

TO-92 Plastic-Encapsulate Transistors

SS8050D331 NPN Transistors

Features

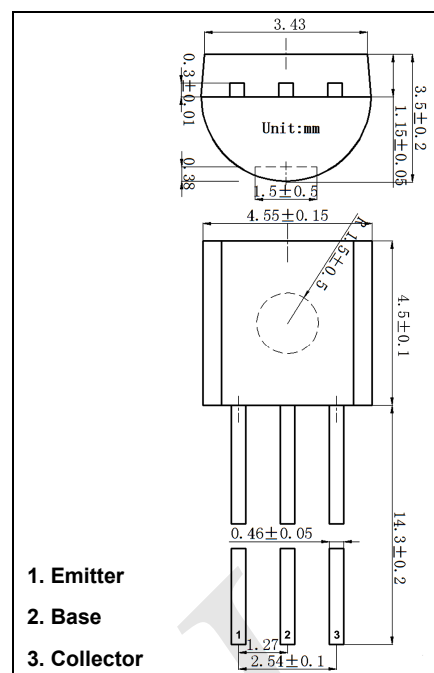
■ Power Dissipation

P_{CM} : 1W ($T_A=25^{\circ}C$)

: 2W ($T_C=25^{\circ}C$)

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

Symbol	Parameter	Value	Unit
V_{CBO}	Collector Base Voltage	40	V
V_{CEO}	Collector Emitter Voltage	25	V
V_{EBO}	Emitter Base Voltage	5	V
I_C	Collector Current	1.5	A
P_D	Collector Power Dissipation	625	mW
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	200	$^{\circ}C/W$
T_j	Junction Temperature	150	$^{\circ}C$
T_{stg}	Storage Temperature	-55 ~ 150	$^{\circ}C$



