

Isc N-Channel MOSFET Transistor

SPA08N50C3

• FEATURES

- Drain Current $I_D = 7.6A @ T_C = 25^\circ C$
- Drain Source Voltage-
: $V_{DSS} = 500V(\text{Min})$
- Static Drain-Source On-Resistance
: $R_{DS(on)} = 0.6 \Omega (\text{Max})$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• APPLICATIONS

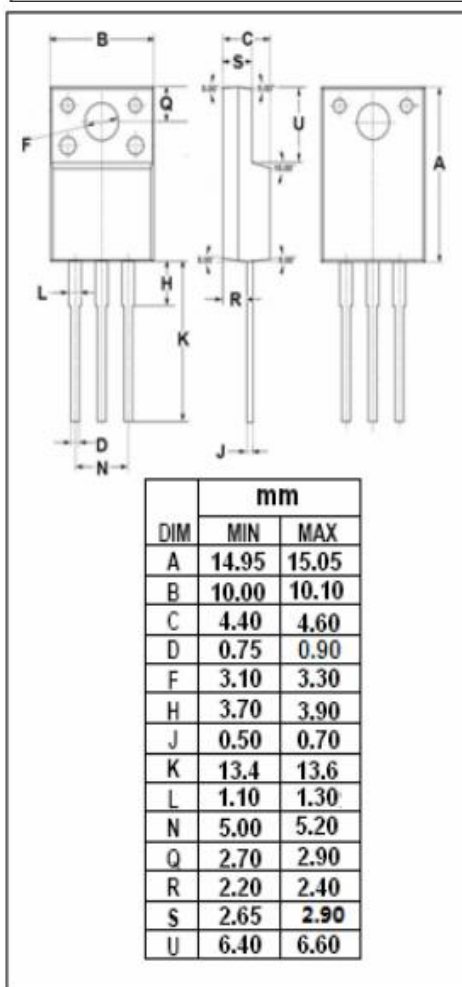
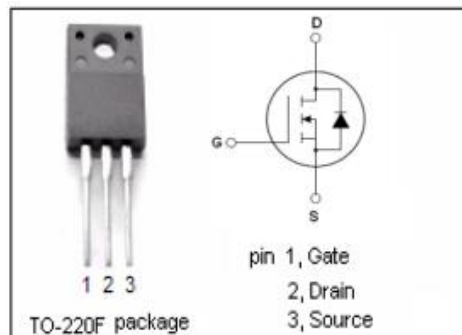
- Switching applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	500	V
V_{GSS}	Gate-Source Voltage	± 20	V
I_D	Drain Current-Continuous @ $T_C = 25^\circ C$ (V_{GS} at 10V) $T_C = 100^\circ C$	7.6 4.6	A
I_{DM}	Drain Current-Single Pulsed	22.8	A
P_D	Total Dissipation @ $T_C = 25^\circ C$	32	W
T_j	Max. Operating Junction Temperature	-55~150	$^\circ C$
T_{stg}	Storage Temperature	-55~150	$^\circ C$

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(ch-c)}$	Channel-to-case thermal resistance	3.9	$^\circ C/W$
$R_{th(ch-a)}$	Channel-to-ambient thermal resistance	80	$^\circ C/W$



Isc N-Channel MOSFET Transistor**SPA08N50C3****• ELECTRICAL CHARACTERISTICS** $T_c=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYPE	MAX	UNIT
BV_{DSS}	Drain-Source Breakdown Voltage	$V_{GS}=0V; I_D=0.25mA$	500			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}; I_D=350\mu A$	2.1	3	3.9	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10V; I_D=7A$		0.5	0.6	Ω
I_{GSS}	Gate-Source Leakage Current	$V_{GS}=\pm 20V; V_{DS}=0V$			± 100	nA
I_{DSS}	Drain-Source Leakage Current	$V_{DS}=500V; V_{GS}=0V; T_j=25^{\circ}\text{C}$ $V_{DS}=500V; V_{GS}=0V; T_j=150^{\circ}\text{C}$		0.5	1 100	μA
V_{SDF}	Diode forward voltage	$I_{SD}=7.6A, V_{GS}=0V$		1	1.2	V

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