

isc N-Channel MOSFET Transistor

IRFP142R

FEATURES

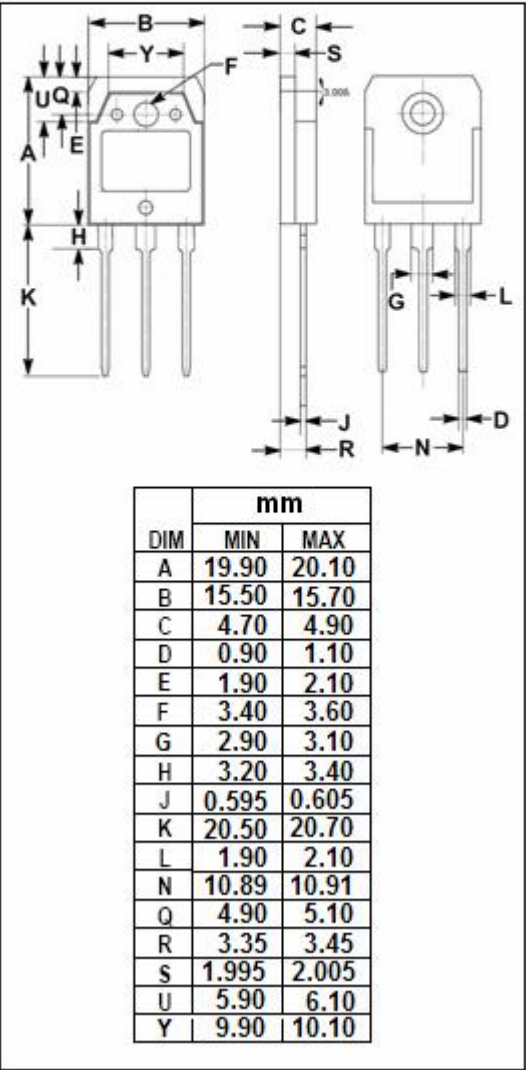
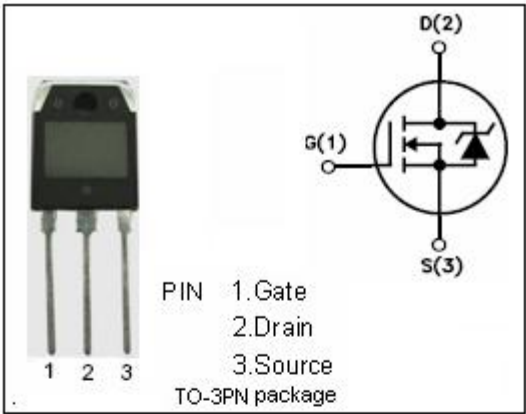
- Drain Current $-I_D = 27A @ T_C = 25^{\circ}C$
- Drain Source Voltage-
: $V_{DSS} = 100V (Min)$
- Static Drain-Source On-Resistance
: $R_{DS(on)} = 0.099 \Omega (Max)$
- Fast Switching

DESCRIPTION

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

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	100	V
V_{GS}	Gate-Source Voltage-Continuous	± 20	V
I_D	Drain Current-Continuous	27	A
I_{DM}	Drain Current-Single Pluse	110	A
P_D	Total Dissipation @ $T_C = 25^{\circ}C$	180	W
T_J	Max. Operating Junction Temperature	-55~175	$^{\circ}C$
T_{stg}	Storage Temperature	-55~175	$^{\circ}C$



THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	0.83	$^{\circ}C/W$
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	30	$^{\circ}C/W$

isc N-Channel MOSFET Transistor**IRFP142R****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0$; $I_D=0.25\text{mA}$	100		V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}$; $I_D=0.25\text{mA}$	2	4	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10\text{V}$; $I_D=19\text{A}$		0.099	Ω
I_{GSS}	Gate-Body Leakage Current	$V_{GS}=\pm 20\text{V}$; $V_{DS}=0$		± 100	nA
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS}=100\text{V}$; $V_{GS}=0$		250	μA
V_{SD}	Forward On-Voltage	$I_S=31\text{A}$; $V_{GS}=0$		2.5	V