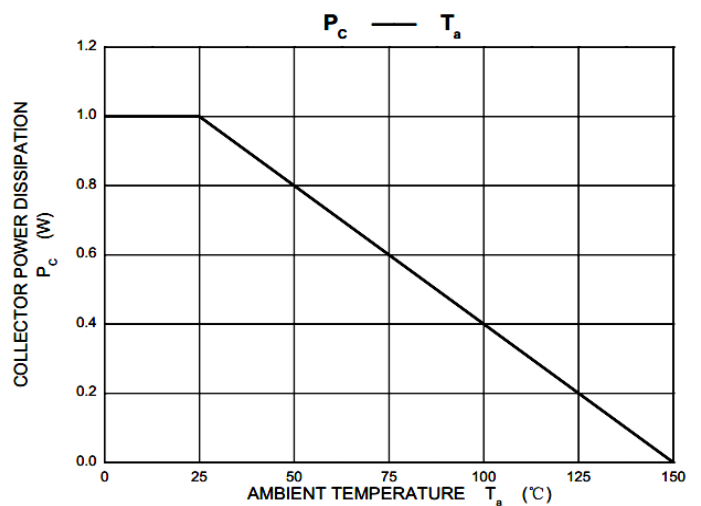
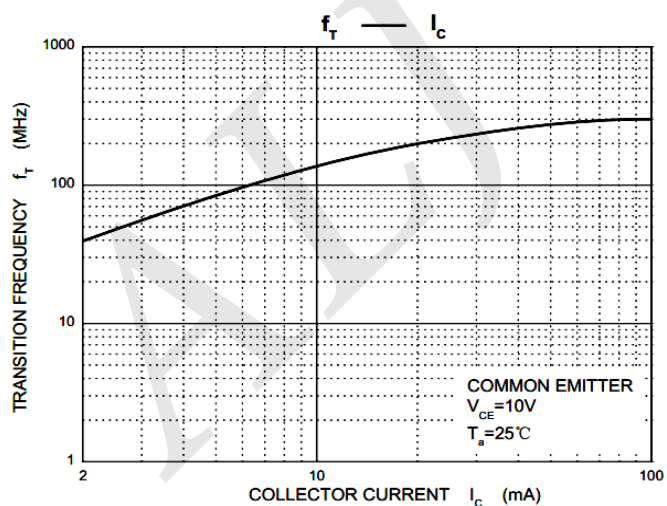
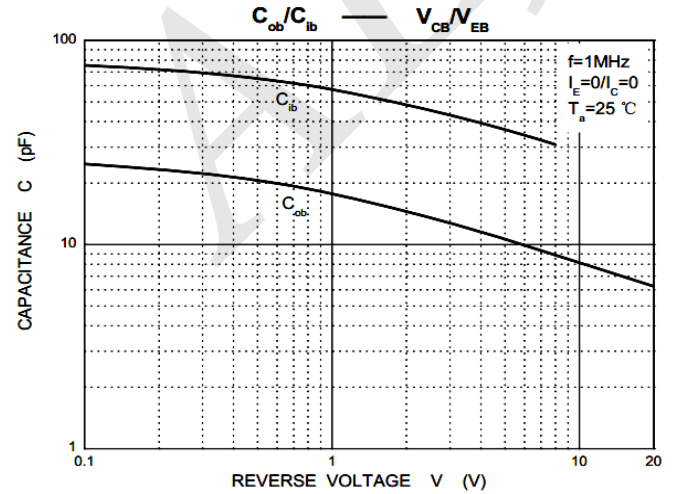
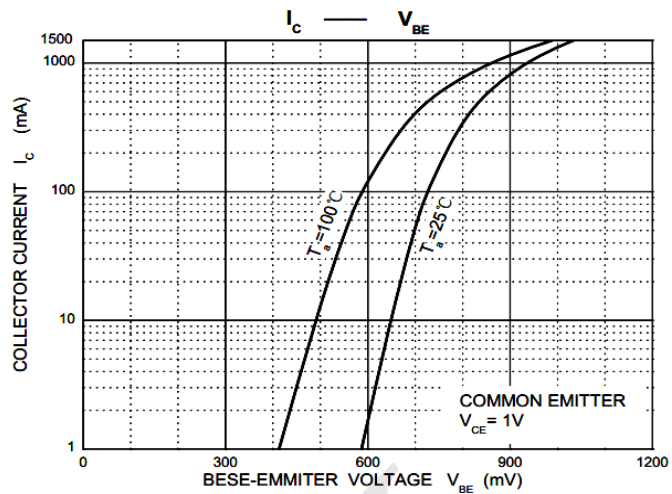
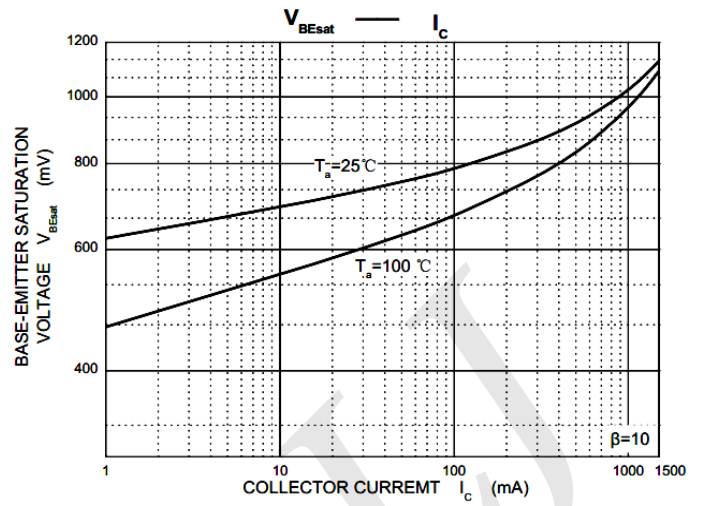
