

2SC1568

Silicon NPN Epitaxial Planar Type

Medium Power Amplifier for Low Voltage Supply
Complementary Pair with 2SA900

■ Features

- Low collector-emitter saturation voltage ($V_{CE(sat)}$)
- High performance at low supply voltage
- TO-126 package, no insulator needed when fixing to a heat sink

■ Absolute Maximum Ratings ($T_a=25^{\circ}\text{C}$)

Item	Symbol	Value	Unit
Collector-base voltage	V_{CB0}	18	V
Collector-emitter voltage	V_{CE0}	18	V
Emitter-base voltage	V_{EB0}	5	V
Peak collector current	I_{CP}	2	A
Collector current	I_C	1	A
Collector power dissipation	P_C	1.2 *	W
Junction temperature	T_j	150	$^{\circ}\text{C}$
Storage temperature	T_{stg}	$-55 \sim +150$	$^{\circ}\text{C}$

* Without heat sink

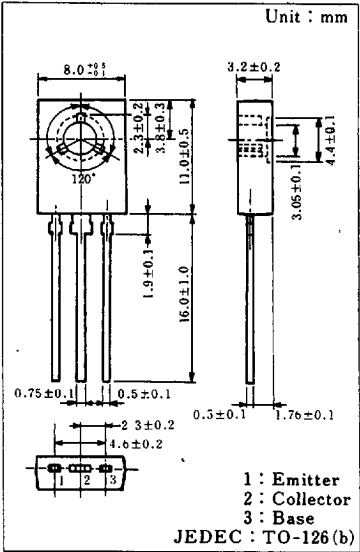
■ Electrical Characteristics ($T_c=25^{\circ}\text{C}$)

Item	Symbol	Condition	min.	typ.	max.	Unit
Collector cutoff current	I_{CBO}	$V_{CB}=10\text{ V}, I_E=0$			1	μA
	I_{CEO}	$V_{CE}=18\text{ V}, I_B=0$			10	
Collector-base voltage	V_{CB0}	$I_C=10\mu\text{A}, I_E=0$	18			V
Collector-emitter voltage	V_{CE0}	$I_C=1\text{ mA}, I_B=0$	18			V
Emitter-base voltage	V_{EB0}	$I_E=10\mu\text{A}, I_C=0$	5			V
DC current gain	$h_{FE1} *$	$V_{CE}=2\text{ V}, I_C=500\text{ mA}$	90	150	360	
	h_{FE2}	$V_{CE}=2\text{ V}, I_C=1.5\text{ A}$	50	100		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=1\text{ A}, I_B=50\text{ mA}$			0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=500\text{ mA}, I_B=50\text{ mA}$			1.2	V
Transition frequency	f_T	$V_{CB}=6\text{ V}, I_E=-50\text{ mA}, f=200\text{ MHz}$		150		MHz
Collector output capacitance	C_{ob}	$V_{CB}=6\text{ V}, I_E=0, f=1\text{ MHz}$		12		pF

