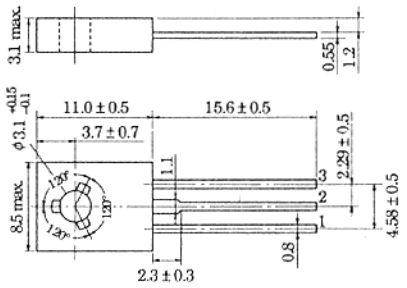
HITACHI

2SC2298

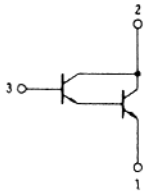
SILICON NPN EPITAXIAL

HIGH GAIN AMPLIFIER



1. Emitter
2. Collector
3. Base

(Dimensions in mm)



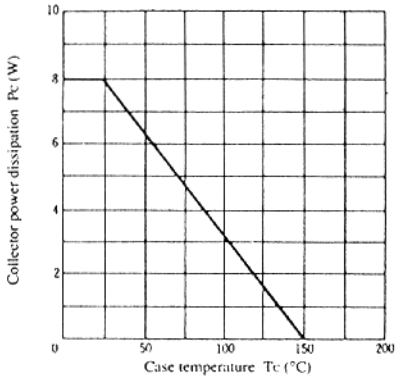
(JEDEC TO-126 MOD.)

■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Item	Symbol	2SC2298	Unit
Collector to base voltage	V_{CBO}	30	V
Collector to emitter voltage	V_{CEO}	30	V
Emitter to base voltage	V_{EBO}	10	V
Collector current	I_C	1.0	A
Collector peak current	$i_{C(peak)}$	1.5	A
Collector power dissipation	P_C	0.8	W
	P_C*	8	W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	−55 to +150	°C

* Value at T_C = 25°C

MAXIMUM COLLECTOR DISSIPATION CURVE

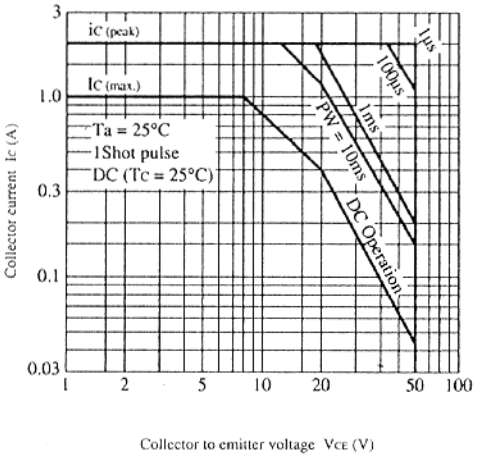


■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

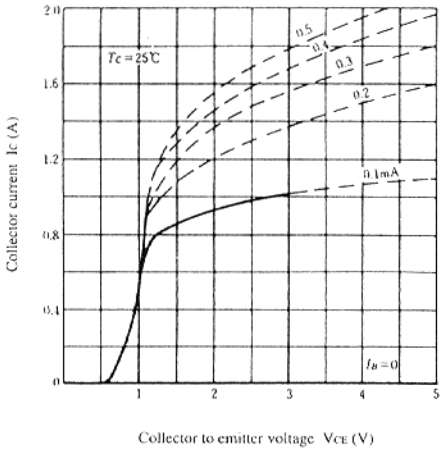
Item	Symbol	Test Condition	min.	typ.	max.	Unit
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	I_C = 1mA, R_{BE} = ∞	30	—	—	V
Emitter cutoff current	I_{EBO}	V_{EB} = 10V, I_C = 0	—	—	10	μA
DC current transfer ratio	h_{FE1}*	V_{CE} = 3V, I_C = 10mA	4000	—	—	
	h_{FE2}*	V_{CE} = 3V, I_C = 100mA	10000	—	—	
	h_{FE3}*	V_{CE} = 3V, I_C = 400mA (pulse test)	10000	—	—	
Collector to emitter saturation voltage	$V_{CE(sat)}$	I_C = 400mA, I_B = 0.1mA (pulse test)	—	—	1.5	V
Base to emitter saturation voltage	$V_{BE(sat)}$		—	—	2.0	V

* The 2SC2298 is grouped by h_{FE} as follows.

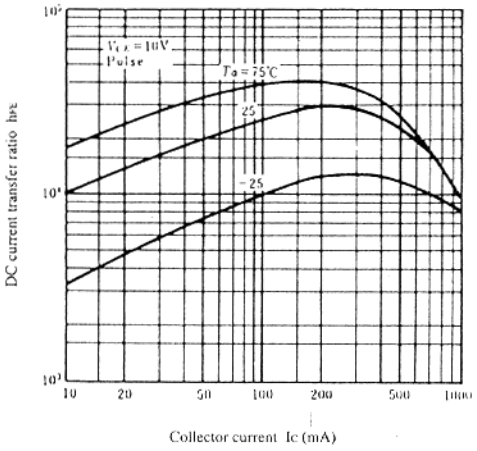
AREA OF SAFE OPERATION



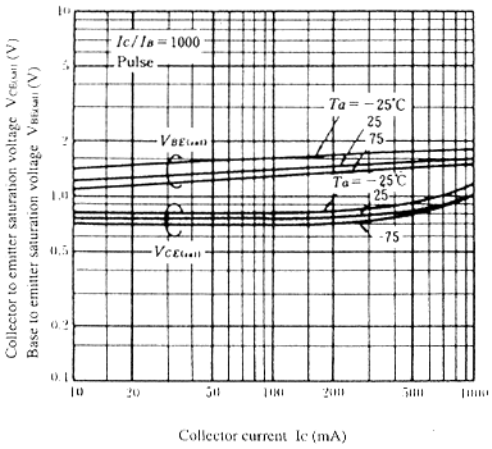
TYPICAL OUTPUT CHARACTERISTICS



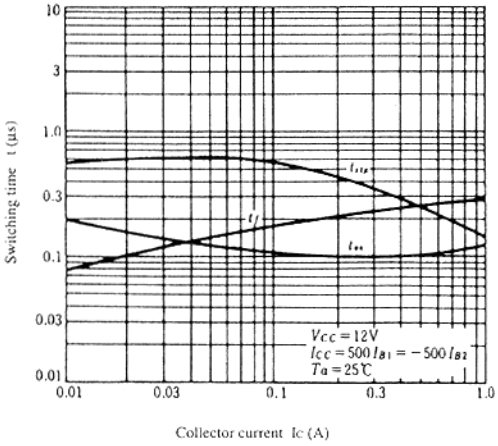
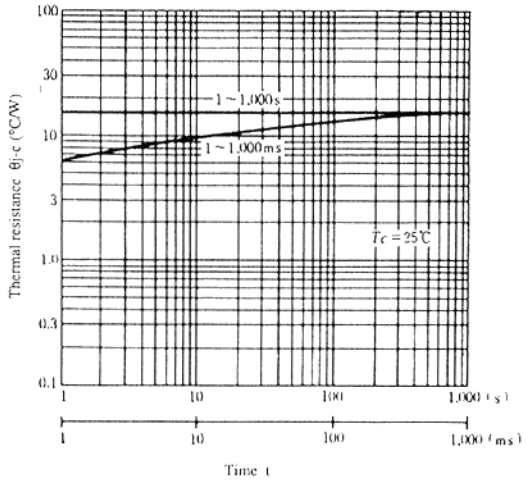
DC CURRENT TRANSFER RATIO VS. COLLECTOR CURRENT



SATURATION VOLTAGE VS. COLLECTOR CURRENT



SWITCHING TIME VS. COLLECTOR CURRENT



TRANSIENT THERMAL RESISTANCE