

isc N-Channel MOSFET Transistor

MTD3055V

FEATURES

- Drain Current $-I_D = 12A @ T_C = 25^\circ C$
- Drain Source Voltage-
: $V_{DS} = 60V(\text{Min})$
- Static Drain-Source On-Resistance
: $R_{DS(on)} = 0.15 \Omega (\text{Max})$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

DESCRIPTION

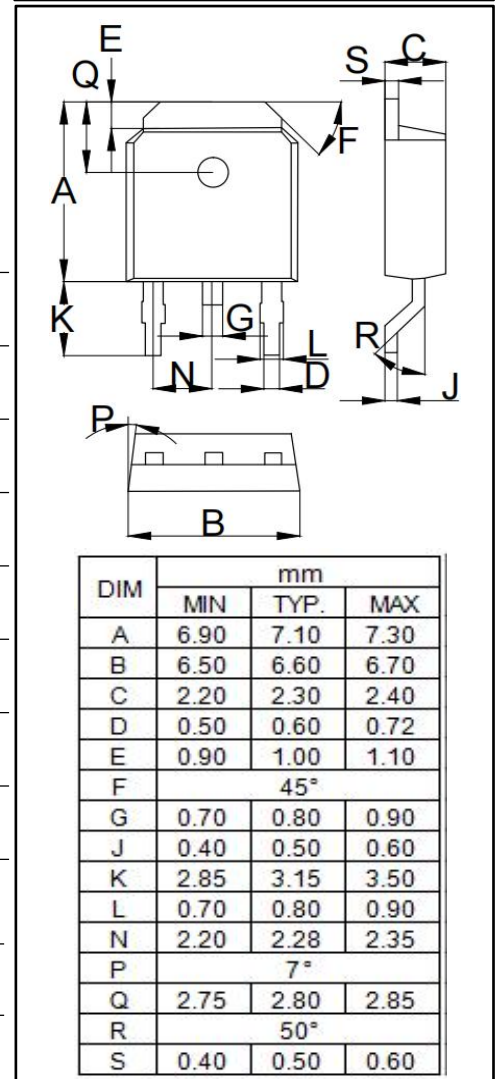
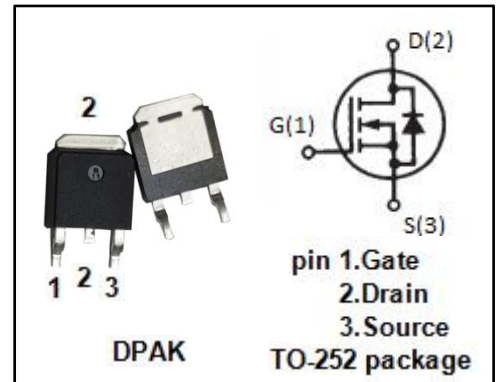
- motor drive, DC-DC converter, power switch and solenoid drive

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DS}	Drain-Source Voltage	60	V
V_{GS}	Gate-Source Voltage	± 20	V
I_D	Drain Current-Continuous	12	A
I_{DM}	Drain Current-Single Pulsed	37	A
P_D	Total Dissipation @ $T_C = 25^\circ C$	48	W
T_j	Operating Junction Temperature	-55~175	$^\circ C$
T_{stg}	Storage Temperature	-55~175	$^\circ C$

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(ch-c)}$	Channel-to-case thermal resistance	3.13	$^\circ C/W$



isc N-Channel MOSFET Transistor**MTD3055V****ELECTRICAL CHARACTERISTICS** $T_c=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
BV_{DSS}	Drain-Source Breakdown Voltage	$V_{GS}=0V$; $I_D = 0.25mA$	60	--	V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}$; $I_D = 0.25mA$	2.0	4.0	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS} = 10V$; $I_D = 6A$	--	0.15	Ω
I_{GSS}	Gate-Source Leakage Current	$V_{GS} = \pm 20V$; $V_{DS} = 0V$	--	± 100	nA
I_{DSS}	Drain-Source Leakage Current	$V_{DS} = 60V$; $V_{GS} = 0V$	--	10	μA
V_{SD}	Diode forward voltage	$I_{SD} = 12A$, $V_{GS} = 0V$	--	1.6	V

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