

iscN-Channel MOSFET Transistor
TK9A45D
• FEATURES

- Low drain-source on-resistance:
 $R_{DS(ON)} = 0.77\Omega$ (MAX)
- Enhancement mode:
 $V_{th} = 2$ to 4 V ($V_{DS} = 10$ V, $I_D = 1.0$ mA)
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• DESCRIPTION

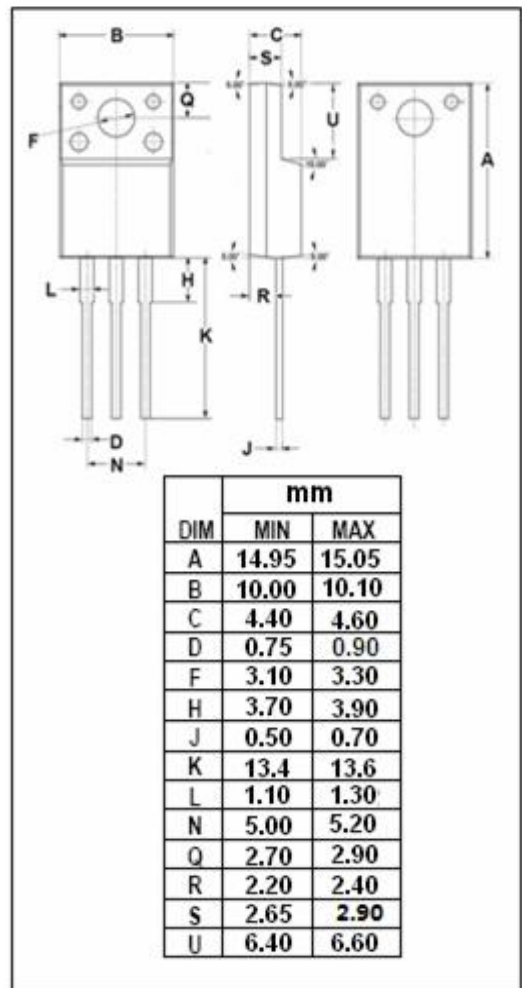
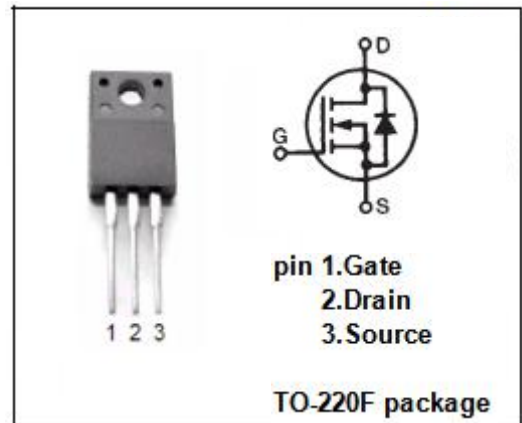
- Switching Voltage Regulators

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DS}	Drain-Source Voltage	450	V
V_{GS}	Gate-Source Voltage	± 30	V
I_D	Drain Current-Continuous	9	A
I_{DM}	Drain Current-Single Pulsed	36	A
P_D	Total Dissipation @ $T_c = 25^\circ\text{C}$	40	W
T_j	Max. Operating Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55~150	$^\circ\text{C}$

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(ch-c)}$	Channel-to-case thermal resistance	3.125	$^\circ\text{C/W}$



iscN-Channel MOSFET Transistor**TK9A45D****ELECTRICAL CHARACTERISTICS**T_c=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V; I _D = 10mA	450			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = 10V; I _D =1.0mA	2		4	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} =10V; I _D =4.5A			0.77	Ω
I _{GSS}	Gate-Source Leakage Current	V _{GS} = ±30V; V _{DS} = 0V			±1	μA
I _{DSS}	Drain-Source Leakage Current	V _{DS} =450V; V _{GS} = 0V			10	μA
V _{SDF}	Diode forward voltage	I _{DR} =9A, V _{GS} = 0 V			1.7	V

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