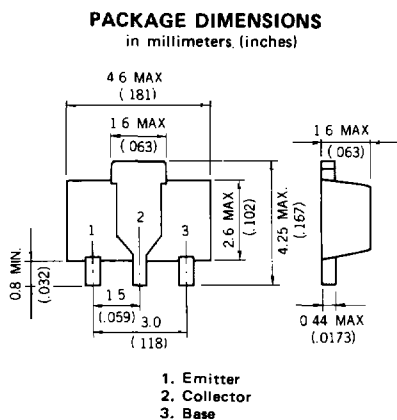


SILICON TRANSISTORS 2SB805, 2SB806

PNP SILICON EPITAXIAL TRANSISTORS POWER MINI MOLD

DESCRIPTION

The 2SB805 and 2SB806 are designed for audio frequency power amplifier application, especially in Hybrid Integrated Circuits.



FEATURES

- World Standard Miniature Package : SOT-89
- High Collector to Emitter Voltage : $V_{CEO} > -120$ V (2SB806),
: $V_{CEO} > -100$ V (2SB805)
- Complement to NPN type 2SD1006 and 2SD1007 respectively

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

Maximum Voltages and Currents	2SB805	2SB806	
Collector to Base Voltage	V_{CBO}	-100	-120 V
Collector to Emitter Voltage	V_{CEO}	-100	-120 V
Emitter to Base Voltage	V_{EBO}	-5.0	V
Collector Current (DC)	I_C	-0.7	A
Collector Current (Pulse)*	I_C	-1.2	A
Maximum Power Dissipation			
Total Power Dissipation at 25°C Ambient Temperature**	P_T	2.0	W
Maximum Temperatures			
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to +150	$^\circ\text{C}$

*PW \leq 10 ms, duty cycle \leq 50 %

**When mounted on ceramic substrate of $2.5\text{ cm}^2 \times 0.7\text{ mm}$

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

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS	
Collector Cutoff Current	I_{CBO}			-100	nA	2SB805	$V_{CB} = -100\text{ V}, I_E = 0$
				-100	nA	2SB806	$V_{CB} = -120\text{ V}, I_E = 0$
Emitter Cutoff Current	I_{EBO}			-100	nA	$V_{EB} = -5.0\text{ V}, I_C = 0$	
DC Current Gain	h_{FE1}	45	200			$V_{CE} = -1.0\text{ V}, I_C = -5.0\text{ mA}$ ***	
DC Current Gain	h_{FE2}	90	200	400		$V_{CE} = -1.0\text{ V}, I_C = -100\text{ mA}$ ***	
Collector Saturation Voltage	$V_{CE(sat)}$		-0.4	-0.6	V	$I_C = -500\text{ mA}, I_B = -50\text{ mA}$ ***	
Base Saturation Voltage	$V_{BE(sat)}$		-0.9	-1.5	V	$I_C = -500\text{ mA}, I_B = -50\text{ mA}$ ***	
Base to Emitter Voltage	V_{BE}	-550	-620	-650	mV	$V_{CE} = -10\text{ V}, I_C = -10\text{ mA}$ ***	
Gain Bandwidth Product	f_T		75		MHz	$V_{CE} = -10\text{ V}, I_E = 10\text{ mA}$	
Output Capacitance	C_{ob}		17		pF	$V_{CB} = -10\text{ V}, I_E = 0, f = 1.0\text{ MHz}$	

***Pulsed : PW \leq 350 μs , duty cycle \leq 2 %

h_{FE} Classification

MARKING	2SB805	KM	KL	KK
	2SB806	KR	KQ	KP
h_{FE2}	90 - 180	135 - 270	200 - 400	