

isc N-Channel MOSFET Transistor

PSMN1R9-40PL

FEATURES

- Drain Current $-I_D = 150A @ T_C = 25^\circ C$
- Drain Source Voltage-
: $V_{DS} = 40V(\text{Min})$
- Static Drain-Source On-Resistance
: $R_{DS(on)} = 1.7m\Omega (\text{Max})$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

DESCRIPTION

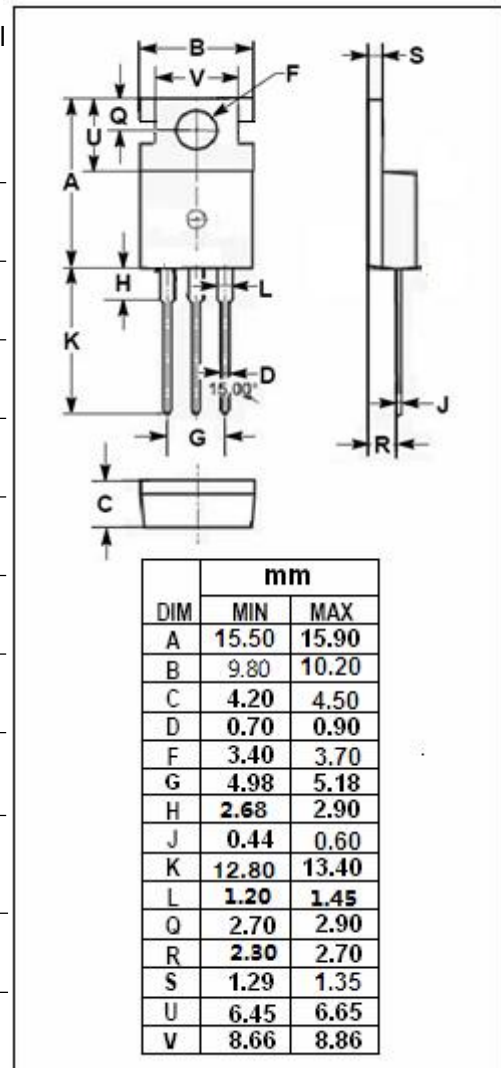
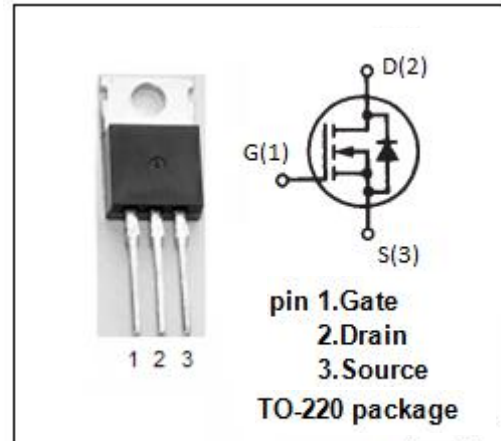
- Designed for use in switch mode power supplies and general purpose applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DS}	Drain-Source Voltage	40	V
V_{GS}	Gate-Source Voltage-Continuous	± 20	V
I_D	Drain Current-Continuous	150	A
I_{DM}	Drain Current-Single Pluse	1332	A
P_D	Total Dissipation @ $T_C = 25^\circ C$	349	W
T_J	Max. Operating Junction Temperature	-55~175	$^\circ C$
T_{stg}	Storage Temperature	-55~175	$^\circ C$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	0.43	$^\circ C/W$



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ELECTRICAL CHARACTERISTICS

T_C=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V _{(BR)DSS}	Drain-Source Breakdown Voltage	V _{GS} = 0; I _D = 0.25mA	40		V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = V _{GS} ; I _D = 1mA	1.4	2.1	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V; I _D = 25A		1.7	mΩ
I _{GSS}	Gate-Body Leakage Current	V _{GS} = ±16V; V _{DS} = 0		±100	nA
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} = 40V; V _{GS} = 0		1.0	μA
V _{SD}	Forward On-Voltage	I _S = 25A; V _{GS} = 0		1.2	V

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