

isc N-Channel MOSFET Transistor

FMV12N50E

• FEATURES

- With TO-220F packaging
- High speed switching
- Very high commutation ruggedness
- Easy to use
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operationz

• APPLICATIONS

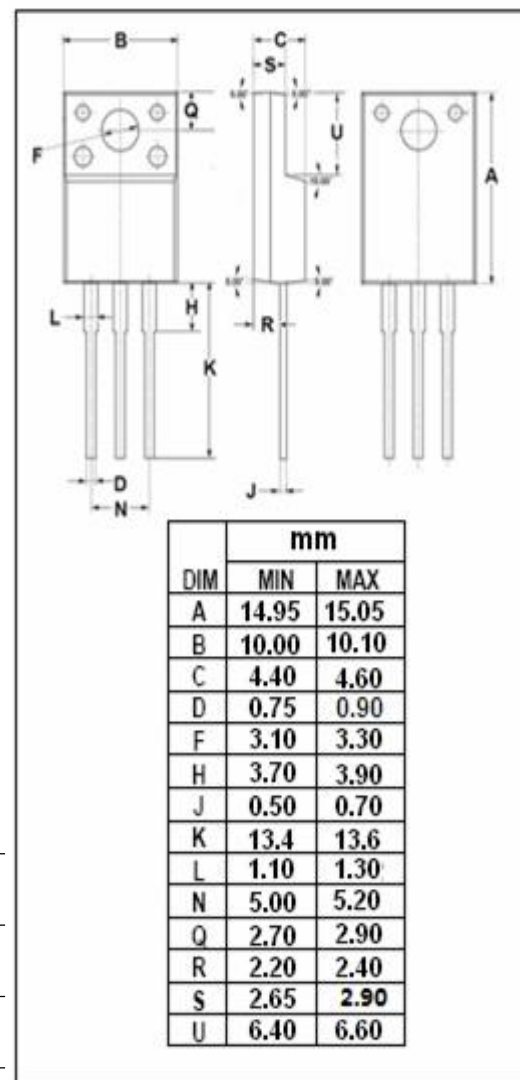
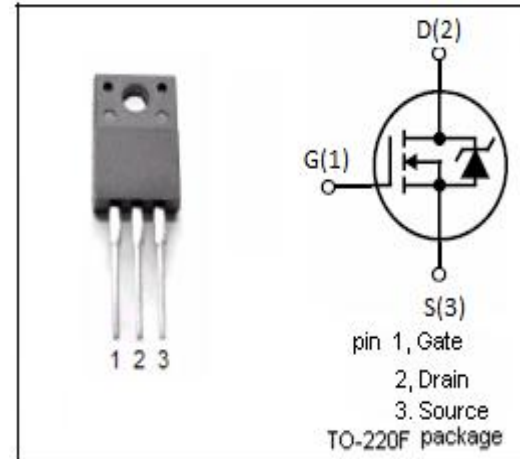
- Switching applications
- DC-DC converters
- Uninterruptible power supply

• ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{DSS}	Drain-Source Voltage	500	V
V _{GSS}	Gate-Source Voltage	±30	V
I _D	Drain Current-Continuous	12	A
I _{DM}	Drain Current-Single Pulsed	48	A
P _D	Total Dissipation	60	W
T _j	Operating Junction Temperature	-55~150	°C
T _{stg}	Storage Temperature	-55~150	°C

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th(ch-c)}	Channel-to-case thermal resistance	2.1	°C/W
R _{th(ch-a)}	Channel-to-ambient thermal resistance	58	°C/W



isc N-Channel MOSFET Transistor**FMV12N50E****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 = 0.25mA	500			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =±30V; I _D =0.25mA	2.5		3.5	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V; I _D =6A		445	520	mΩ
I _{GSS}	Gate-Source Leakage Current	V _{GS} = ±30V; V _{DS} = 0V			±0.1	μA
I _{DSS}	Drain-Source Leakage Current	V _{DS} = 500V; V _{GS} = 0V; T _C =25°C V _{DS} = 400V; V _{GS} = 0V; T _C =125°C			25 250	μA
V _{SDF}	Diode forward voltage	I _{SD} =12A, V _{GS} = 0 V			1.32	V

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