

isc N-Channel MOSFET Transistor

SMK0870F

• FEATURES

- · With TO-220F packaging
- · High speed switching
- Standard level gate drive
- · Easy to use
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

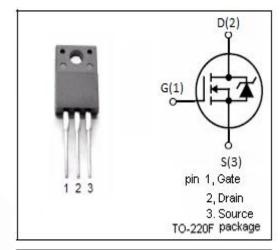
- Power supply
- · Switching applications

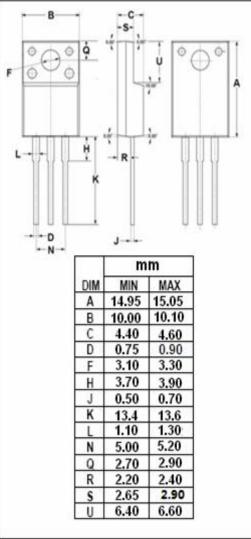


SYMBOL	PARAMETER	VALUE	UNIT
V _{DSS}	Drain-Source Voltage	700	V
V _{GSS}	Gate-Source Voltage	±30	V
I _D	Drain Current-Continuous	8	А
I _{DM}	Drain Current-Single Pulsed	32	А
P _D	Total Dissipation	40	W
Tj	Operating Junction Temperature	150	$^{\circ}$ C
T _{stg}	Storage Temperature	-55~150	${\mathbb C}$

THERMAL CHARACTERISTICS

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





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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	ТҮР	MAX	UNIT
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V; I _D = 0.25mA	700			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} ; I _D =1mA	2.0		4.0	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V; I _D =4A		770	900	mΩ
I _{GSS}	Gate-Source Leakage Current	V_{GS} = $\pm30V;V_{DS}$ = $0V$			±0.1	μА
I _{DSS}	Drain-Source Leakage Current	V _{DS} = 700V; V _{GS} = 0V			1	μА
V _{SDF}	Diode forward voltage	I _{SD} =8A, V _{GS} = 0 V			1.4	V

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