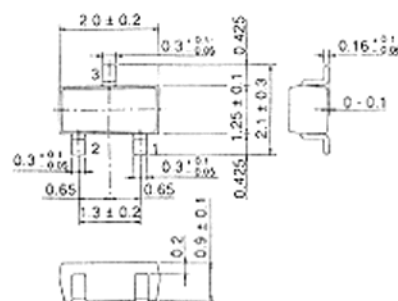


2SC4259

SILICON NPN EPITAXIAL

UHF RF AMPLIFIER



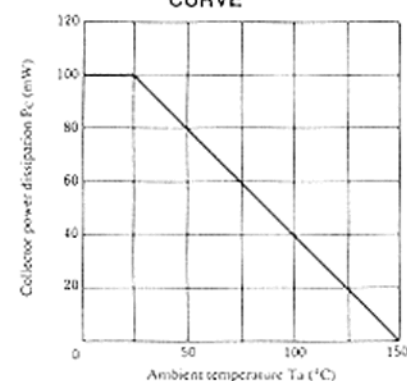
(CIPAK)

1. Emitter
2. Base
3. Collector
(Dimensions in mm)

■ ABSOLUTE MAXIMUM RATINGS ($T_a=25^\circ\text{C}$)

Item	Symbol	2SC4259	Unit
Collector to base voltage	V_{CB0}	30	V
Collector to emitter voltage	V_{CE0}	25	V
Emitter to base voltage	V_{EB0}	3	V
Collector current	I_C	20	mA
Collector power dissipation	P_C	100	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

MAXIMUM COLLECTOR DISSIPATION CURVE

■ ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$)

Item	Symbol	Test Condition	min.	typ.	max.	Unit
Collector to base breakdown voltage	$V_{(BR)CB0}$	$I_C = 10\mu\text{A}$, $I_E = 0$	30	—	—	V
Collector cutoff current	I_{CB0}	$V_{CB} = 15\text{V}$, $I_E = 0$	—	—	0.3	μA
	I_{CE0}	$V_{CE} = 25\text{V}$, $R_{BE} = \infty$	—	—	10	μA
Emitter cutoff current	I_{EB0}	$V_{EB} = 3\text{V}$, $I_C = 0$	—	—	1.0	μA
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 10\text{mA}$, $I_B = 1\text{mA}$	—	—	5.0	V
DC current transfer ratio	h_{FE}	$V_{CE} = 5\text{V}$, $I_C = 2\text{mA}$	50	—	180	
Collector output capacitance	C_{ob}	$V_{CB} = 10\text{V}$, $I_E = 0$, $f = 1\text{MHz}$	—	0.6	0.9	pF
Gain bandwidth product	f_T	$V_{CE} = 5\text{V}$, $I_C = 2\text{mA}$	0.7	1.0	—	GHz
Power gain	PG	$V_{CC} = 4\text{V}$, $I_C = 2\text{mA}$, $f = 900\text{MHz}$	10	15	—	dB
Noise figure	NF	$V_{CC} = 4\text{V}$, $I_C = 2\text{mA}$, $f = 900\text{MHz}$	—	3.0	4.5	dB
AGC voltage	V_{AGC}	$V_{CC} = 4\text{V}$, $I_C = 2\text{mA}$, $f = 900\text{MHz}$ $P_n = -50\text{dBm}$, $GR = 30\text{dB}$	1.8	—	2.7	V

* Marking is [UI-].

■ See characteristic curves of 2SC4229.