

isc Silicon NPN Power Transistor

2N3714

DESCRIPTION

- Excellent Safe Operating Area
- Low Collector-Emitter Saturation Voltage
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation.

APPLICATIONS

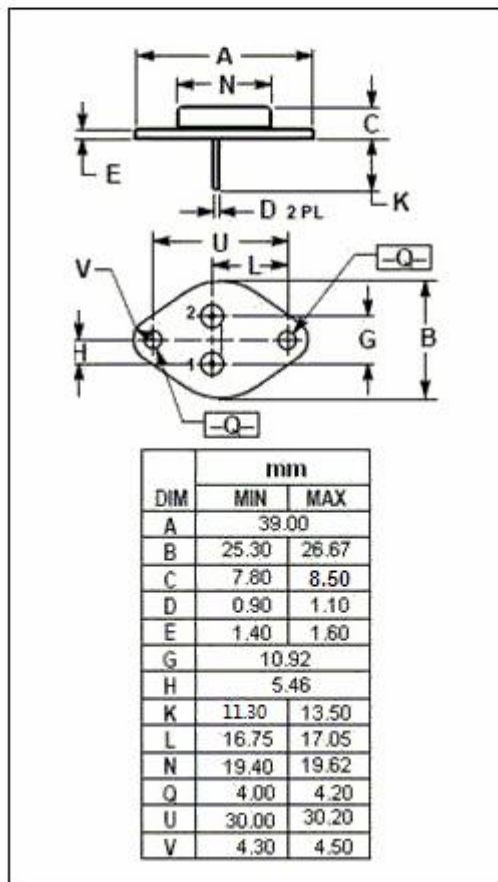
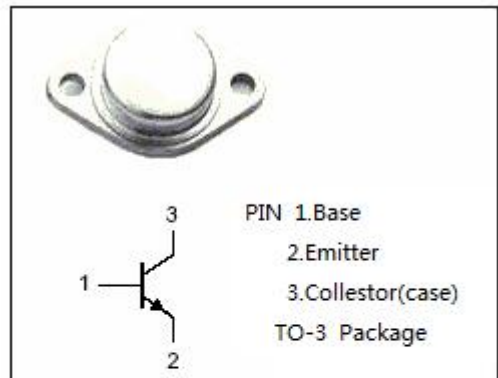
- Designed for medium-speed switching and amplifier applications.

ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{CB0}	Collector-Base Voltage	100	V
V _{CEO}	Collector-Emitter Voltage	80	V
V _{EBO}	Emitter-Base Voltage	7	V
I _C	Collector Current-Continuous	10	A
P _C	Collector Power Dissipation@T _C =25°C	150	W
T _J	Junction Temperature	-65~200	°C
T _{stg}	Storage Temperature	-65~200	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal Resistance, Junction to Case	1.17	°C/W



isc Silicon NPN Power Transistor**2N3714****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}^*$	Collector-Emitter Sustaining Voltage	$I_C=200\text{mA}; I_B=0$	80		V
I_{EBO}	Emitter Cutoff Current	$V_{EB}=7\text{V}; I_C=0$		5	mA
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=5\text{A}; I_B=0.5\text{A}$		1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=5\text{A}; I_B=0.5\text{A}$		2.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C=3\text{A}; V_{CE}=2\text{V}$		1.5	V
h_{FE-1}	DC Current Gain	$I_C=1\text{A}; V_{CE}=2\text{V}$	25	90	
h_{FE-2}	DC Current Gain	$I_C=3\text{A}; V_{CE}=2\text{V}$	15		
f_T	Current Gain-Bandwidth Product	$I_C=0.5\text{A}; V_{CE}=10\text{V}; f=1.0\text{MHz}$	4		MHz

*:Pulse test:Pulse width=300us,duty cycle≤2%

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