

isc N-Channel MOSFET Transistor
SUM45N25-58
FEATURES

- Drain Current : $I_D = 45 @ T_C = 25^\circ\text{C}$
- Drain Source Voltage
: $V_{DSS} = 250\text{V}(\text{Min})$
- Static Drain-Source On-Resistance
: $R_{DS(\text{on})} = 58\text{m}\Omega (\text{Max}) @ V_{GS} = 10\text{V}$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

DESCRIPTION

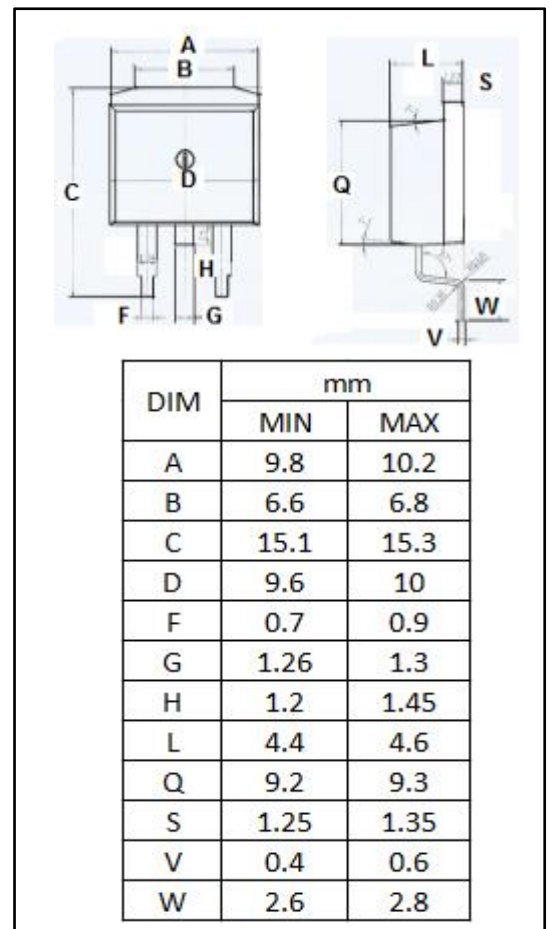
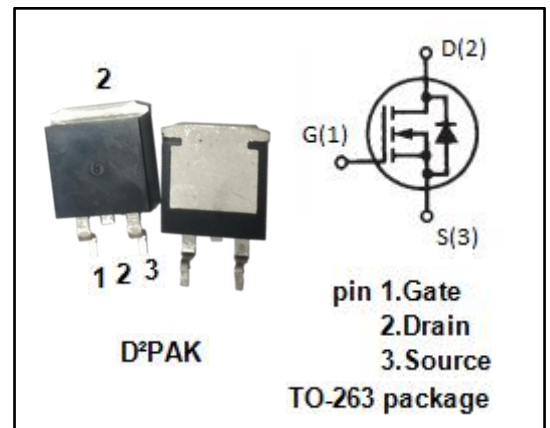
- motor drive, DC-DC converter, power switch and solenoid drive.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	250	V
V_{GS}	Gate-Source Voltage	± 30	V
I_D	Drain Current-Continuous	45	A
I_{DM}	Drain Current-Single Pulsed	70	A
P_D	Total Dissipation @ $T_C = 25^\circ\text{C}$	375	W
T_j	Max. Operating Junction Temperature	175	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55~175	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(J-c)}$	Junction-to-case thermal resistance	0.4	$^\circ\text{C}/\text{W}$



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ELECTRICAL CHARACTERISTICS

T_c=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V; I _D =0.25mA	250	-	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 =20A	-	58	mΩ
I _{GSS}	Gate-Source Leakage Current	V _{GS} =±30V	-	±250	nA
I _{DSS}	Drain-Source Leakage Current	V _{DS} = 200V; V _{GS} = 0V	-	1	μA
V _{SD}	Diode forward voltage	I _S = 45A, V _{GS} = 0V	-	1.5	V

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