

isc N-Channel MOSFET Transistor

FDP7042L

FEATURES

- Drain Current $-I_D = 50A @ T_C = 25^\circ C$
- Drain Source Voltage-
: $V_{DS} = 30V(\text{Min})$
- Static Drain-Source On-Resistance
: $R_{DS(on)} = 7.5m\Omega (\text{Max}) @ V_{GS} = 10V$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

DESCRIPTION

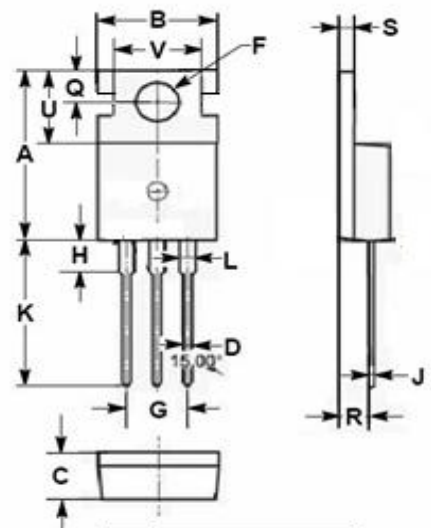
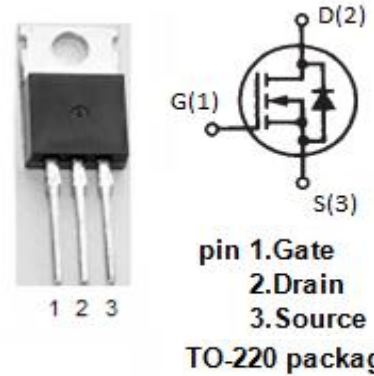
- motor drive, DC-DC converter, power switch and solenoid drive.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DS}	Drain-Source Voltage	30	V
V_{GS}	Gate-Source Voltage-Continuous	± 12	V
I_D	Drain Current-Continuous	50	A
I_{DM}	Drain Current-Single Pluse	150	A
P_D	Total Dissipation @ $T_C = 25^\circ C$	83	W
T_J	Max. Operating Junction Temperature	175	$^\circ C$
T_{stg}	Storage Temperature	-65~175	$^\circ C$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	1.8	$^\circ C/W$



DIM	mm	
	MIN	MAX
A	15.50	15.90
B	9.80	10.20
C	4.20	4.50
D	0.70	0.90
F	3.40	3.70
G	4.98	5.18
H	2.68	2.90
J	0.44	0.60
K	12.80	13.40
L	1.20	1.45
Q	2.70	2.90
R	2.30	2.70
S	1.29	1.35
U	6.45	6.65
V	8.66	8.86

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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	30	--	V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = V _{GS} ; I _D = 0.25mA	0.8	2.0	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V; I _D =25A	--	7.5	mΩ
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 4.5V; I _D =25A	--	9	mΩ
I _{GSS}	Gate-Body Leakage Current	V _{GS} = ±12V; V _{DS} = 0	--	±100	nA
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =24V; V _{GS} = 0	--	1	uA
V _{SD}	Forward On-Voltage	I _S =25A; V _{GS} = 0	--	1.3	V

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