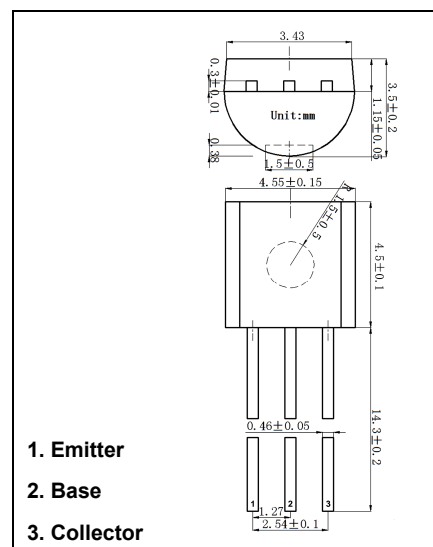


TO-92 Plastic-Encapsulate Transistors

S8050D331 NPN Transistors

Features

- Complimentary to S8550
- Collector current: $I_C = 0.5A$



Maximum Ratings ($T_a=25^{\circ}C$ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CB0}	Collector Base Voltage	40	V
V_{CEO}	Collector Emitter Voltage	25	V
V_{EBO}	Emitter Base Voltage	5	V
I_C	Collector Current	500	mA
P_C	Collector Power Dissipation	625	mW
T_j	Junction Temperature	150	$^{\circ}C$
T_{stg}	Storage Temperature	-55 ~ +150	$^{\circ}C$

Electrical Characteristics ($T_a=25^{\circ}C$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C = 100\mu A, I_E = 0$	40			V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C = 0.1mA, I_B = 0$	25			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E = 100\mu A, I_C = 0$	5			V
I_{CBO}	Collector cut-off current	$V_{CB} = 40V, I_E = 0$			100	nA
I_{CEO}	Collector cut-off current	$V_{CE} = 20V, I_E = 0$			100	nA
I_{EBO}	Emitter cut-off current	$V_{EB} = 5V, I_C = 0$			100	nA
$h_{FE(1)}$	DC current gain	$V_{CE} = 1V, I_C = 50mA$	85		400	
$h_{FE(2)}$		$V_{CE} = 5V, I_C = 100mA$	85			
$h_{FE(3)}$		$V_{CE} = 1V, I_C = 500mA$	50			
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C = 500mA, I_B = 50mA$			0.6	V
$V_{BE(sat)}$	Base-emitter saturation voltage	$I_C = 500mA, I_B = 50mA$			1.2	V
f_T	Transition frequency	$V_{CE}=6V, I_C=20mA, f=30MHz$	150			MHz

Classification OF $h_{FE(2)}$

Rank	B	C	D	D3
Range	85-160	120-200	160-300	300-400

Typical Characteristics

