

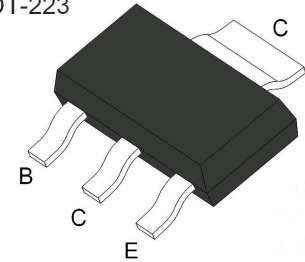
Applications

- Audio power amplifier
- DC-DC convertor
- Voltage regulator

Features

- Low saturation voltage
- High current output up to -3A

SOT-223



Absolute Maximum Rating (Ta=25°C)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	BV_{CBO}	-50	V
Collector-Emitter Voltage	BV_{CEO}	-30	V
Emitter-Base Voltage	BV_{EBO}	-6	V
Collector Current	I_C	-3	A
Collector Power Dissipation	P_C	1.25	W
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-55~150	°C

Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	BV_{CBO}	$I_C = -100\mu A, I_E = 0$	-50			V
Collector-emitter breakdown voltage	BV_{CEO}	$I_C = -10mA, I_B = 0$	-30			V
Emitter-base breakdown voltage	BV_{EBO}	$I_E = -100\mu A, I_C = 0$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB} = -40V, I_E = 0$			-10	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -5V, I_C = 0$			-10	μA
DC current gain	h_{FE1}	$V_{CE} = -2V, I_B = -20mA$	50			
	h_{FE2}	$V_{CE} = -2V, I_B = -1A$	100		400	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -2A, I_B = -0.2A$			-0.5	V
Base -emitter saturation voltage	$V_{BE(sat)}$	$I_C = -2A, I_B = -0.2A$			-2.0	V
Transition frequency	f_T	$V_{CE} = -5V, I_B = -0.1A$	50			MHz

Note *Pulse Test: $PW \leq 350\mu s$, Duty Cycle $\leq 2\%$

hFE

Range	160-320
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Typical Characteristics

