

isc N-Channel MOSFET Transistor

FDD8878

FEATURES

- Drain Current : $I_D=40A@T_C=25^{\circ}C$
- Drain Source Voltage
: $V_{DSS}=30V(\text{Min})$
- Static Drain-Source On-Resistance
: $R_{DS(on)} = 15m\Omega (\text{Max}) @V_{GS}= 10V$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

DESCRIPTION

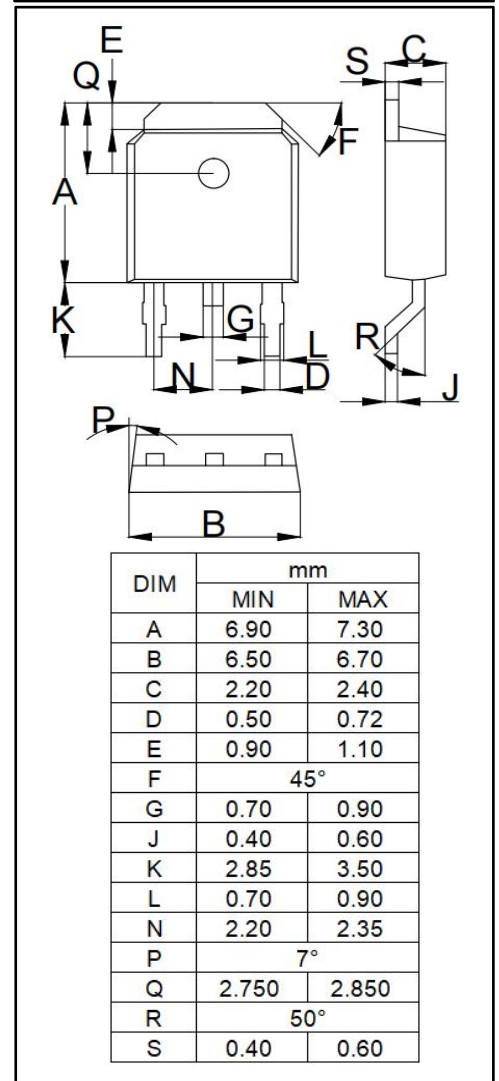
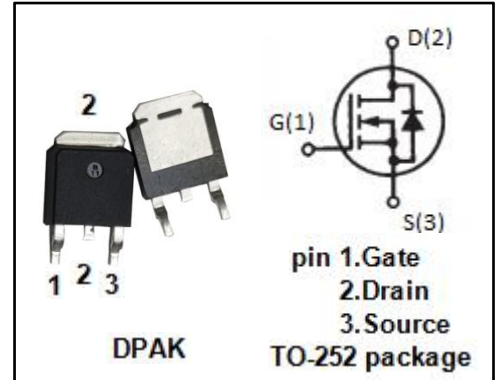
- motor drive, DC-DC converter, power switch and solenoid drive.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	30	V
V_{GS}	Gate-Source Voltage-Continuous	± 20	V
I_D	Drain Current-Continuous	40	A
I_{DM}	Drain Current-Single Pluse	160	A
P_D	Total Dissipation @ $T_C=25^{\circ}C$	40	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	3.75	$^{\circ}C/W$



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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	30	-	V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = V _{GS} ; I _D = 0.25mA	1.2	2.5	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V; I _D =35A	-	15	mΩ
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 4.5V; I _D =35A	-	18.5	mΩ
I _{GSS}	Gate-Body Leakage Current	V _{GS} = ±20V; V _{DS} = 0	-	±100	nA
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} = 24V; V _{GS} = 0	-	1.0	uA
V _{SD}	Forward On-Voltage	I _S =35A; V _{GS} = 0	-	1.25	V
V _{SD}	Forward On-Voltage	I _S =3.2A; V _{GS} = 0	-	1.0	V

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