

isc Silicon NPN Power Transistor

2N6123

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
: $V_{CE(sat)} = 0.6V(\text{Max.}) @ I_C = 1.5A$
- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 80V(\text{Min})$
- Complement to Type 2N6126
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

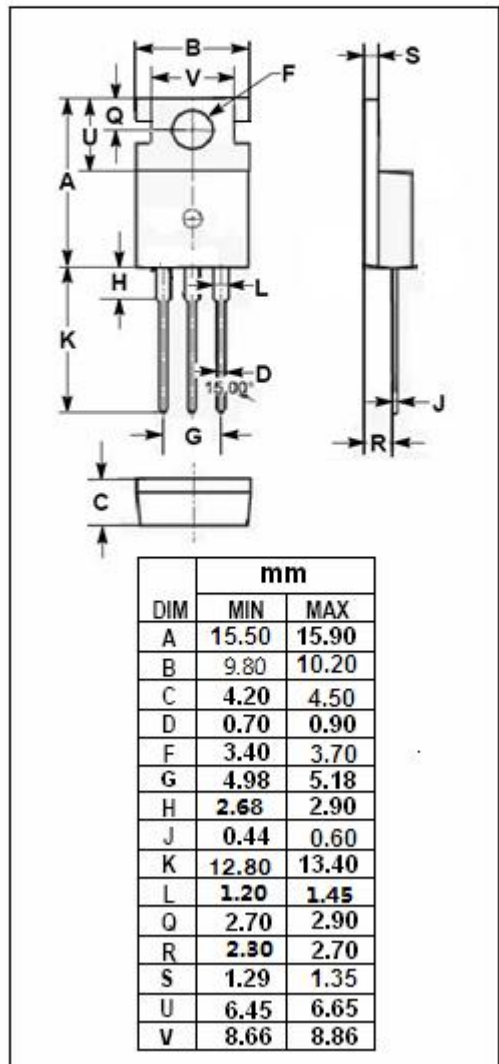
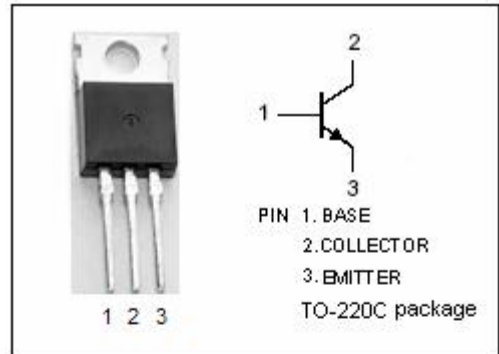
- Designed for use in power amplifier and switching circuits applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	80	V
V_{CEO}	Collector-Emitter Voltage	80	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	4	A
I_{CM}	Collector Current-Peak	8	A
I_B	Base Current	1	A
P_C	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	40	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-65~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	3.125	$^\circ\text{C/W}$



isc Silicon NPN Power Transistor**2N6123****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V _{CEQ(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 50mA; I _B =0	80		V
V _{CE(sat)-1}	Collector-Emitter Saturation Voltage	I _C = 1.5A; I _B = 0.15A		0.6	V
V _{CE(sat)-2}	Collector-Emitter Saturation Voltage	I _C = 4A; I _B = 1.0A		1.4	V
V _{BE(on)}	Base-Emitter On Voltage	I _C = 1.5A ; V _{CE} = 2V		1.2	V
I _{CEX}	Collector Cutoff Current	V _{CE} = 80V; V _{BE(off)} = 1.5V V _{CE} = 80V; V _{BE(off)} = 1.5V ;T _C = 150°C		0.1 2.0	mA
I _{CEO}	Collector Cutoff Current	V _{CE} = 80V; I _B = 0		1.0	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C = 0		1.0	mA
h _{FE-1}	DC Current Gain	I _C = 1.5A ; V _{CE} = 2V	20	80	
h _{FE-2}	DC Current Gain	I _C = 4A; V _{CE} = 2V	7		
f _T	Current-Gain—Bandwidth Product	I _C = 1.0A;V _{CE} = 4V, f _{test} = 1.0MHz	2.5		MHz

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