

isc N-Channel MOSFET Transistor

IPD78CN10N,IIPD78CN10N

• FEATURES

- Static drain-source on-resistance:
 $R_{DS(on)} \leq 78m\Omega$
- Enhancement mode:
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• DESCRIPTION

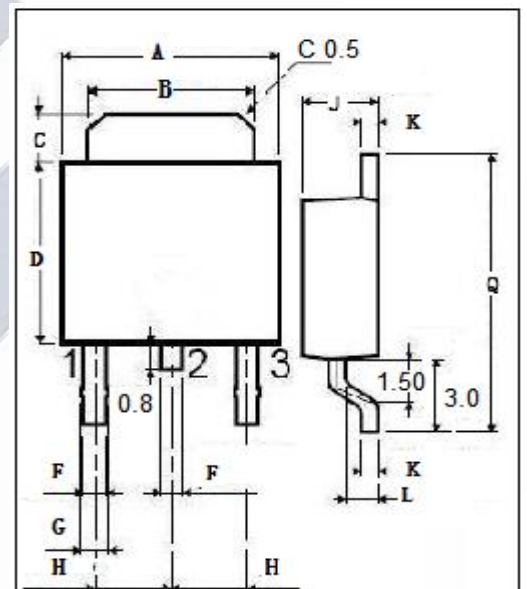
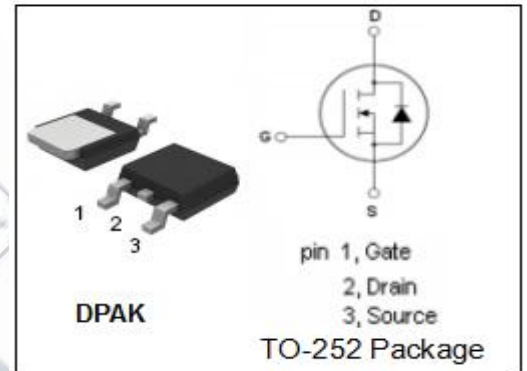
- Ideal for high-frequency switching and synchronous rectification

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DS}	Drain-Source Voltage	100	V
V_{GS}	Gate-Source Voltage	± 20	V
I_D	Drain Current-Continuous	13	A
I_{DM}	Drain Current-Single Pulsed	52	A
P_D	Total Dissipation @ $T_c=25^\circ C$	31	W
T_j	Max. Operating Junction Temperature	175	$^\circ C$
T_{stg}	Storage Temperature	-55~175	$^\circ C$

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(j-c)}$	Channel-to-case thermal resistance	4.9	$^\circ C/W$
$R_{th(j-a)}$	Channel-to-ambient thermal resistance	75	$^\circ C/W$



DIM	mm	
	MIN	MAX
A	6.40	6.60
B	5.20	5.40
C	1.15	1.35
D	5.70	6.10
F	0.65	
G	0.75	
H	2.10	2.50
J	2.10	2.40
K	0.40	0.60
L	0.90	1.10
Q	9.90	10.1

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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 =1mA	100			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} ; I _D =12 μA	2		4	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} =10V; I _D =13A			78	mΩ
I _{GSS}	Gate-Source Leakage Current	V _{GS} = 20V; V _{DS} =0V			0.1	μA
I _{DSS}	Drain-Source Leakage Current	V _{DS} =80V; V _{GS} = 0V			1	μA
V _{SD}	Diode forward voltage	I _F =13A, V _{GS} = 0V			1.2	V