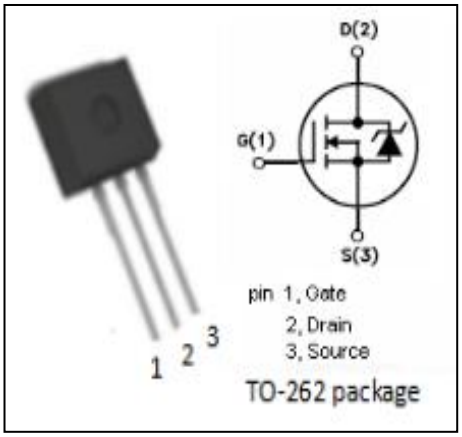
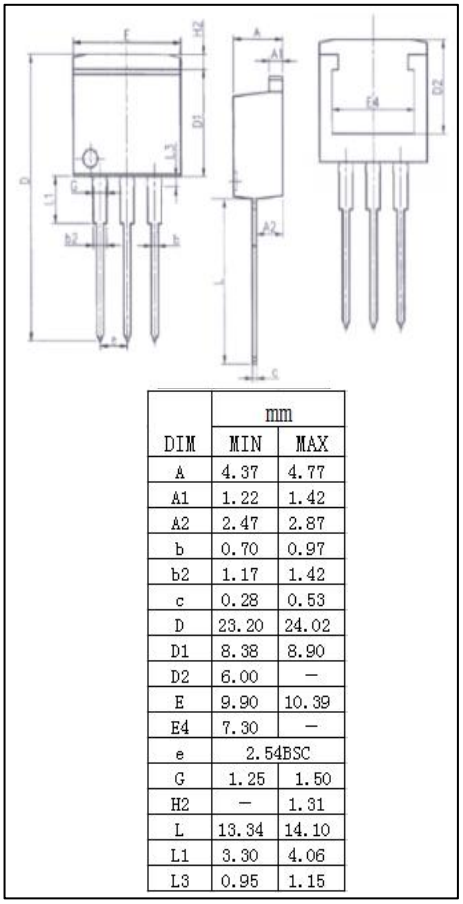
isc N-Channel MOSFET Transistor IPI65R420CFD



- **FEATURES**
- Static drain-source on-resistance:
  R_{DS}(on) ≤0.42Ω
- Enhancement mode
- Fast Switching Speed
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

- **DESCRIPTION**
- Provide all benefits of a fast switching SJ MOSFET while offering an extremely fast and robust body diode



DIM	mm MIN	MAX
A	4.37	4.77
A1	1.22	1.42
A2	2.47	2.87
b	0.70	0.97
b2	1.17	1.42
c	0.28	0.53
D	23.20	24.02
D1	8.38	8.90
D2	6.00	—
E	9.90	10.39
E4	7.30	—
e	2.54BSC	
G	1.25	1.50
H2	—	1.31
L	13.34	14.10
L1	3.30	4.06
L3	0.95	1.15

- **ABSOLUTE MAXIMUM RATINGS(T_a=25℃)**

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	650	V
V_{GS}	Gate-Source Voltage	±20	V
I_D	Drain Current-Continuous	8.7	A
I_{DM}	Drain Current-Single Pulsed	27	A
P_D	Total Dissipation @T_C=25℃	83.3	W
T_j	Max. Operating Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55~150	℃

- **THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
Rth(ch-c)	Channel-to-case thermal resistance	1.5	℃/W

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
BV_{DSS}	Drain-Source Breakdown Voltage	V_{GS}=0V; I_D =1mA	650			V
$V_{GS(th)}$	Gate Threshold Voltage	V_{DS}=V_{GS}; I_D =0.3mA	3.5		4.5	V
$R_{DS(on)}$	Drain-Source On-Resistance	V_{GS}=10V; I_D=3.4A			0.42	Ω
I_{GSS}	Gate-Source Leakage Current	V_{GS}=20V; V_{DS}=0V			0.1	μA
I_{DSS}	Drain-Source Leakage Current	V_{DS}=650V; V_{GS}= 0V			1	μA
V_{SD}	Diode forward voltage	I_F=5.2A; V_{GS} = 0V		0.9		V