

isc N-Channel MOSFET Transistor

TK9J90E

• DESCRIPTION

- Drain Current $I_D = 9A @ T_C = 25^\circ C$
- Drain Source Voltage-
: $V_{DSS} = 900V(\text{Min})$
- Fast Switching Speed
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• APPLICATIONS

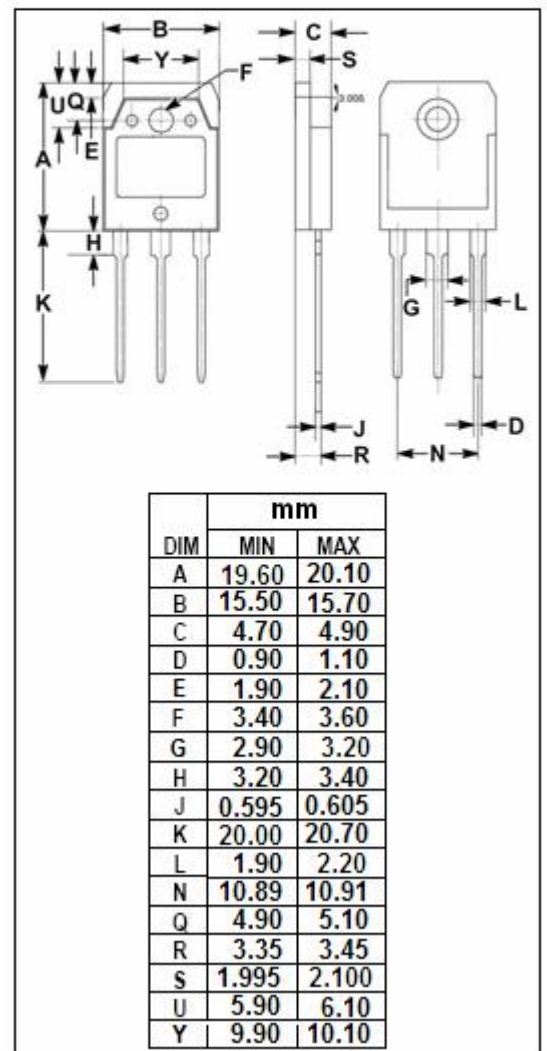
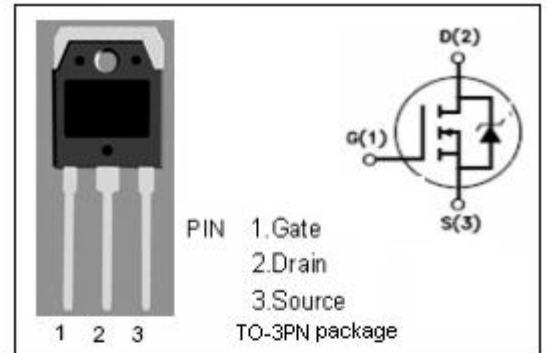
- Switching voltage regulators

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage ($V_{GS}=0$)	900	V
V_{GS}	Gate-Source Voltage	± 30	V
I_D	Drain Current-continuous@ $T_C = 25^\circ C$	9	A
$I_{D(puls)}$	Pulse Drain Current	27	A
P_{tot}	Total Dissipation@ $T_C = 25^\circ C$	250	W
T_j	Max. Operating Junction Temperature	150	$^\circ C$
T_{stg}	Storage Temperature Range	-55~150	$^\circ C$

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	0.5	$^\circ C/W$



isc N-Channel MOSFET Transistor**TK9J90E****• ELECTRICAL CHARACTERISTICS (T_c=25°C)**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYPE	MAX	UNIT
V _{(BR)DSS}	Drain-Source Breakdown Voltage	V _{GS} = 0; I _D =10mA	900			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = V _{GS} ; I _D =0.9mA	2.5		4.0	V
V _{SD}	Diode Forward On-Voltage	I _S =9A; V _{GS} = 0			1.7	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V; I _D =4.5A			1.3	Ω
I _{GSS}	Gate-Body Leakage Current	V _{GS} = ±30V; V _{DS} = 0			±1	μA
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} = 720V; V _{GS} = 0			10	μA

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