2SC1380
2SC1380A

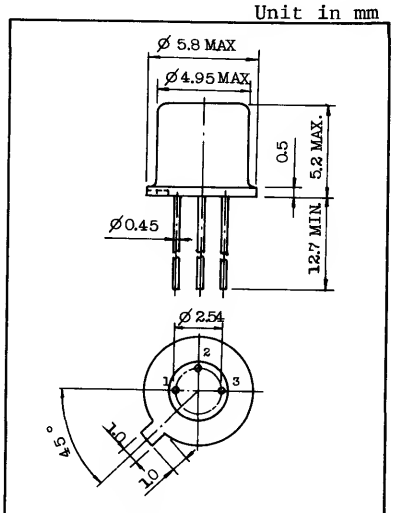
SILICON NPN EPITAXIAL TYPE (PCT PROCESS)
(INDUSTRIAL APPLICATIONS)

HIGH FREQUENCY AMPLIFIER APPLICATIONS.
LOW NOISE AUDIO AMPLIFIER APPLICATIONS. (2SC1380A)

FEATURES:

- High Breakdown Voltage : V_{CEO}=50V
- High DC Current Gain : h_{FE}=200∿700
- Low Noise Figure : NF=2dB(Max.)(2SC1380A)
  at R_g=10kΩ, f=100Hz

Unit in mm



1. EMITTER
2. BASE
3. COLLECTOR (CASE)

JEDEC	TO-18
EIAJ	TC-7, TB-8C
TOSHIBA	2-5A1B

Weight : 0.31g

MAXIMUM RATINGS (Ta=25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	55	V
Collector-Emitter Voltage	V_{CEO}	50	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	100	mA
Base Current	I_B	20	mA
Collector Power Dissipation	P_C	200	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55∿150	°C

ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	V_{CB}=18V, I_E=0	-	-	0.1	μA
Emitter Cut-off Current		I_{EBO}	V_{EB}=5V, I_C=0	-	-	0.1	μA
DC Current Gain		h_{FE} (Note)	V_{CE}=6V, I_C=2mA	200	-	700	
Transition Frequency		f_T	V_{CE}=6V, I_C=1mA	-	80	-	MHz
Collector Output Capacitance		C_{ob}	V_{CB}=6V, I_E=0, f=1MHz	-	6	10	pF
Noise Figure	2SC1380A Only	NF(1)	V_{CE}=6V, I_C=0.1mA f=10Hz, R_g=10kΩ	-	-	10	dB
		NF(2)	V_{CE}=6V, I_C=0.1mA f=100Hz, R_g=10kΩ	-	-	2	

Note: h_{FE} Classification GR: 200∿400, BL: 350∿700