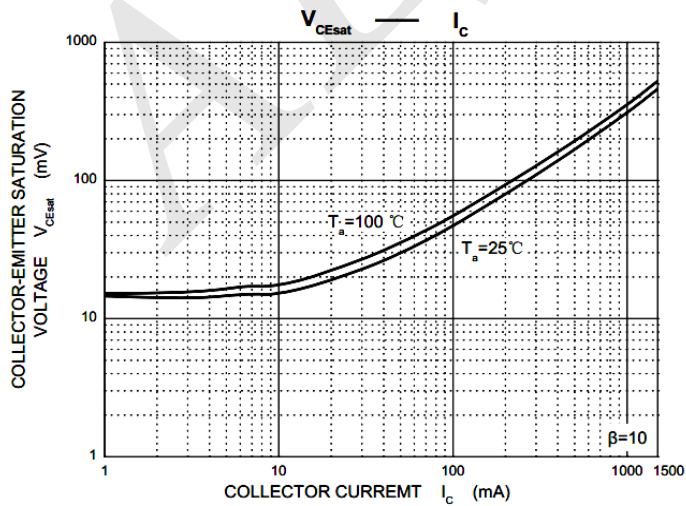
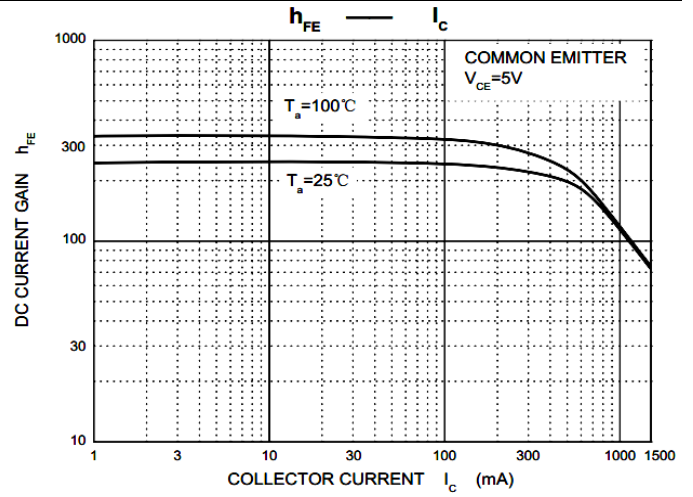
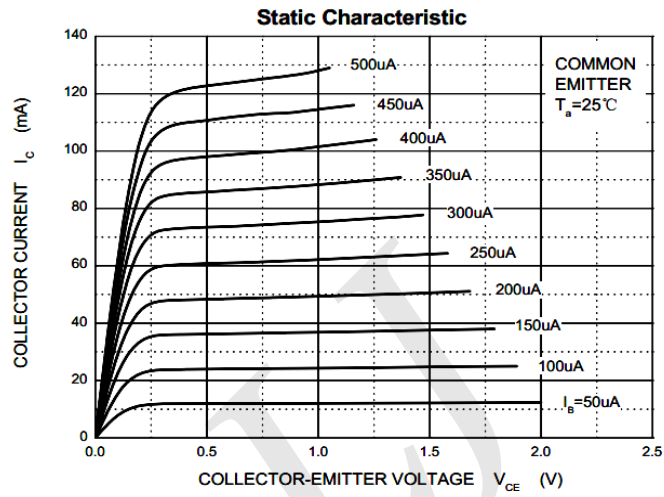
Electrical Characteristics ($T_a=25^{\circ}C$ unless otherwise specified)

