

isc Silicon NPN Power Transistor**2SD414****DESCRIPTION**

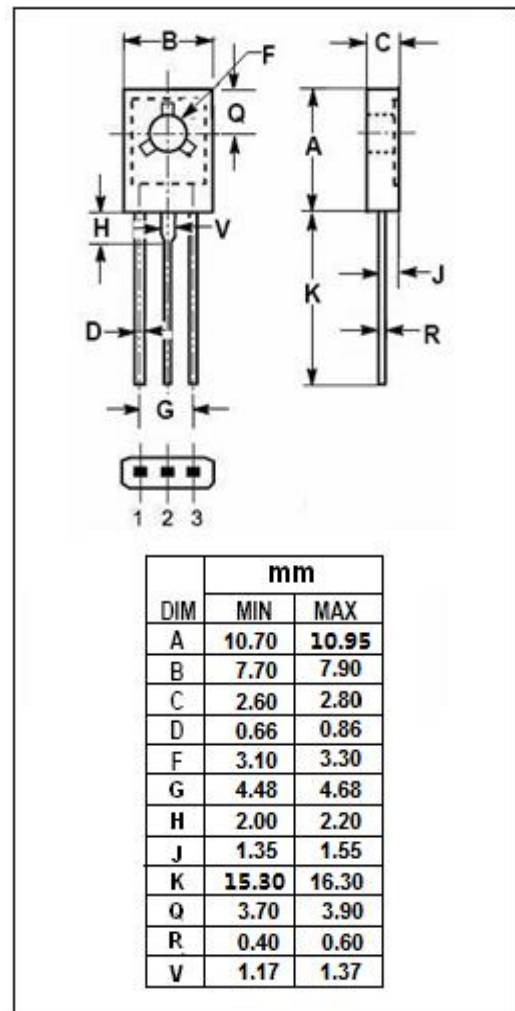
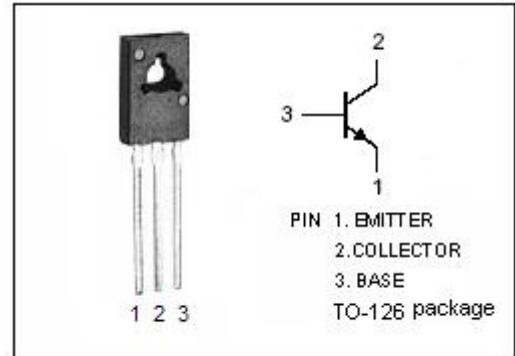
- With TO-126 packaging
- Excellent linearity of h_{FE}
- Low collector-to-emitter saturation voltage
- Fast switching speed
- Complementary to 2SB548
- Minimum Lot-to-Lot variations for robust device performance and reliable operation.

APPLICATIONS

- Relay drivers, high-speed inverters, converters and Other general high current switching applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	120	V
V_{CEO}	Collector-Emitter Voltage	80	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	0.8	A
I_{CP}	Collector Current-Pulse	1.5	A
P_C	Collector Power Dissipation	1.0	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



isc Silicon NPN Power Transistor**2SD414****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V_{CBO}	Collector-Base Voltage	$I_C=0.1\text{mA}$, $I_E=0$	120			V
V_{CEO}	Collector-Emitter Voltage	$I_C=1\text{mA}$, $I_B=0$	80			V
V_{EBO}	Emitter-Base Voltage	$I_E=0.1\text{mA}$, $I_C=0$	5			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=500\text{mA}$; $I_B=50\text{mA}$		0.3	2.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=500\text{mA}$; $I_B=50\text{mA}$		0.9	1.5	V
I_{CBO}	Collector Cutoff Current	$V_{CB}=80\text{V}$; $I_E=0$			1.0	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=3\text{V}$; $I_C=0$			1.0	μA
h_{FE-1}	DC Current Gain	$I_C=2\text{mA}$; $V_{CE}=5\text{V}$	20			
h_{FE-2}	DC Current Gain	$I_C=200\text{mA}$; $V_{CE}=5\text{V}$	40		320	

◆ **h_{FE-2} Classifications**

S	R	Q	P
40-80	60-120	100-200	160-320