

isc P-Channel MOSFET Transistor

AOTF409

• 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 operation

• APPLICATIONS

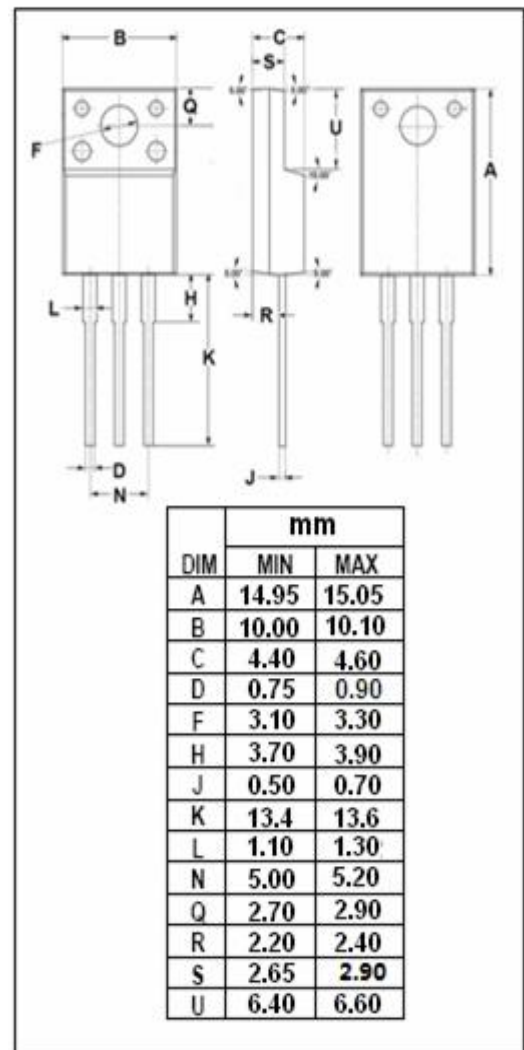
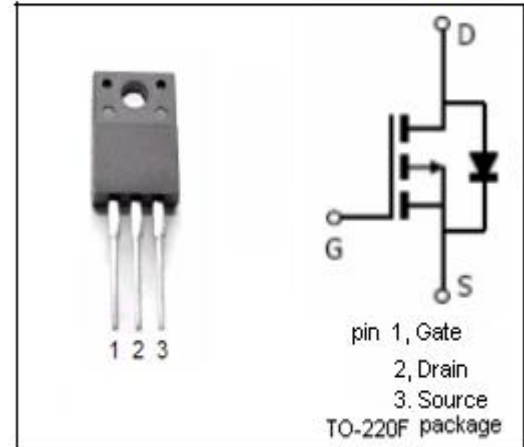
- PFC stages
- LCD & PDP TV
- Power supply
- Switching applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	-60	V
V_{GSS}	Gate-Source Voltage	± 20	V
I_D	Drain Current-Continuous@ $T_c=25^{\circ}\text{C}$ $T_c=100^{\circ}\text{C}$	-24 -17	A
I_{DM}	Drain Current-Single Pulsed	-60	A
P_D	Total Dissipation	43	W
T_j	Operating Junction Temperature	-50~175	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-50~175	$^{\circ}\text{C}$

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
Rth(ch-c)	Channel-to-case thermal resistance	3.5	$^{\circ}\text{C/W}$
Rth(ch-a)	Channel-to-ambient thermal resistance	58	$^{\circ}\text{C/W}$



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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	-60			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =±20V; I _D =-0.25mA	-1.2		-2.4	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = -10V; I _D =-20A		33	40	mΩ
I _{GSS}	Gate-Source Leakage Current	V _{GS} = ±20V; V _{DS} = 0V			±0.1	μA
I _{DSS}	Drain-Source Leakage Current	V _{DS} = -60V; V _{GS} = 0V; T _C =25°C V _{DS} = -60V; V _{GS} = 0V; T _C =55°C			-1 -5	μA
V _{SDF}	Diode forward voltage	I _{SD} =-1A, V _{GS} = 0 V			-1.0	V

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