

Isc N-Channel MOSFET Transistor

SPA16N50C3

• FEATURES

- Drain-source on-resistance:
 $R_{DS(on)} \leq 250m\Omega @ 10V$
- Reduced switching and conduction losses
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• APPLICATIONS

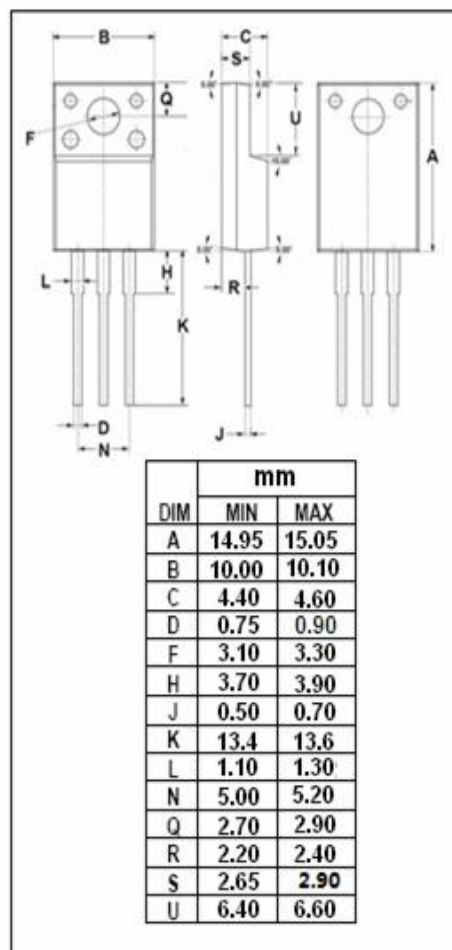
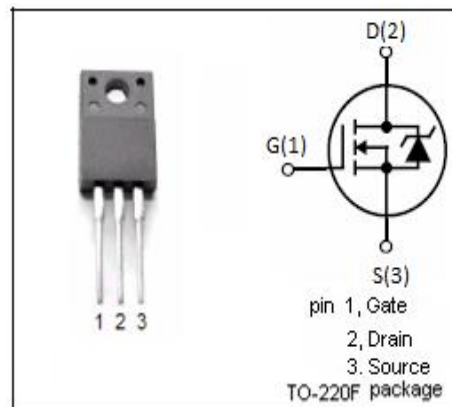
- Switching applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DS}	Drain-Source Voltage	500	V
V_{GS}	Gate-Source Voltage	± 20	V
I_D	Drain Current-Continuous @ $T_c=25^\circ C$ (V_{GS} at 10V) $T_c=100^\circ C$	16 10	A
I_{DM}	Drain Current-Single Pulsed	48	A
P_D	Total Dissipation @ $T_c=25^\circ C$	34	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	3.7	$^\circ C/W$
$R_{th(ch-a)}$	Channel-to-ambient thermal resistance	80	$^\circ C/W$



Isc N-Channel MOSFET Transistor**SPA16N50C3****• ELECTRICAL CHARACTERISTICS****T_c=25°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 =0.675A	2.1	3	3.9	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V; I _D =10A		0.25	0.28	Ω
I _{GSS}	Gate-Source Leakage Current	V _{GS} = ±20V; V _{DS} = 0V			± 100	nA
I _{DSS}	Drain-Source Leakage Current	V _{DS} = 500V; V _{GS} = 0V; T _j =25°C V _{DS} =500V; V _{GS} = 0V; T _j =150°C		0.1	1 100	μ A
V _{SDF}	Diode forward voltage	I _{SD} =16A, V _{GS} = 0 V		1	1.2	V

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