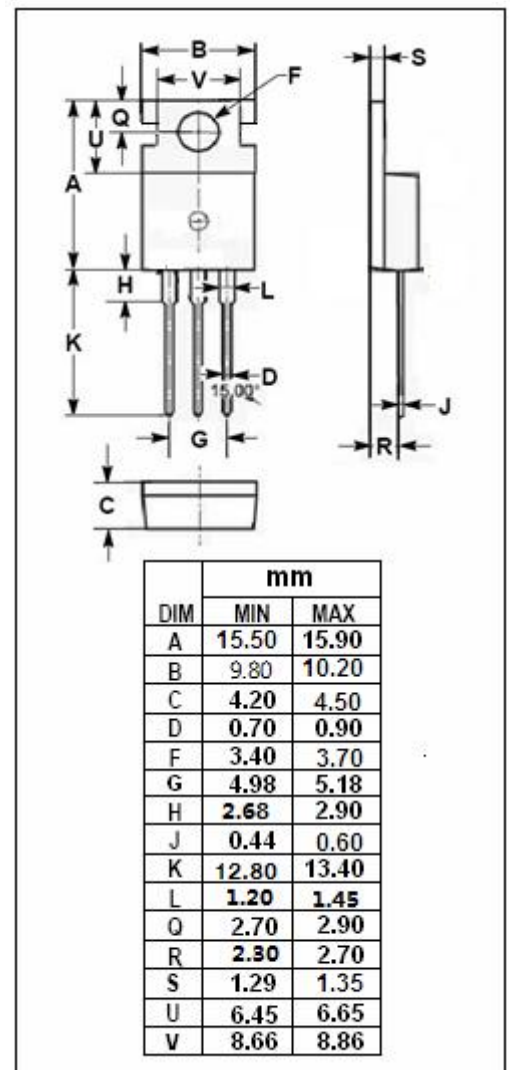
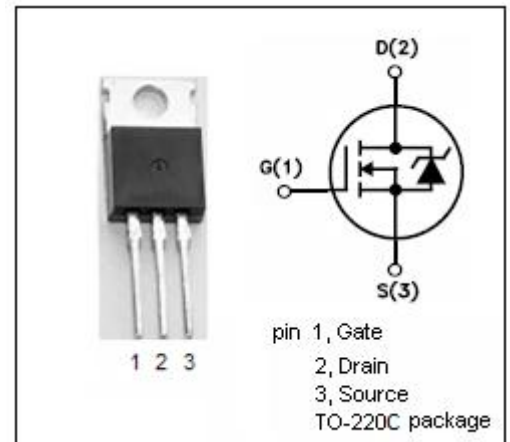
- Switch mode power supplies
- DC-DC converters for telecom, Off-line UPS, automotive System, solenoid and Motor Control

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

SYMBOL	ARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage ($V_{GS}=0$)	100	V
V_{GS}	Gate-Source Voltage	± 20	V
I_D	Drain Current-continuous@ $TC=25^\circ C$	120	A
I_{DM}	Pulsed Drain Current	480	A
P_{tot}	Total Dissipation@ $TC=25^\circ C$	192	W
	Total Dissipation@ $T_a=25^\circ C$	1.28	
T_j	Max. Operating Junction Temperature	-55~150	$^\circ C$
T_{stg}	Storage Temperature Range	-55~150	$^\circ C$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance,Junction to Case	0.78	$^\circ C/W$
$R_{th j-a}$	Thermal Resistance,Junction to Ambient	62.5	$^\circ C/W$



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• ELECTRICAL CHARACTERISTICS (T_c=25°C)

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V _{(BR)DSS}	Drain-Source Breakdown Voltage	V _{GS} = 0; I _D = 0.25mA	100		V
V _{GS(TH)}	Gate Threshold Voltage	V _{DS} = V _{GS} ; I _D = 0.25mA	2	4	V
R _{DS(ON)}	Drain-Source On-stage Resistance	V _{GS} = 10V; I _D = 80A		5.8	mΩ
I _{GSS}	Gate Source Leakage Current	V _{GS} = ±20V; V _{DS} = 0		± 100	nA
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} = 80V; V _{GS} = 0		1	uA
V _{SD}	Diode Forward Voltage	I _F = 80A; V _{GS} = 0		1.4	V

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