

isc N-Channel MOSFET Transistor
IPB80N04S2-04
FEATURES

- Drain Current I_D : 80A@ $T_C=25^\circ\text{C}$
- Drain Source Voltage
: $V_{DSS}= 40\text{V}(\text{Min})$
- Static Drain-Source On-Resistance
: $R_{DS(\text{on})} = 3.7\text{m}\Omega (\text{Max})$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

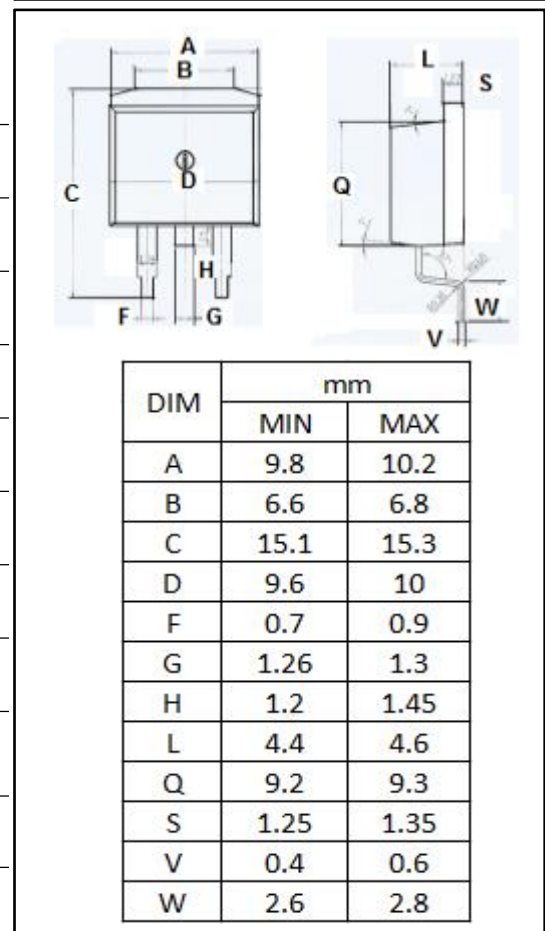
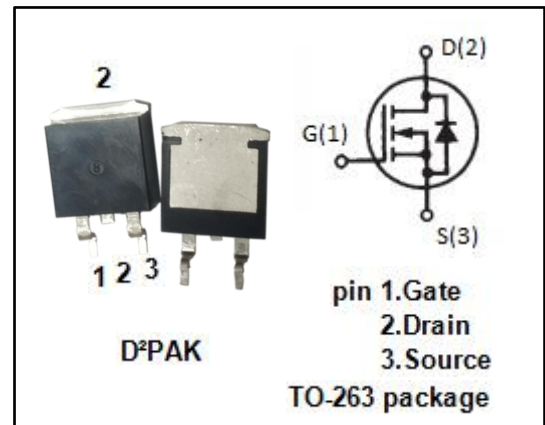
- High speed power switching
- Switching regulator, DC-DC converter

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	40	V
V_{GS}	Gate-Source Voltage	± 20	V
I_D	Drain Current-Continuous	80	A
I_{DM}	Drain Current-Single Pulsed	320	A
P_D	Total Dissipation @ $T_C=25^\circ\text{C}$	300	W
T_j	Max. Operating Junction Temperature	-55~175	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55~175	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(\text{ch-c})}$	Channel-to-case thermal resistance	0.5	$^\circ\text{C/W}$



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ELECTRICAL CHARACTERISTICS

T_c=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} = 0V; I _D = 1.0mA	40		V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = V _{GS} ; I _D = 0.25mA	2.1	4.0	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} =10V; I _D = 80A		3.7	mΩ
I _{GSS}	Gate-Source Leakage Current	V _{GS} = ±20V; V _{DS} = 0V		±0.1	μA
I _{DSS}	Drain-Source Leakage Current	V _{DS} = 40V; V _{GS} = 0V		1.0	μA
V _{SD}	Diode forward voltage	I _F = 80A; V _{GS} = 0V		1.3	V

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