

## isc N-Channel MOSFET Transistor

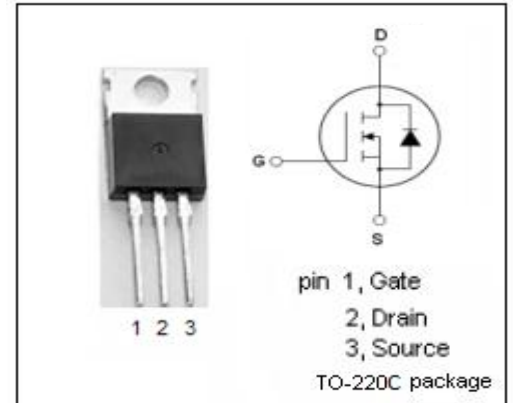
## FCP650N80Z

### • FEATURES

- Static drain-source on-resistance:  
 $R_{DS(on)} \leq 650m\Omega$
- 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

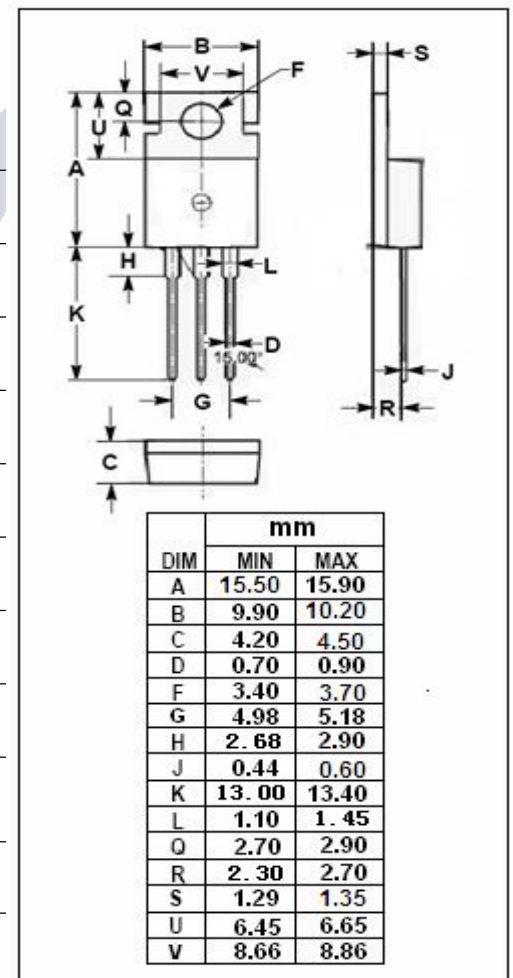


### • ABSOLUTE MAXIMUM RATINGS( $T_a=25^\circ\text{C}$ )

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DSS}$	Drain-Source Voltage	800	V
$V_{GS}$	Gate-Source Voltage	$\pm 20$	V
$I_D$	Drain Current-Continuous	10	A
$I_{DM}$	Drain Current-Single Pulsed	24	A
$P_D$	Total Dissipation @ $T_c=25^\circ\text{C}$	162	W
$T_j$	Operating Junction Temperature	-55~150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-55~150	$^\circ\text{C}$

### • THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(ch-c)}$	Channel-to-case thermal resistance	0.77	$^\circ\text{C/W}$



**Isc N-Channel MOSFET Transistor****FCP650N80Z****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$BV_{DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0V; I_D=1mA$	800			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}; I_D=250\mu A$	2.5		4.5	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10V; I_D=4A$			650	$m\Omega$
$I_{GSS}$	Gate-Source Leakage Current	$V_{GS}=\pm 20V; V_{DS}=0V$			$\pm 10$	$\mu A$
$I_{DSS}$	Drain-Source Leakage Current	$V_{DS}=800V; V_{GS}=0V$			25	$\mu A$
		$V_{DS}=640V; V_{GS}=0V; T_C=125^{\circ}\text{C}$			250	$\mu A$
$V_{SD}$	Diode forward voltage	$I_S=50A; V_{GS}=0V$			1.2	V

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