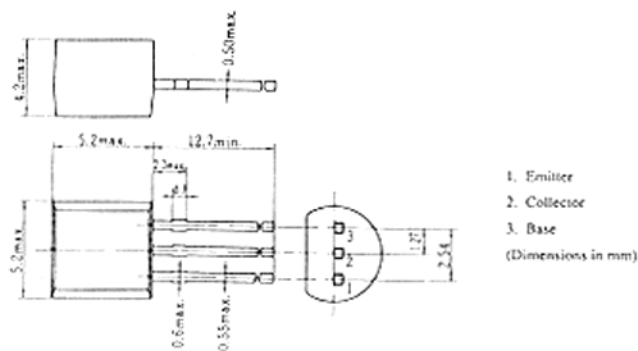


2SC2309

SILICON NPN EPITAXIAL
LOW FREQUENCY AMPLIFIER

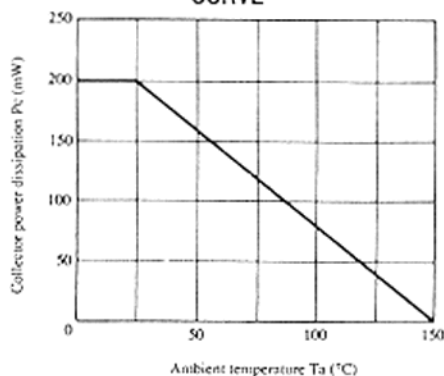


(JEDEC TO-92)

■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Item	Symbol	2SC2309	Unit
Collector to base voltage	V _{CB0}	55	V
Collector to emitter voltage	V _{CE0}	50	V
Emitter to base voltage	V _{EB0}	5	V
Collector current	I _C	100	mA
Collector power dissipation	P _C	200	mW
Junction temperature	T _J	150	°C
Storage temperature	T _{stg}	-55 to +150	°C

MAXIMUM COLLECTOR DISSIPATION CURVE



■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

Item	Symbol	Test Condition	min.	typ.	max.	Unit
Collector to base breakdown voltage	V _{BR(C)BO}	I _C = 10μA, I _E = 0	55	—	—	V
Collector to emitter breakdown voltage	V _{BR(C)EO}	I _C = 1mA, R _{BE} = ∞	50	—	—	V
Emitter to base breakdown voltage	V _{BR(E)BO}	I _E = 10μA, I _C = 0	5	—	—	V
Collector cutoff current	I _{CB0}	V _{CB} = 18V, I _E = 0	—	—	0.5	μA
Emitter cutoff current	I _{EB0}	V _{EB} = 2V, I _C = 0	—	—	0.5	μA
DC current transfer ratio	h _{FE} *	V _{CE} = 12V, I _C = 2mA	250	—	1200	
Base to emitter voltage	V _{BE}	V _{CE} = 12V, I _C = 2mA	—	—	0.75	V
Collector to emitter saturation voltage	V _{CE(sat)}	I _C = 10mA, I _B = 1mA	—	—	0.2	V
Gain bandwidth product	f _T	V _{CE} = 12V, I _C = 2mA	—	230	—	MHz
Collector output capacitance	C _{ob}	V _{CB} = 10V, I _E = 0, f = 1MHz	—	1.8	3.5	pF

* The 2SC2309 is grouped by h_{FE} as follows.

D	E	F
250 to 500	400 to 800	600 to 1200

■ See characteristic curves of 2SC1345.