

isc N-Channel MOSFET Transistor

IRFS440A

FEATURES

- Avalanche Rugged Technology
- Rugged Gate Oxide Technology
- Lower Input Capacitance
- Improved Gate Charge
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

DESCRIPTION

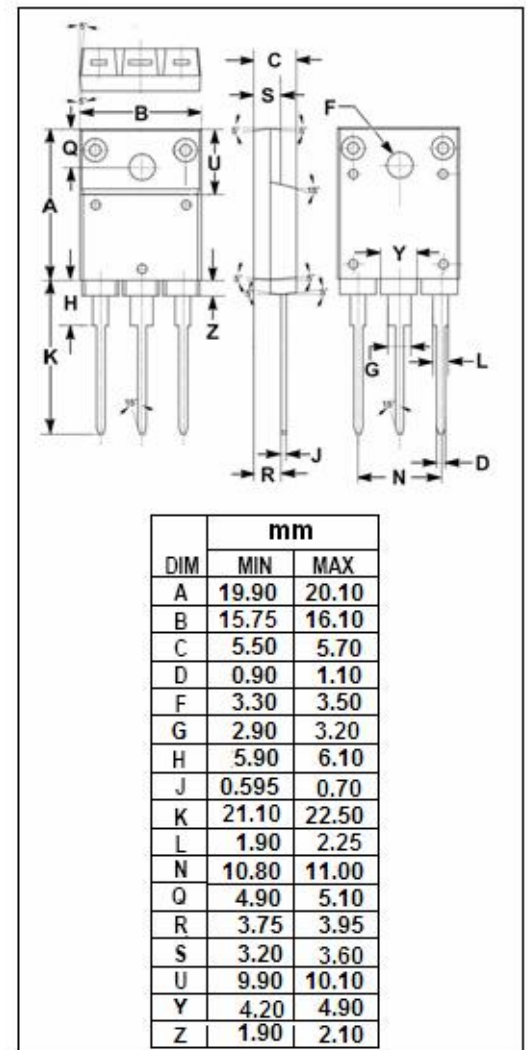
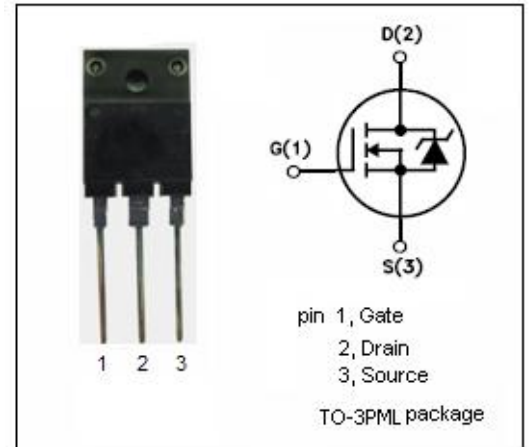
- Designed for use in switch mode power supplies and general purpose applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DS}	Drain-Source Voltage	500	V
V_{GS}	Gate-Source Voltage-Continuous	± 30	V
I_D	Drain Current-Continuous	6.2	A
I_{DM}	Drain Current-Single Pluse	34	A
P_D	Total Dissipation @ $T_c=25^{\circ}\text{C}$	85	W
T_J	Max. Operating Junction Temperature	-55~150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55~150	$^{\circ}\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.46	$^{\circ}\text{C/W}$
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	40	$^{\circ}\text{C/W}$



isc N-Channel MOSFET Transistor**IRFS440A****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V _{(BR)DSS}	Drain-Source Breakdown Voltage	V _{GS} = 0; I _D = 0.25mA	500		V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = V _{GS} ; I _D = 0.25mA	2	4	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V; I _D =3.1A		0.85	Ω
I _{GSS}	Gate-Body Leakage Current	V _{GS} = ±30V; V _{DS} = 0		±100	nA
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} = 500V; V _{GS} = 0 V _{DS} = 400V; V _{GS} = 0; T _J = 125°C		10 100	μA
V _{SD}	Forward On-Voltage	I _S = 6.2A; V _{GS} = 0		1.4	V

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