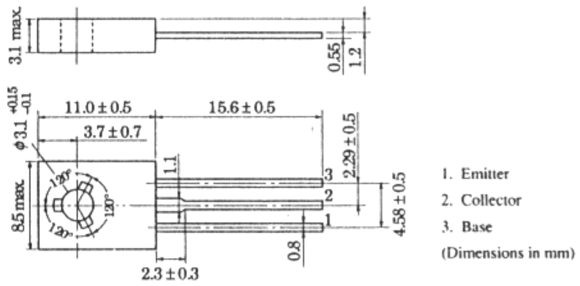
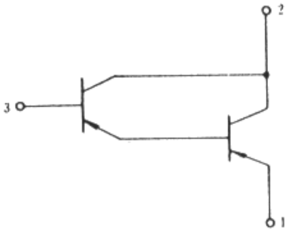
2SA1194Ⓚ

SILICON PNP EPITAXIAL

HIGH GAIN AMPLIFIER





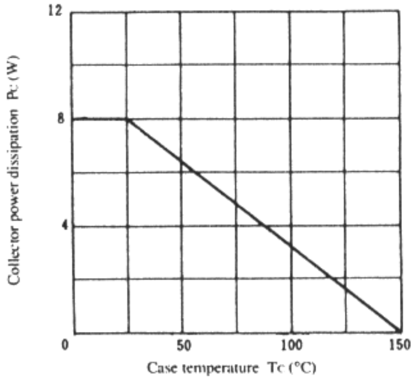
(JEDEC TO-126 MOD.)

■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Item	Symbol	2SA1194Ⓚ	Unit
Collector to base voltage	V_{CBO}	–60	V
Collector to emitter voltage	V_{CEO}	–60	V
Emitter to base voltage	V_{EBO}	–7	V
Collector current	I_C	–1	A
Collector peak current	$i_{C(peak)}$	–2	A
Collector power dissipation	P_C	1	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

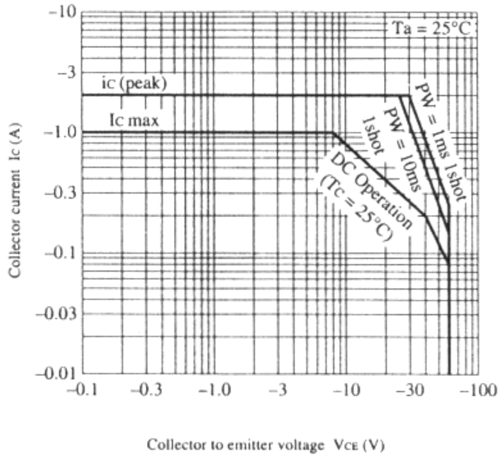


■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

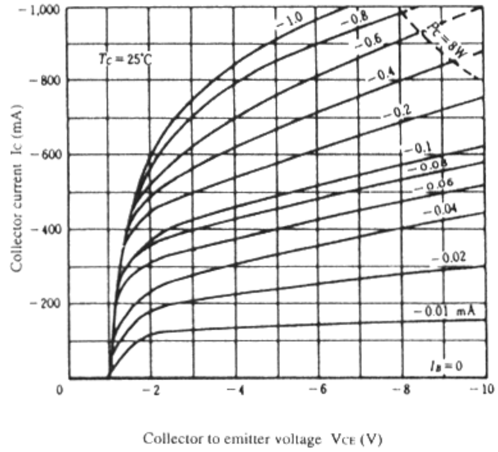
Item	Symbol	Test Condition	min.	typ.	max.	Unit
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	I_C = –1mA, R_{BE} = ∞	–60	—	—	V
Collector cutoff current	I_{CBO}	V_{CB} = –60V, I_E = 0	—	—	–1.0	μA
Emitter cutoff current	I_{EBO}	V_{EB} = –7V, I_C = 0	—	—	–1.0	μA
DC current transfer ratio	h_{FE}	V_{CE} = –3V, I_C = –500mA*	1000	—	—	
Collector to emitter saturation voltage	$V_{CE(sat)}$	I_C = –500mA, I_B = –1mA*	—	—	–2.0	V
Base to emitter saturation voltage	$V_{BE(sat)}$		—	—	–2.0	V
Turn on time	t_{on}	I_C = –500mA I_{B1} = –I_{B2} = –1mA	—	0.7	—	μs
Turn off time	t_{off}		—	0.8	—	μs

* Pulse Test

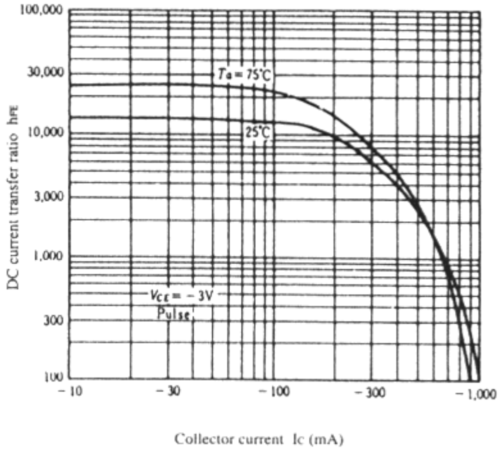
AREA OF SAFE OPERATION



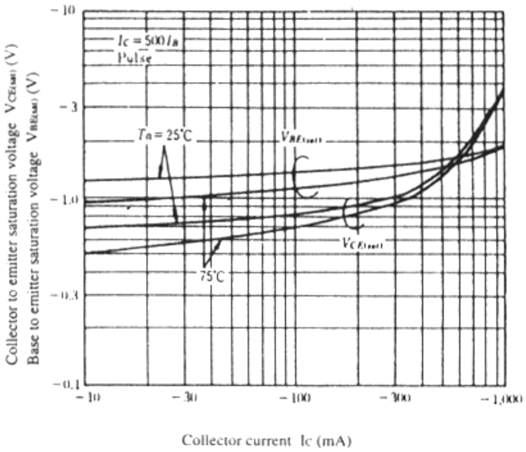
TYPICAL OUTPUT CHARACTERISTICS



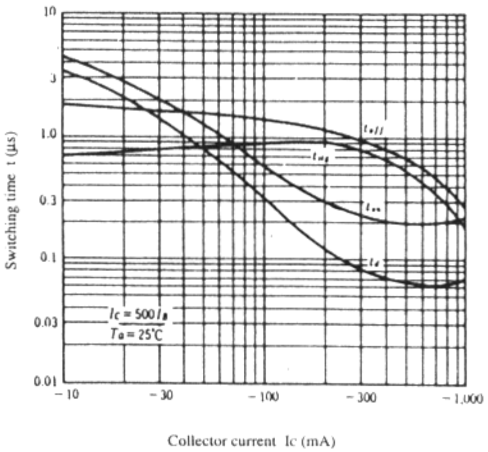
DC CURRENT TRANSFER RATIO VS. COLLECTOR CURRENT



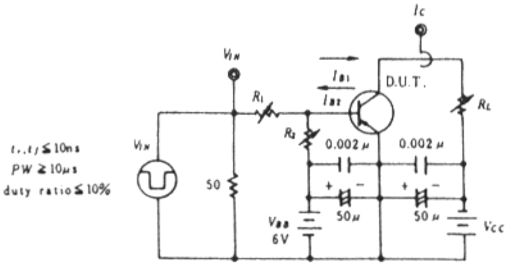
SATURATION VOLTAGE VS. COLLECTOR CURRENT



SWITCHING TIME VS. COLLECTOR CURRENT



SWITCHING TIME TEST CIRCUIT



RESPONSE WAVEFORM