

isc N-Channel MOSFET Transistor

TJ9A10M3, ITJ9A10M3

• FEATURES

- Low drain-source on-resistance:
 $R_{DS(on)} \leq 0.17\Omega$. ($V_{GS} = -10\text{ V}$)
- Enhancement mode:
 $V_{th} = -2.0\text{ to }-4.0\text{ V}$ ($V_{DS} = -10\text{ V}$, $I_D = -1\text{ mA}$)
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• DESCRIPTION

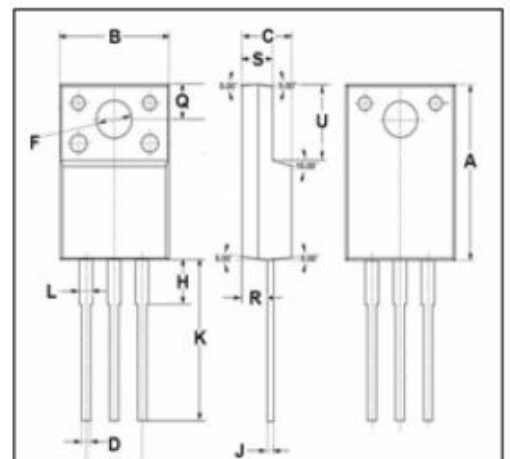
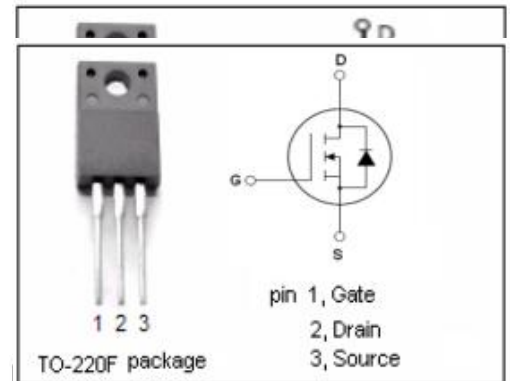
- Switching Voltage Regulators

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DS}	Drain-Source Voltage	-100	V
V_{GS}	Gate-Source Voltage	± 20	V
I_D	Drain Current-Continuous	-9	A
I_{DM}	Drain Current-Single Pulsed	-18	A
P_D	Total Dissipation @ $T_c=25^\circ\text{C}$	19	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	6.57	$^\circ\text{C/W}$
$R_{th(ch-a)}$	Channel-to-ambient thermal resistance	62.5	$^\circ\text{C/W}$



DIM	mm	
	MIN	MAX
A	14.95	15.05
B	10.00	10.10
C	4.40	4.60
D	0.75	0.90
F	3.10	3.30
H	3.70	3.90
J	0.50	0.70
K	13.4	13.6
L	1.10	1.30
N	5.00	5.20
Q	2.70	2.90
R	2.20	2.40
S	2.65	2.90
U	6.40	6.60

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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	-100			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =-10V; I _D =-1mA	-2.0		-4.0	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} =-10V; I _D =-4.5A			170	mΩ
I _{GSS}	Gate-Source Leakage Current	V _{GS} = ±20V; V _{DS} = 0V			±0.1	μA
I _{DSS}	Drain-Source Leakage Current	V _{DS} =-100V; V _{GS} = 0V			-10	μA
V _{SDF}	Diode forward voltage	I _{DR} =-9A, V _{GS} = 0 V			-1.4	V

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