

# isc N-Channel MOSFET Transistor

# FMV09N70E

## • FEATURES

- drain-source on-resistance:  
 $R_{DS(on)} \leq 1.4\Omega$  (max)
- Fast Switching Speed
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## • DESCRIPTION

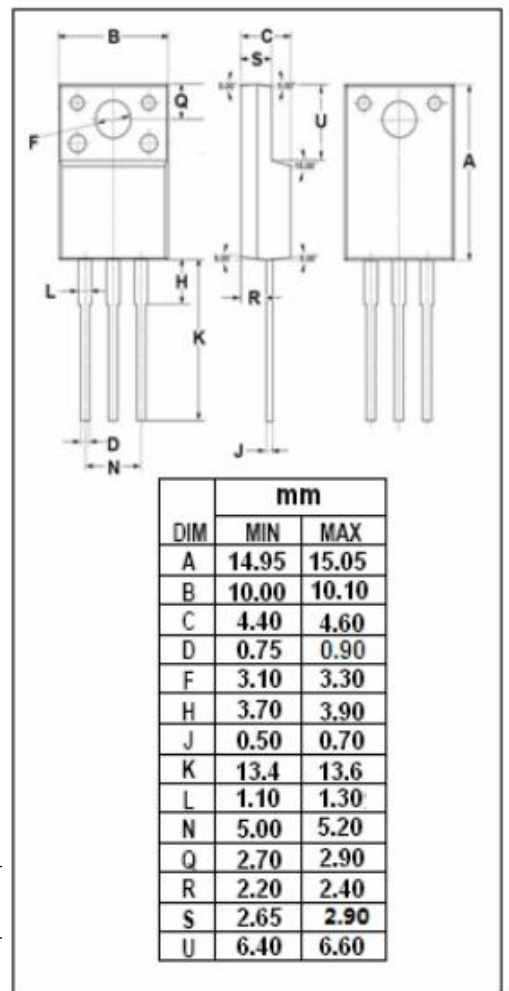
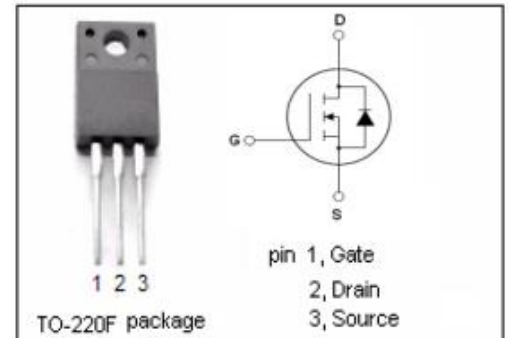
- Switching regulators
- UPS (Uninterruptible Power Supply)
- DC-DC converters

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DSS}$	Drain-Source Voltage	700	V
$V_{GS}$	Gate-Source Voltage	$\pm 30$	V
$I_D$	Drain Current-Continuous	9	A
$I_{DM}$	Drain Current-Single Pulsed	36	A
$P_D$	Total Dissipation @ $T_c=25^\circ\text{C}$	85	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	1.47	$^\circ\text{C/W}$



**isc N-Channel MOSFET Transistor****FMV09N70E****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$BV_{DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0V; I_D=0.25mA$	700			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}; I_D=0.25mA$	3.5		4.5	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10V; I_D=4.5A$			1.4	$\Omega$
$I_{GSS}$	Gate-Source Leakage Current	$V_{GS}=\pm 30V; V_{DS}=0V$			$\pm 100$	nA
$I_{DSS}$	Drain-Source Leakage Current	$V_{DS}=700V; V_{GS}=0V$			25	$\mu A$
$V_{SD}$	Diode forward voltage	$I_{DR}=9A, V_{GS}=0V$			1.35	V

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