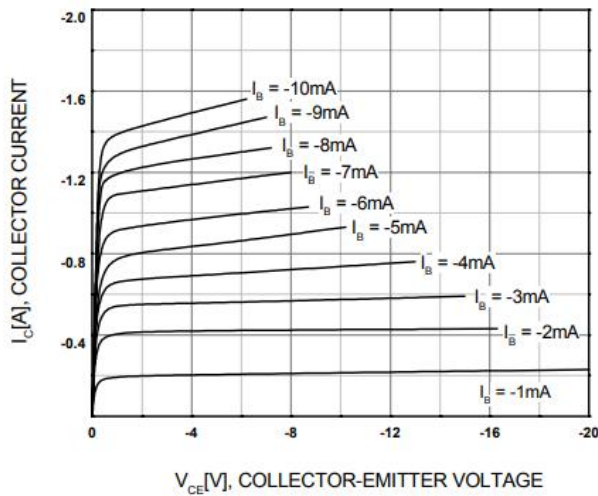


Figure 1. Static Characteristic

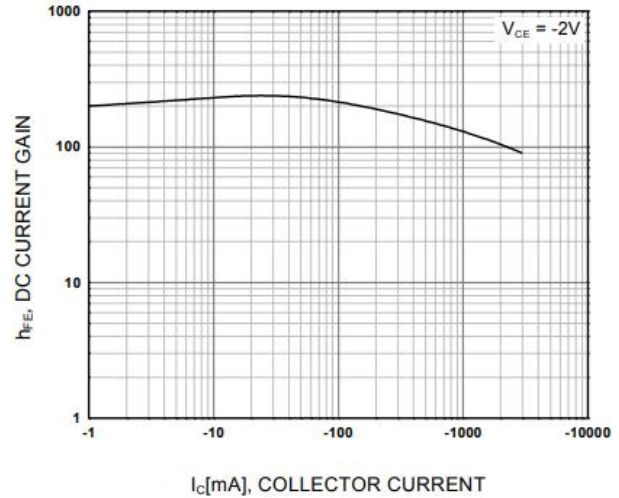


Figure 2. DC current Gain

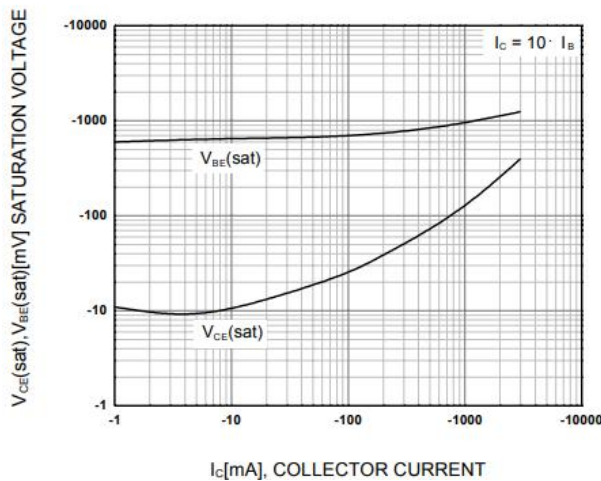


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

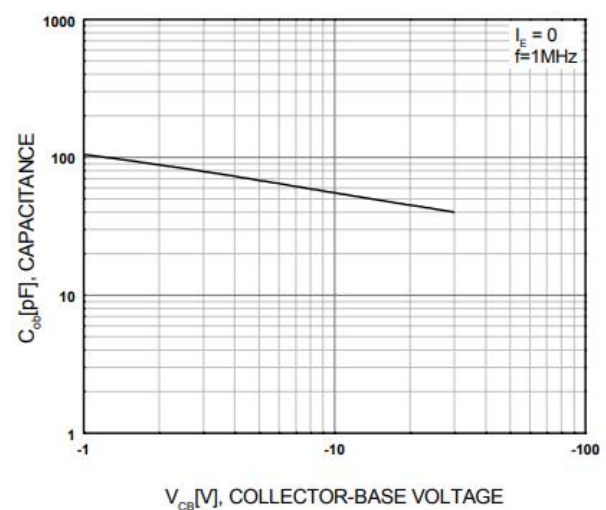


Figure 4. Collector Output Capacitance

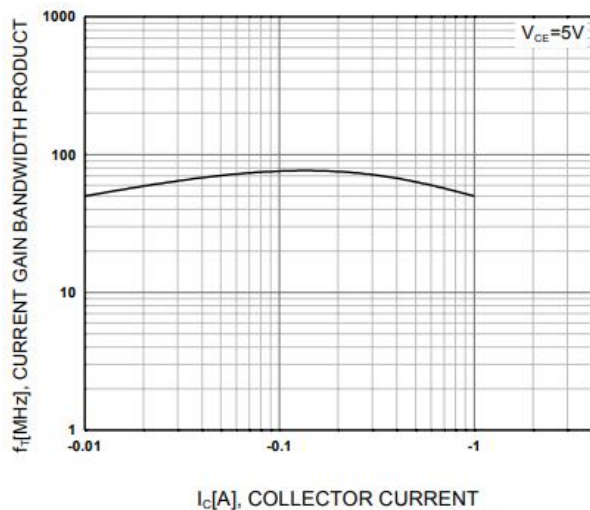


Figure 5. Current Gain Bandwidth Product

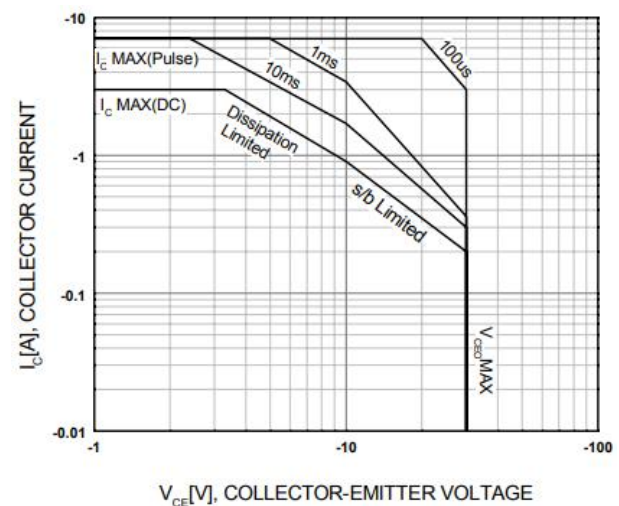
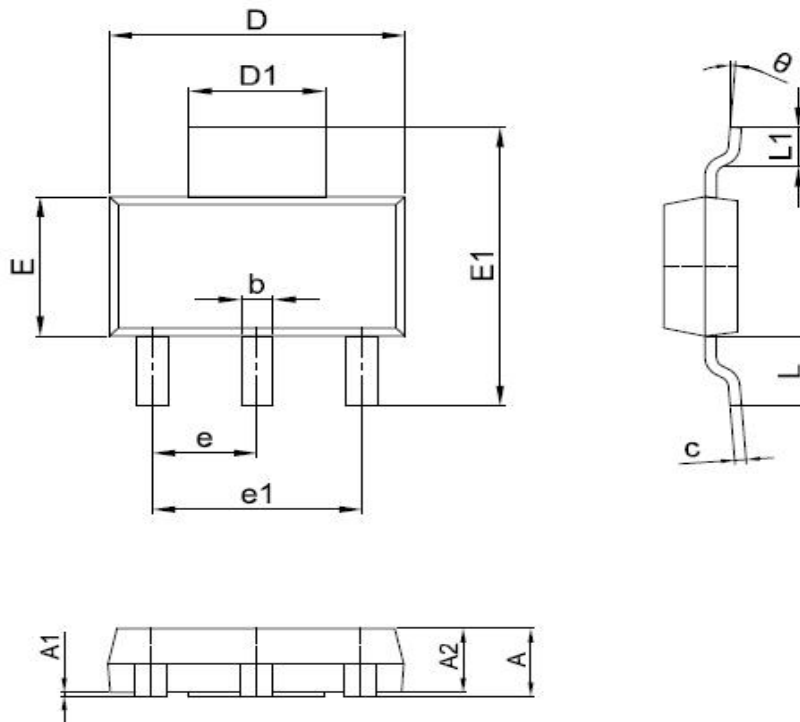


Figure 6. Power Derating

Package Dimensions


Symbol	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	1.50	1.80	0.059	0.071
A1	0.00	0.10	0.000	0.004
A2	1.50	1.70	0.059	0.067
b	0.65	0.75	0.026	0.030
c	0.20	0.30	0.008	0.012
D	6.40	6.60	0.252	0.260
D1	2.90	3.10	0.114	0.122
E	3.30	3.70	0.130	0.146
E1	6.85	7.15	0.270	0.281
e	2.20	2.40	0.087	0.094
e1	4.40	4.80	0.173	0.189
L	1.65	1.85	0.065	0.073
L1	0.90	1.15	0.035	0.045

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