

2SC1570

2003A

NPN Epitaxial Planar Silicon Transistor

Low-Noise Amp Applications

©431E

The 2SC1570 is developed as very low-noise transistor and is especially suited for use in equalizer first stage of high-grade type stereo sets.

Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

		unit
Collector to Base Voltage	V_{CBO}	55 V
Collector to Emitter Voltage	V_{CEO}	50 V
Emitter to Base Voltage	V_{EBO}	5 V
Collector Current	I_C	100 mA
Peak Collector Current	i_{cp}	200 mA
Base Current	I_B	20 mA
Collector Dissipation	P_C	200 mW
Junction Temperature	T_j	125 $^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +125 $^\circ\text{C}$

Electrical Characteristics at $T_a = 25^\circ\text{C}$

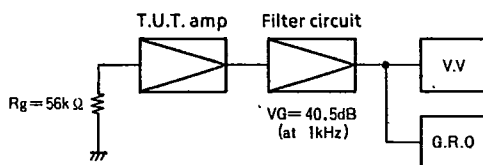
			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = 18\text{V}, I_E = 0$			0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 3\text{V}, I_C = 0$			0.1	μA
DC Current Gain	h_{FE}	$V_{CE} = 6\text{V}, I_C = 1\text{mA}$	160*		960*	
Gain-Bandwidth Product	f_T	$V_{CE} = 6\text{V}, I_C = 1\text{mA}$		100		MHz
Output Capacitance	c_{ob}	$V_{CB} = 6\text{V}, f = 1\text{MHz}$		3		pF
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = 50\text{mA}, I_B = 5\text{mA}$			0.5	V
Base to Emitter Voltage	V_{BE}	$V_{CE} = 2\text{V}, I_C = 1\text{mA}$		0.58	0.80	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 10\mu\text{A}, I_E = 0$	55			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 1\text{mA}, R_{BE} = \infty$	50			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 10\mu\text{A}, I_C = 0$	5			V
Noise Level	$V_{NO(ave)}$	See specified Test Circuit. $V_{CC} = 30\text{V}, I_C = 1\text{mA}$ $R_g = 56\text{k}\Omega, V_G = 77\text{dB}$ (at 1kHz)			40	mV

Noise Peak Level	$V_{NO(peak)}$	"	"		280	mV
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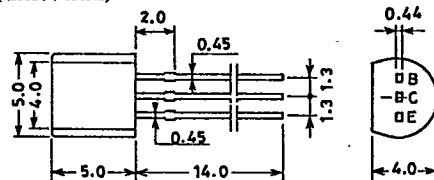
* : The 2SC1570 is classified by 1mA h_{FE} as follows :

160	F	320	280	G	560	480	H	960
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Noise Test Circuit



Case Outline 2003A (unit : mm)



JEDEC: TO-92

EIAJ: SC-43

SANYO: NP

B: Base

C: Collector

E: Emitter

4280MO/4147KI/3185KI, TS No.431-1/3

