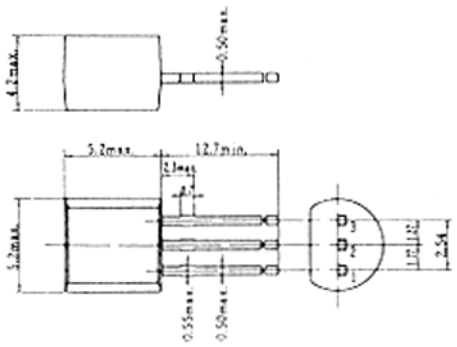
HITACHI

2SC4308

SILICON NPN EPITAXIAL PLANAR

VHF WIDE BAND AMPLIFIER



1. Base
2. Emitter
3. Collector

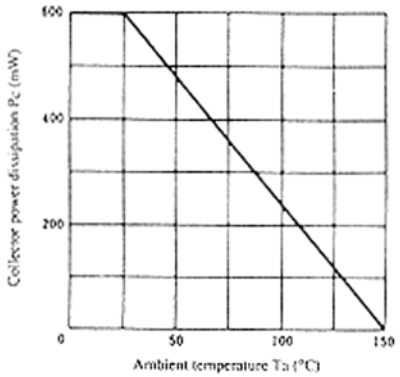
(Dimensions in mm)

(JEDEC TO-92)

■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Item	Symbol	2SC4308	Unit
Collector to base voltage	V_{CBO}	30	V
Collector to emitter voltage	V_{CEO}	20	V
Emitter to base voltage	V_{EBO}	3	V
Collector current	I_C	300	mA
Collector peak current	$i_{C(peak)}$	500	mA
Collector power dissipation	P_C	600	mW
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	−55 to +150	°C

MAXIMUM COLLECTOR DISSIPATION CURVE

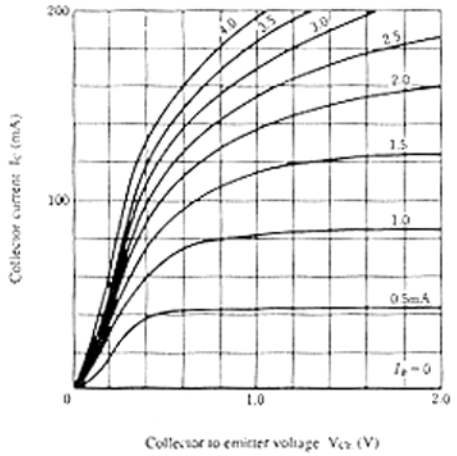


■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

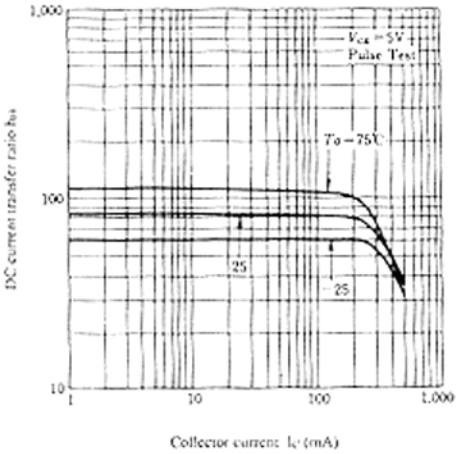
Item	Symbol	Test Condition	min.	typ.	max.	Unit
Collector to base breakdown voltage	$V_{(BR)CBO}$	I_C = 100μA, I_E = 0	30	—	—	V
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	I_C = 1mA, R_{BE} = ∞	20	—	—	V
Collector cutoff current	I_{CBO}	V_{CB} = 25V, I_E = 0	—	—	1	μA
Emitter cutoff current	I_{EBO}	V_{EB} = 3V, I_E = 0	—	—	10	μA
DC current transfer ratio	h_{FE}	V_{CE} = 5V, I_C = 50mA	50	—	200	
Gain bandwidth product	f_T	V_{CE} = 5V, I_C = 50mA	1.5	2.5	—	GHz
Collector output capacitance	C_{ob}	V_{CB} = 10V, I_E = 0, f = 1MHz	—	4.0	—	pF

2SC4308

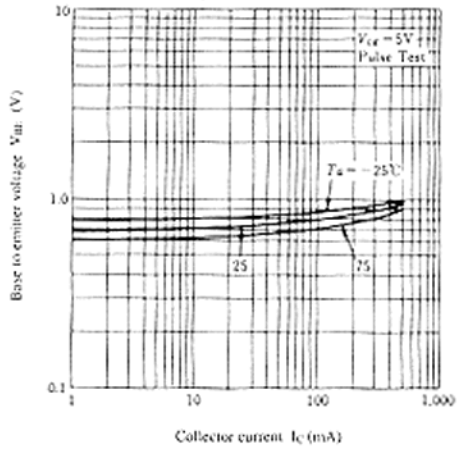
TYPICAL OUTPUT CHARACTERISTICS



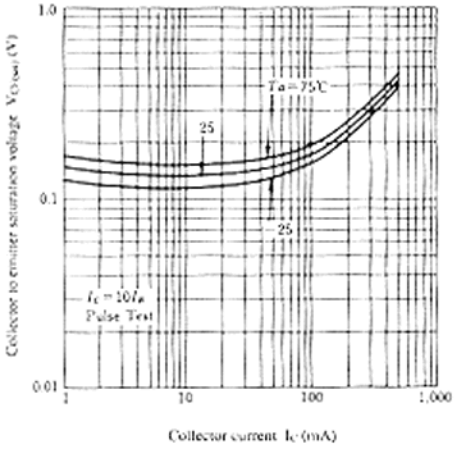
DC CURRENT TRANSFER RATIO VS. COLLECTOR CURRENT



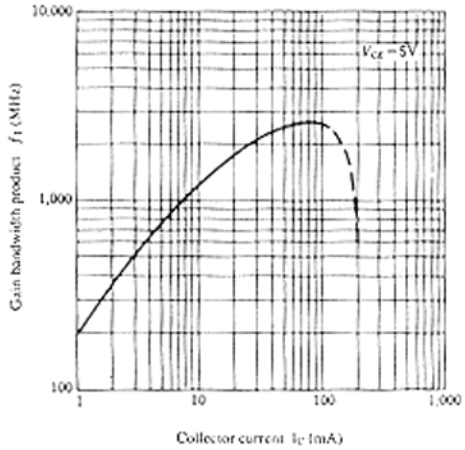
BASE TO EMITTER VOLTAGE VS. COLLECTOR CURRENT



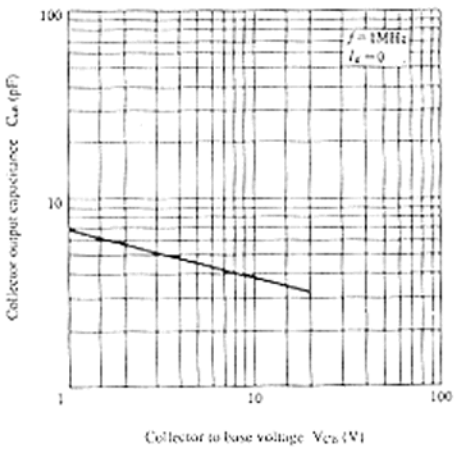
COLLECTOR TO EMITTER SATURATION VOLTAGE VS. COLLECTOR CURRENT



GAIN BANDWIDTH PRODUCT VS. COLLECTOR CURRENT



COLLECTOR OUTPUT CAPACITANCE VS. COLLECTOR CURRENT



EMITTER INPUT CAPACITANCE VS.
EMITTER TO BASE VOLTAGE