

isc N-Channel MOSFET Transistor

FCP125N65S3

• FEATURES

- Drain Source Voltage-
: $V_{DSS} = 650V(\text{Min})$
- Static Drain-Source On-Resistance
: $R_{DS(on)} = 125m\Omega (\text{Max})$
- Fast Switching
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• APPLICATIONS

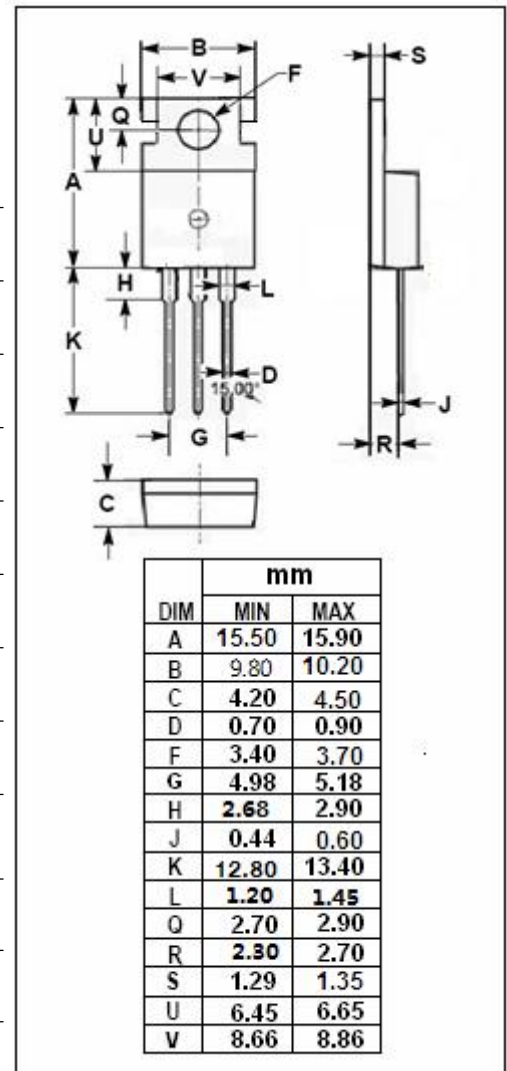
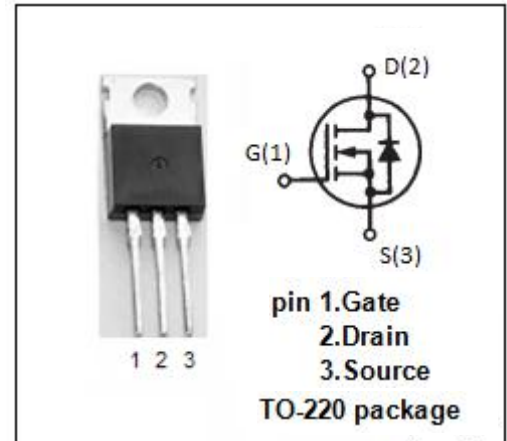
- Switch-Mode and Resonant-Mode Power Supplies
- DC-DC Converters
- AC and DC Motor Drives

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	650	V
V_{GS}	Gate-Source Voltage-Continuous	± 30	V
I_D	Drain Current-Continuous	24	A
I_{DM}	Drain Current-Single Plused	60	A
P_D	Total Dissipation @ $T_c=25^\circ\text{C}$	181	W
T_j	Max. Operating Junction Temperature	-55~150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55~150	$^\circ\text{C}$

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	0.69	$^\circ\text{C/W}$



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• ELECTRICAL CHARACTERISTICS

T_c=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYPE	MAX	UNIT
V _{(BR)DSS}	Drain-Source Breakdown Voltage	V _{GS} = 0; I _D =1mA	650			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = V _{GS} ; I _D = 590uA	2.5		4.5	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V; I _D = 12A			125	mΩ
I _{GSS}	Gate-Body Leakage Current	V _{GS} = ±30V; V _{DS} = 0			±100	nA
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =650V; V _{GS} = 0			1	μA
V _{SD}	Diode Forward On-voltage	I _F = 12A; V _{GS} = 0			1.2	V

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