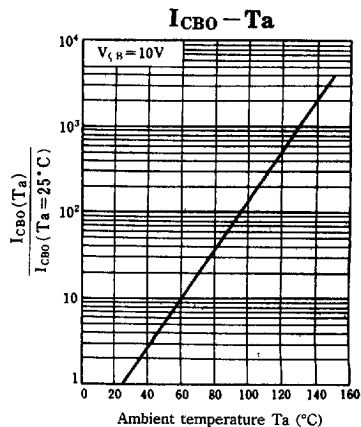
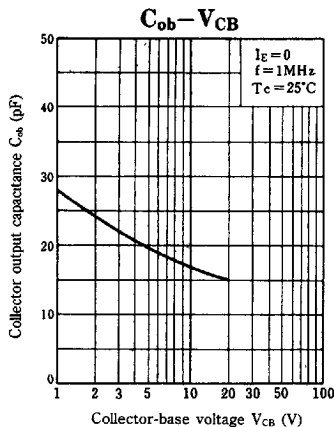
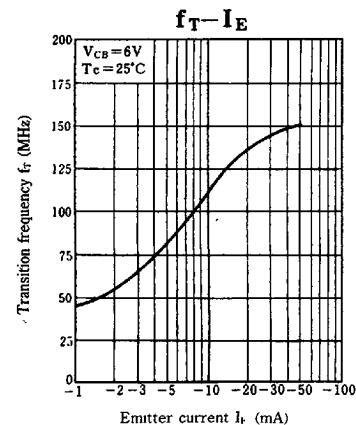
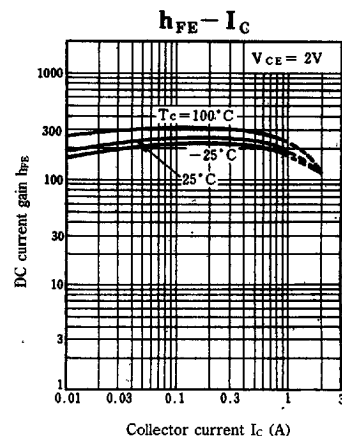
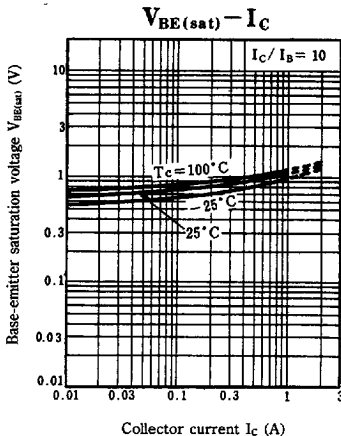
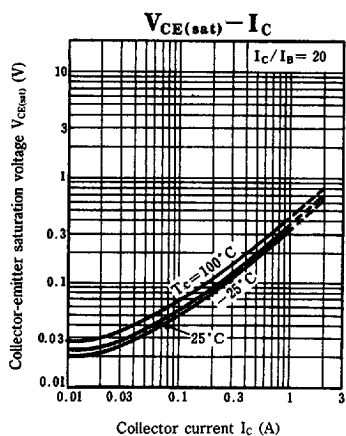
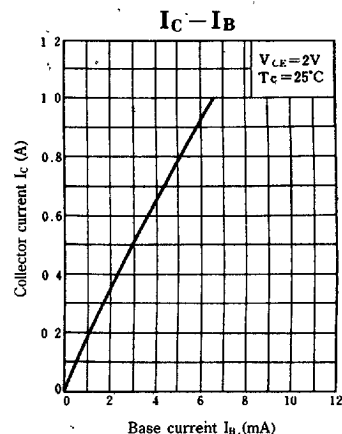
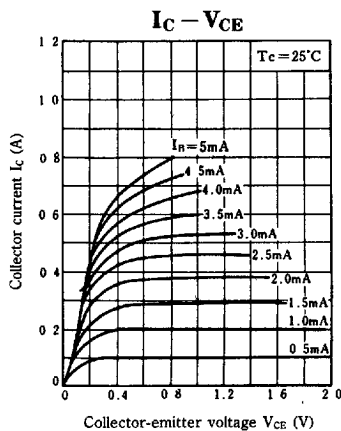
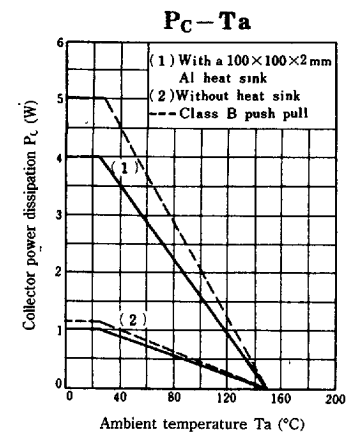
* h_{FE1} Classifications

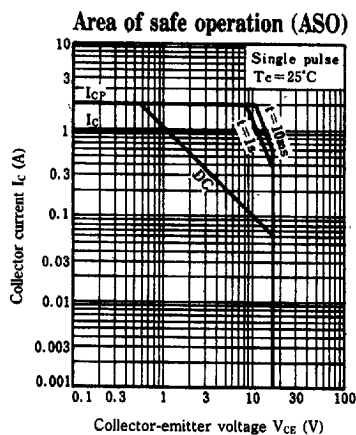
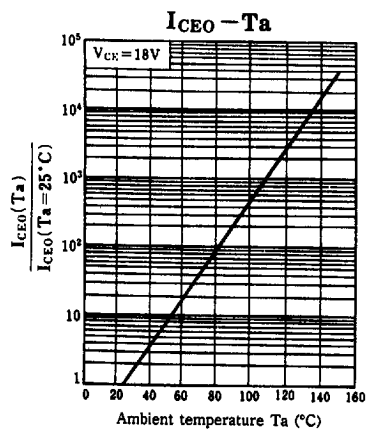
Class	Q	R	S	T
h_{FE1}	90~155	130~210	180~280	250~360

■ Package Dimensions



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