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	$I_C = 1mA, I_B = 0$	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	$V_{CE} = 20V, I_B = 0$			100	nA
I_{EBO}	Emitter cut-off current	$V_{EB} = 5V, I_C = 0$			100	nA
$h_{FE(1)}$	DC current gain	$V_{CE} = 1V, I_C = 100mA$	100		400	
$h_{FE(2)}$		$V_{CE} = 1V, I_C = 800mA$	40			
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C = 800mA, I_B = 80mA$			0.5	V
$V_{BE(sat)}$	Base-emitter saturation voltage	$I_C = 800mA, I_B = 80mA$			1.2	V
V_{BE}	Base-emitter voltage	$V_{CE} = 1V, I_C = 10mA$			1	V
f_T	Transition frequency	$V_{CE} = 10V, I_C = 50mA, f = 30MHz$	100			MHz

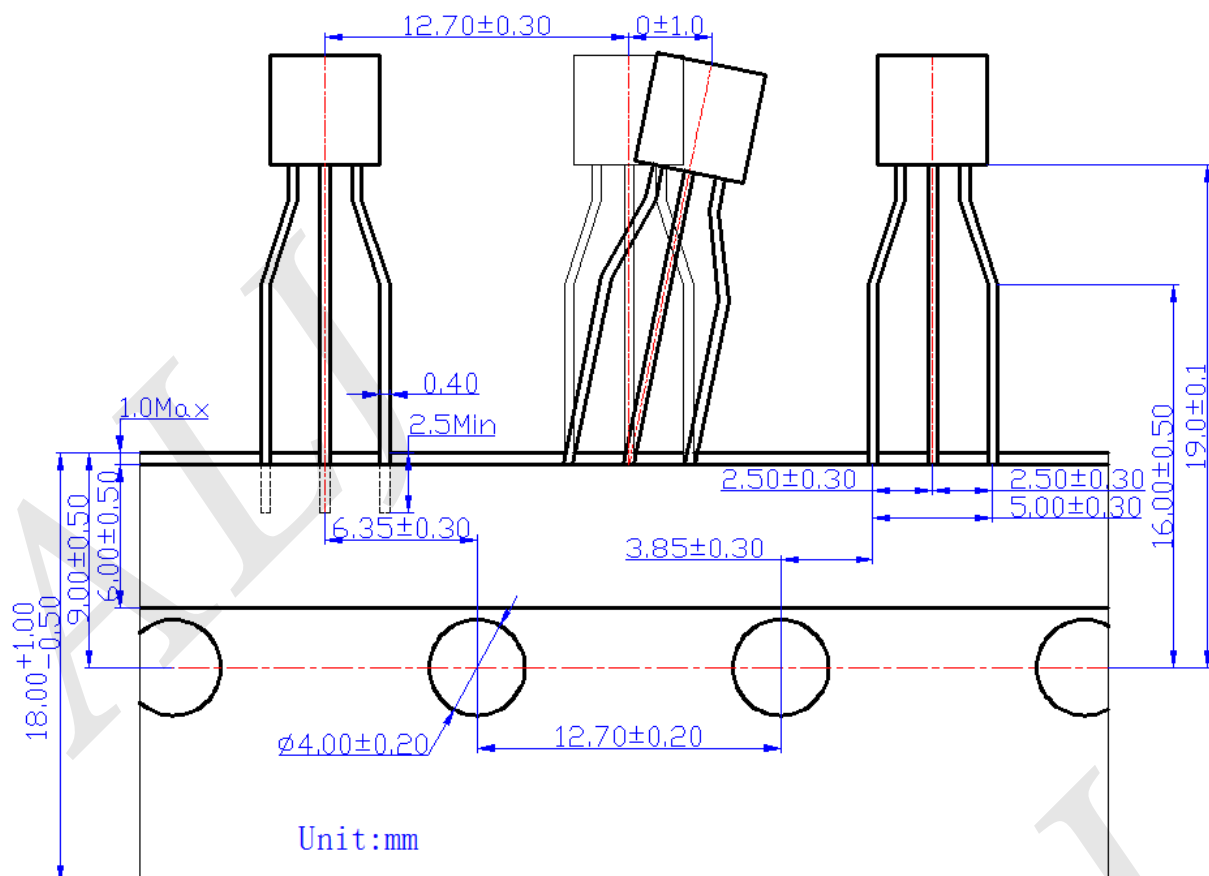
Classification OF $h_{FE(1)}$

Rank	C	D
Range	100-200	200-400

Typical Characteristics



Package Taping Dimension



Marking Information

