

Isc N-Channel MOSFET Transistor

TK56E12N1

• FEATURES

- Low drain-source on-resistance:
 RDS(ON) = 7.5mΩ (VGS = 10 V)
- Enhancement mode:
 - Vth = 2.0 to 4.0V (VDS = 10 V, ID=1.0mA)
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

DESCRITION

Switching Voltage Regulators

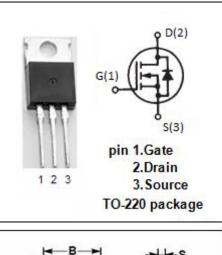
• ABSOLUTE MAXIMUM RATINGS(Ta=25°C)

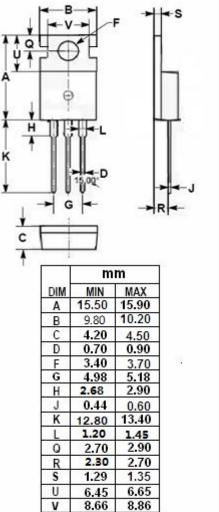
SYMBOL	PARAMETER	VALUE	UNIT
V _{DSS}	Drain-Source Voltage	120	V
V _{GS}	Gate-Source Voltage	±20	V
ID	Drain Current-Continuous	56	А
I _{DM}	Drain Current-Single Pulsed 210		А
P _D	Total Dissipation @T _c =25°C 168		W
Tj	Max. Operating Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55~150	°C
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• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
Rth(ch-c)	Channel-to-case thermal resistance	0.74	°C/W

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ELECTRICAL CHARACTERISTICS

$T_{\text{C}}\text{=}25^{\circ}\!\!\!\!\!\mathrm{C}$ 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 =1.0mA	2.0		4.0	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} =10V; I _D =28A			7	mΩ
lgss	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
V _{SDF}	Diode forward voltage	I _{DR} =56A, V _{GS} = 0 V			1.2	v



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