

isc N-Channel MOSFET Transistor

FCP125N65S

• FEATURES

- Static drain-source on-resistance:
 $R_{DS(on)} \leq 2.3m\Omega$
- Enhancement mode
- Fast Switching Speed
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• DESCRIPTION

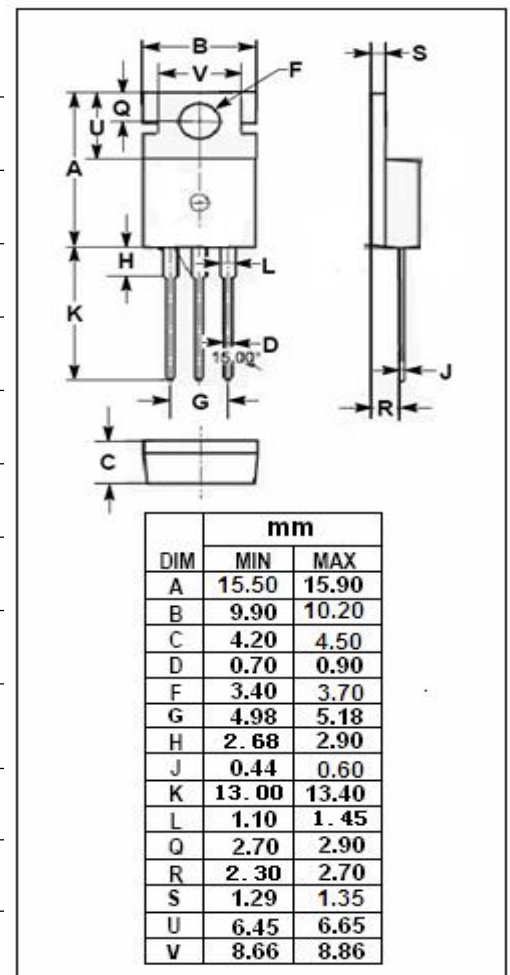
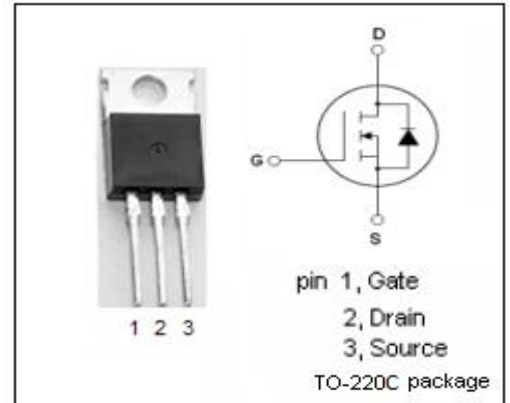
- Be suitable for synchronous rectification for server and general purpose applications

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

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

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(ch-c)}$	Channel-to-case thermal resistance	0.69	$^\circ C/W$
$R_{th(ch-a)}$	Channel-to-ambient thermal resistance	62.5	$^\circ C/W$



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ELECTRICAL CHARACTERISTICS

T_C=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V; I _D =1mA	650			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} ; I _D =2.4mA	2.5		4.5	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} =10V; I _D =12A			125	mΩ
I _{GSS}	Gate-Source Leakage Current	V _{GS} = ±30V; V _{DS} =0V			±100	nA
I _{DSS}	Drain-Source Leakage Current	V _{DS} =650V; V _{GS} = 0V			1	μA
		V _{DS} =520V; T _C =125°C		1.35		
V _{SD}	Diode forward voltage	I _S =12A; V _{GS} = 0V			1.2	V

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