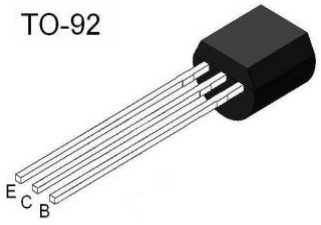
Audio Frequency Power Speed Switching



Absolute Maximum Ratings (Ta=25℃)

Parameter	Symbol	Value	Unit
		2SD1616AG-L-T92-B-CN	
Collector-Base Voltage	BV_{CBO}	120	V
Collector-Emitter Voltage	BV_{CEO}	60	V
Emitter-Base Voltage	BV_{EBO}	6	V
Collector Current	I_C	1	A
Collector Power Dissipation	P_C	0.75	W
Junction Temperature Storage Temperature	Tj、Tstg	-55～+150	℃

Electrical Characteristics (Ta=25℃)

Parameter	Symbol	Conditions	Value			Unit
			Min	Typ	Max	
Collector-base breakdown voltage	BV_{CBO}	I_C = 100μA，I_E = 0	120			V
Collector-emitter breakdown voltage	BV_{CEO}	I_C = 1mA，I_B = 0	60			V
Emitter-base breakdown voltage	BV_{EBO}	I_E = 100μA，I_C = 0	6			V
Collector cut-off current	I_{CBO}	V_{CB} = 60V，I_E = 0			0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB} = 5V，I_C = 0			0.1	μA
DC current gain	h_{FE1}	V_{CE} = 2V，I_B= 100mA	135		600	
	h_{FE2}	V_{CE} = 2V，I_B= 1A	81			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C = 1A，I_B = 50mA			0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C = 1A，I_B = 50mA			1.2	V
Transition frequency	f_T	V_{CE} = 2V，I_B = 100mA	100			MH_Z

