

INCHANGE SEMICONDUCTOR

Isc N-Channel MOSFET Transistor

TK32A12N1, ITK32A12N1

FEATURES

- Low drain-source on-resistance: $R_{DS}(ON) = 11.0 \text{ m}\Omega \text{ (typ.)} (V_{GS} = 10 \text{ V})$
- Enhancement mode:

Vth = 2.0 to 4.0V (VDS = 10 V, ID=0.5mA)

- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

DESCRITION

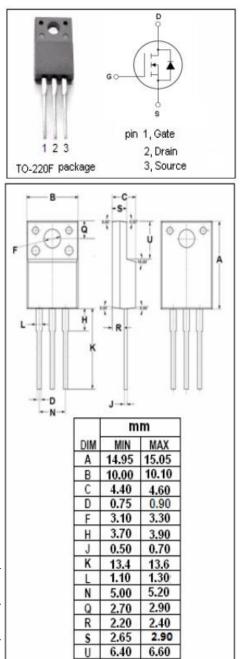
Switching Voltage Regulators

• ABSOLUTE MAXIMUM RATINGS(Ta=25°C)

			UNIT	
V _{DSS}	Drain-Source Voltage	120	V	
V _{GS}	Gate-Source Voltage	±20	V	
ID	Drain Current-Continuous	32	A	
I _{DM}	Drain Current-Single Pulsed 110		A	
PD	Total Dissipation @Tc=25℃	30	W	
Tj	Max. Operating Junction Temperature	150	°C	
T _{stg}	Storage Temperature	-55~150	°C	

SYMBOL	PARAMETER	МАХ	UNIT
Rth(ch-c)	Channel-to-case thermal resistance	4.16	°C /W
Rth(ch-a)	Channel-to-ambient thermal resistance	62.5	°C/W

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ELECTRICAL CHARACTERISTICS

 $T_{C}\text{=}25^{\circ}\!\!\!\!\mathrm{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	ТҮР	МАХ	UNIT
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V; I _D = 10mA	120			v
V _{GS} (th)	Gate Threshold Voltage	V _{DS} = 10V; I _D =0.5mA	2.0		4.0	v
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} =10V; I _D =16A		11.0	13.8	mΩ
I _{GSS}	Gate-Source Leakage Current	V _{GS} = ±20V;V _{DS} =0V			±0.1	μA
I _{DSS}	Drain-Source Leakage Current	V _{DS} = 120V; V _{GS} = 0V			10	μA
VSDF	Diode forward voltage	I _{DR} =32A, V _{GS} = 0 V			1.2	V

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