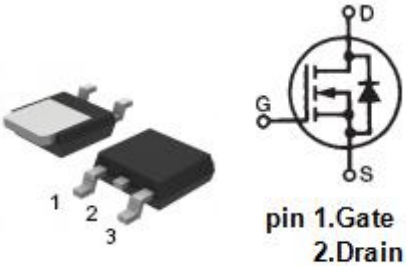
iscN-Channel MOSFET Transistor TK3R1P04PL

- **FEATURES**
- Low drain-source on-resistance:
  R_{DS}(ON) = 3.1mΩ (MAX) (V_{GS} = 10 V)
- Enhancement mode:
  Vth = 1.4 to 2.4V (V_{DS} = 10 V, I_D=0.5mA)
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

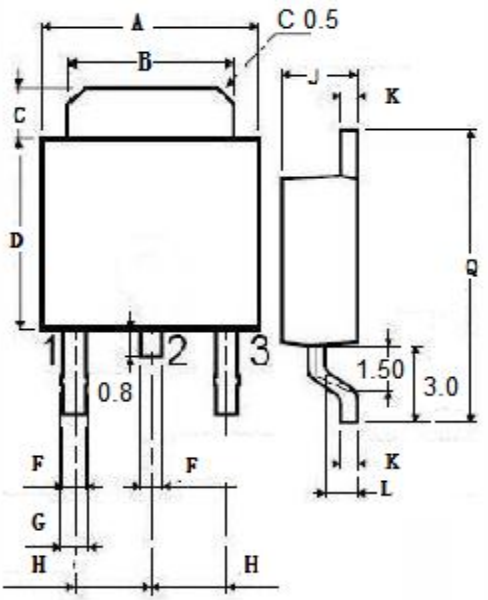


pin 1.Gate
2.Drain
3.Source
TO-252 package

- **DESCRITION**
- Switching Voltage Regulators

- **ABSOLUTE MAXIMUM RATINGS(T_a=25℃)**

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	40	V
V_{GS}	Gate-Source Voltage	±20	V
I_D	Drain Current-Continuous	58	A
I_{DM}	Drain Current-Single Pulsed	400	A
P_D	Total Dissipation @T_C=25℃	87	W
T_j	Max. Operating Junction Temperature	175	℃
T_{stg}	Storage Temperature	-55~175	℃



DIM	mm MIN	mm 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

- **THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
Rth(ch-c)	Channel-to-case thermal resistance	1.72	℃/W

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
BV_{DSS}	Drain-Source Breakdown Voltage	V_{GS}=0V; I_D= 10mA	40			V
$V_{GS(th)}$	Gate Threshold Voltage	V_{DS}= 10V; I_D=0.5mA	1.4		2.4	V
$R_{DS(on)}$	Drain-Source On-Resistance	V_{GS}= 10V; I_D=29A			3.1	mΩ
I_{GSS}	Gate-Source Leakage Current	V_{GS}= ±20V;V_{DS}= 0V			±0.1	μA
I_{DSS}	Drain-Source Leakage Current	V_{DS}= 40V; V_{GS}= 0V			10	μA
V_{SDF}	Diode forward voltage	I_{DR} =58A, V_{GS} = 0 V			1.5	V

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