

INCHANGE SEMICONDUCTOR

isc N-Channel MOSFET Transistor

TK72E12N1

• FEATURES

- With TO-220 packaging
- High speed switching
- Very high commutation ruggedness
- · Easy to use
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

APPLICATIONS

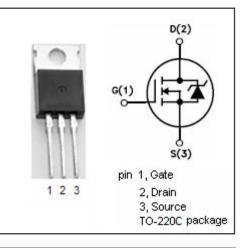
- PFC stages
- LCD & PDP TV
- Power supply
- Switching applications

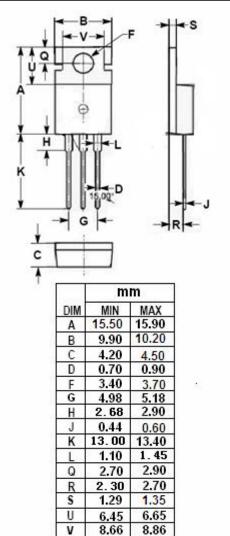
SYMBOL	PARAMETER	VALUE	UNIT	
V _{DSS}	Drain-Source Voltage	120	V	
V _{GSS}	Gate-Source Voltage	±20	V	
ID	Drain Current-Continuous@Tc=25℃ Tc=100℃	179 72	А	
I _{DM}	Drain Current-Single Pulsed	360	А	
PD	Total Dissipation	255	W	
Tj	Operating Junction Temperature	-55~150	°C	
T _{stg}	Storage Temperature	-55~150	°C	

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER		UNIT	
Rth(ch-c)	Channel-to-case thermal resistance	0.49	°C /W	
Rth(ch-a)	Channel-to-ambient thermal resistance	83.3	°C/W	

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isc website: www.iscsemi.cn



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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} =V _{GS} ; I _D =1.0mA	2.0		4.0	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V; I _D =36A		3.6	4.4	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	μ Α
V _{SDF}	Diode forward voltage	I _{SD} =72A, V _{GS} = 0 V			1.2	v

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