h_{FE1} Classification

Classification	Y	G	L
h_{FE1}	135-270	200-400	300-600

Typical Characteristics

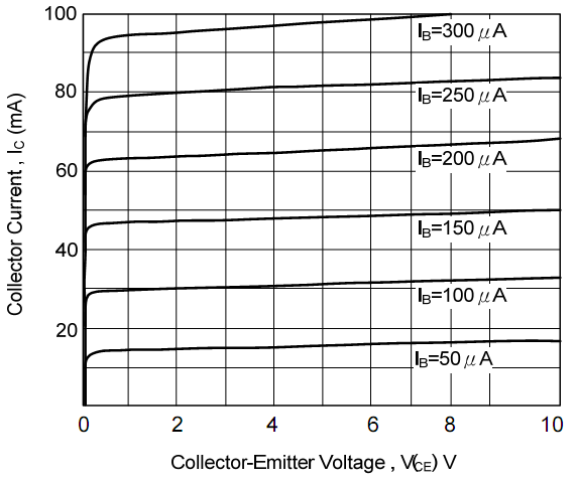


Figure 1. Static Characteristic

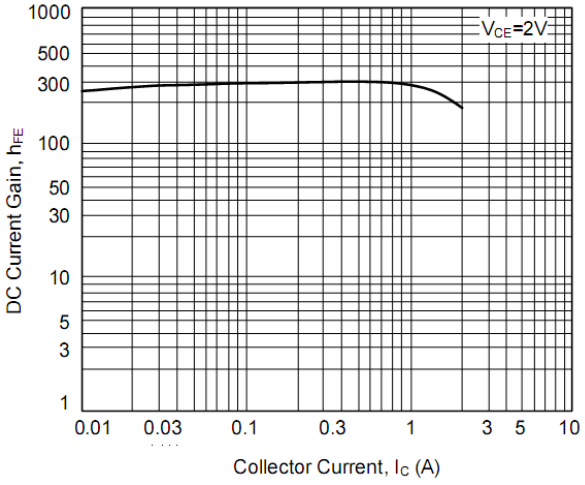


Figure 2. DC current Gain

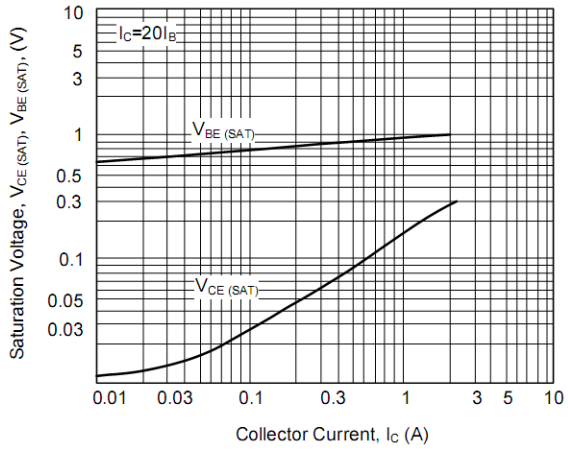


Figure 3. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

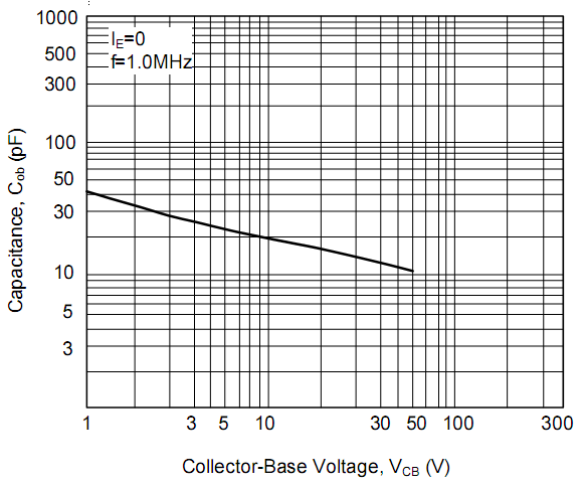


Figure 4. Output Capacitance

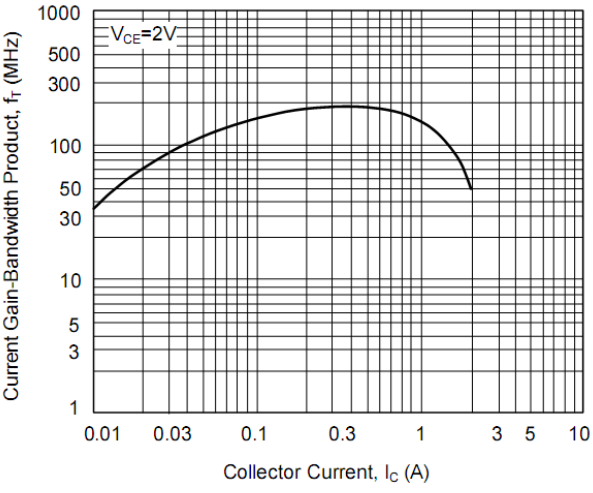


Figure 5. Current Gain Bandwidth Product

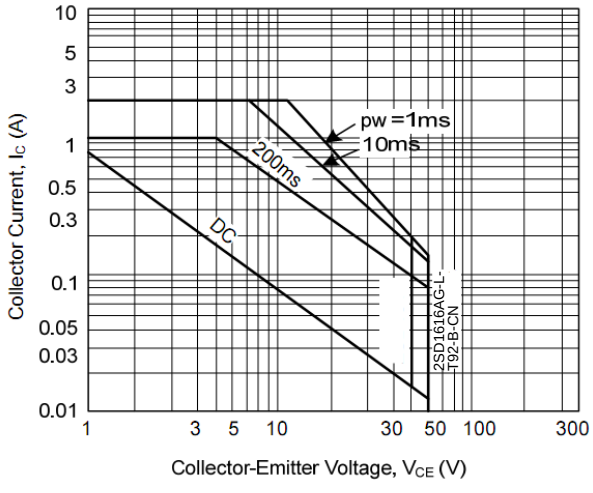
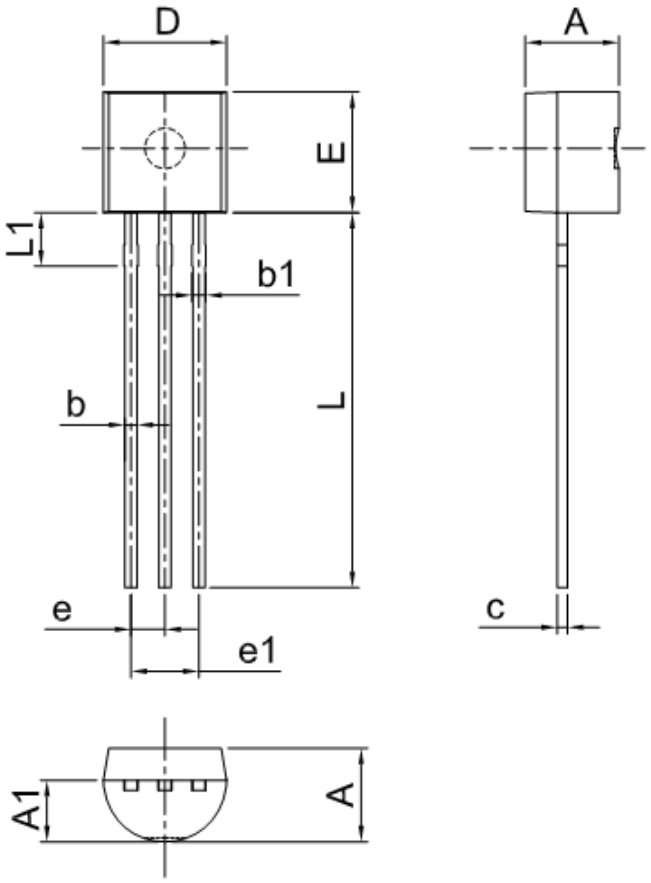


Figure 6. Safe Operating Area

Package Dimensions (Unit:mm)



Symbol	TO-92		
	Min.	Typ	Max.
A	3.30	3.50	3.70
A1	2.10	2.30	2.50
b	0.40	0.45	0.50
b1	0.50	0.55	0.60
c	0.35	0.40	0.45
D	4.45	4.55	4.65
E	4.45	4.55	4.65
e	1.17	1.27	1.37
e1	2.34	2.54	2.64
L	13.50	14.00	14.50
L1	1.80	2.00	2.20

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