

iscN-Channel MOSFET Transistor
TK3P50D
• FEATURES

- Low drain-source on-resistance:
 $R_{DS(ON)} = 3\Omega$ (MAX) ($V_{GS} = 10\text{ V}$)
- Enhancement mode:
 $V_{th} = 2.4$ to 4.4 V ($V_{DS} = 10\text{ V}$, $I_D = 1.0\text{ mA}$)
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• DESCRIPTION

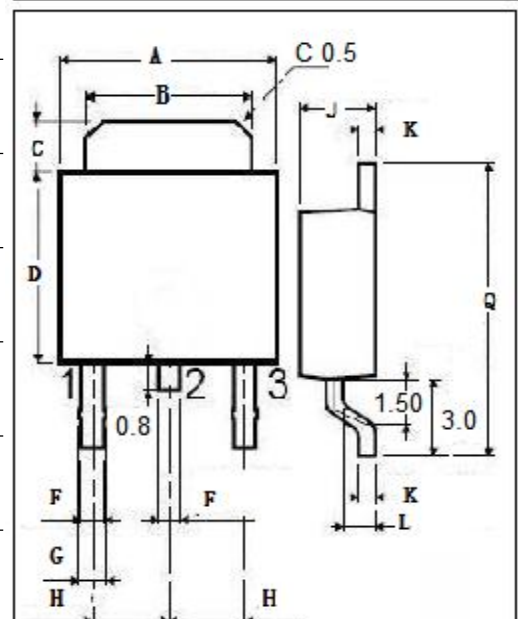
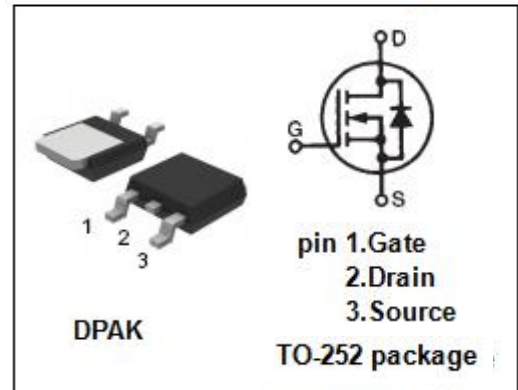
- Switching Voltage Regulators

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DS}	Drain-Source Voltage	500	V
V_{GS}	Gate-Source Voltage	± 30	V
I_D	Drain Current-Continuous	3	A
I_{DM}	Drain Current-Single Pulsed	6	A
P_D	Total Dissipation @ $T_c = 25^\circ\text{C}$	60	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	2.08	$^\circ\text{C/W}$



DIM	mm	
	MIN	MAX
A	6.40	6.60
B	5.20	5.40
C	1.15	1.35
D	5.70	6.10
F	0.65	
G	0.75	
H	2.10	2.50
J	2.10	2.40
K	0.40	0.60
L	0.90	1.10
Q	9.90	10.1

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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	500			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = 10V; I _D =1.0mA	2.4		4.4	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} =10V; I _D =1.5A			3	Ω
I _{GSS}	Gate-Source Leakage Current	V _{GS} = ±30V; V _{DS} = 0V			±1	μA
I _{DSS}	Drain-Source Leakage Current	V _{DS} = 500V; V _{GS} = 0V			10	μA
V _{SDF}	Diode forward voltage	I _{DR} =3A, V _{GS} = 0 V			1.7	V

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