

isc N-Channel MOSFET Transistor

FMV20N60S1

• FEATURES

- Low on-resistance:
 $R_{DS(on)} \leq 0.19\Omega$ (max)
- Low switching loss
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• DESCRIPTION

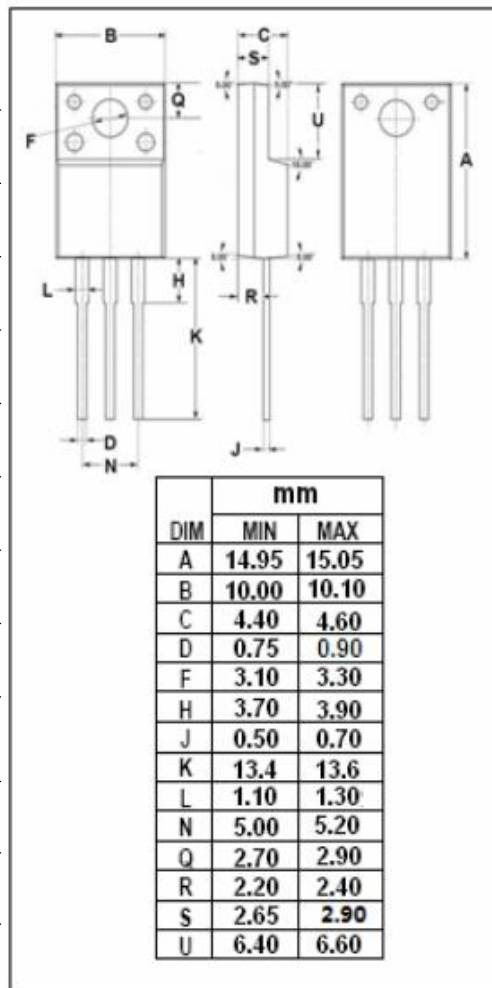
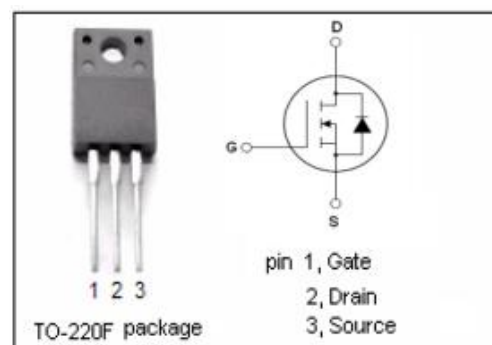
- UPS (Uninterruptible Power Supply)
- Power conditioner system
- Power supply

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DS}	Drain-Source Voltage	600	V
V_{GS}	Gate-Source Voltage	± 30	V
I_D	Drain Current-Continuous	20	A
I_{DM}	Drain Current-Single Pulsed	60	A
P_D	Total Dissipation @ $T_c=25^\circ\text{C}$	53	W
T_j	Max. Operating Junction Temperature	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	2.36	$^\circ\text{C/W}$
$R_{th(ch-a)}$	Channel-to-ambient thermal resistance	58	$^\circ\text{C/W}$



isc N-Channel MOSFET Transistor**FMV20N60S1****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
BV_{DSS}	Drain-Source Breakdown Voltage	$V_{GS}=0V; I_D=0.25mA$	600			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}; I_D=0.25mA$	2.5		3.5	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10V; I_D=10A$			0.19	Ω
I_{GSS}	Gate-Source Leakage Current	$V_{GS}= \pm 30V; V_{DS}= 0V$			± 100	nA
I_{DSS}	Drain-Source Leakage Current	$V_{DS}=600V; V_{GS}= 0V$			25	μA
V_{SD}	Diode forward voltage	$I_{DR}=20A, V_{GS}= 0V$			1.35	V

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