

isc N-Channel Mosfet Transistor

IRF540N

FEATURES

- Drain Current $I_D = 27A @ T_C = 25^{\circ}C$
- Static Drain-Source On-Resistance
: $R_{DS(on)} = 0.052 \Omega$ (Max)
- Fast Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

DESCRIPTION

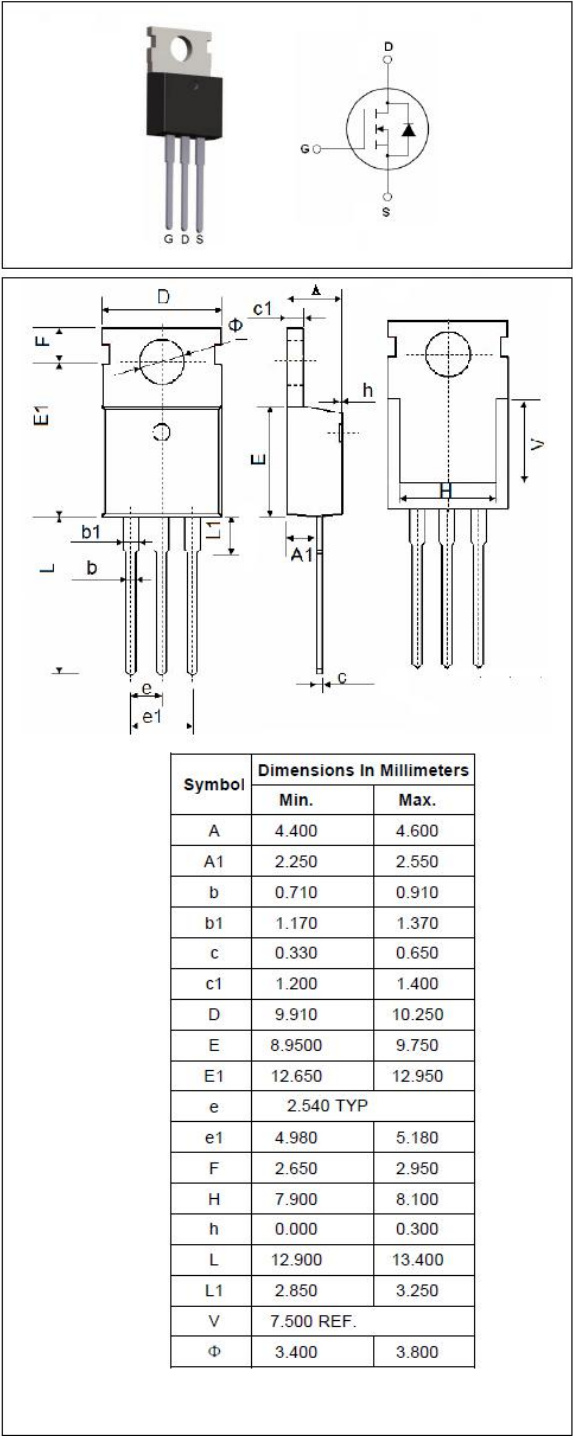
- Designed especially for high voltage,high speed applications, such as off-line switching power supplies , UPS,AC and DC motor controls,relay and solenoid drivers.

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@ $T_C = 25^{\circ}C$	27	A
	Drain Current-continuous@ $T_C = 100^{\circ}C$	19	
I_{DM}	Drain Current-Single Plused	110	A
P_D	Total Dissipation @ $T_C = 25^{\circ}C$	100	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	1.6	$^{\circ}C/W$
$R_{th\ j-a}$	Thermal Resistance,Junction to Ambient	62	$^{\circ}C/W$



isc N-Channel Mosfet Transistor**IRF540N****ELECTRICAL CHARACTERISTICS** $T_c=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0$; $I_D=250\mu\text{A}$	100		V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}$; $I_D=250\mu\text{A}$	2	4	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10\text{V}$; $I_D=16\text{A}$		0.052	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	$V_{DS}=100\text{V}$; $V_{GS}=0$		25	μA
V_{SD}	Forward On-Voltage	$I_S=16\text{A}$; $V_{GS}=0$		1.3	V