Silicon NPN Power Transistors 2N6121 2N6122 2N6123

DESCRIPTION

·With TO-220 package
·Complement to PNP type :
2N6124 ;2N6125 ;2N6126

APPLICATIONS

·For use in power amplifier and switching circuit applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector;connected to mounting base
3	Emitter

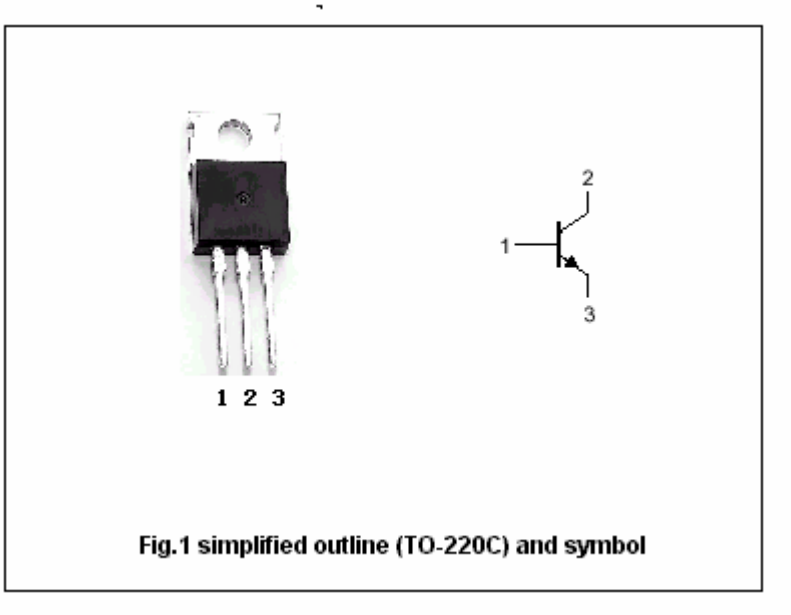

Fig.1 simplified outline (TO-220C) and symbol

Absolute maximum ratings(Ta=25□)

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	2N6121	Open emitter	45	V
		2N6122		60	
		2N6123		80	
V_{CEO}	Collector-emitter voltage	2N6121	Open base	45	V
		2N6122		60	
		2N6123		80	
V_{EBO}	Emitter-base voltage		Open collector	5	V
I_C	Collector current			4	A
I_{CM}	Collector current-peak			8	A
I_B	Base current			1	A
P_T	Total power dissipation		T_C=25□	40	W
T_j	Junction temperature			150	□
T_{stg}	Storage temperature			-65~150	□

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal resistance from junction to case	3.125	□/W

CHARACTERISTICS

Tj=25□ unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-emitter sustaining voltage	2N6121	I_C=0.1A ;I_B=0	45			V
		2N6122		60			
		2N6123		80			
$V_{CEsat-1}$	Collector-emitter saturation voltage		I_C=1.5A;I_B=0.15A			0.6	V
$V_{CEsat-2}$	Collector-emitter saturation voltage		I_C=4.0A;I_B=1.0A			1.4	V
V_{BE}	Base-emitter on voltage		I_C=1.5A ; V_{CE}=2V			1.2	V
I_{CEX}	Collector cut-off current	2N6121	V_{CE}=45V;V_{BE}=1.5V T_C=125□			0.1 2.0	mA
		2N6122	V_{CE}=60V;V_{BE}=1.5V T_C=125□			0.1 2.0	
		2N6123	V_{CE}=80V;V_{BE}=1.5V T_C=125□			0.1 2.0	
I_{CEO}	Collector cut-off current	2N6121	V_{CE}=45V;I_B=0			1.0	mA
		2N6122	V_{CE}=60V;I_B=0				
		2N6123	V_{CE}=80V;I_B=0				
I_{EBO}	Emitter cut-off current		V_{EB}=5V; I_C=0			1.0	mA
h_{FE-1}	DC current gain	2N6121	I_C=1.5A ; V_{CE}=2V	25		100	
		2N6122					
		2N6123		20		80	
h_{FE-2}	DC current gain	2N6121	I_C=4A ; V_{CE}=2V	10			
		2N6122					
		2N6123		7			
f_T	Transition frequency		I_C=1A ; V_{CE}=4V	2.5			MHz

PACKAGE OUTLINE

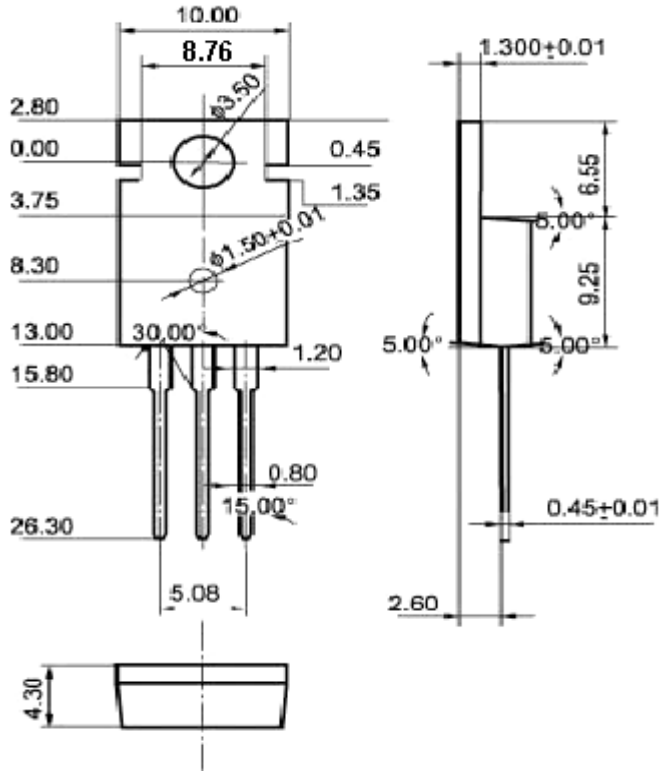

Fig.2 Outline dimensions(unindicated tolerance:±0.10 mm)