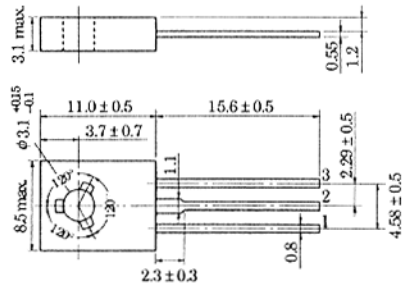
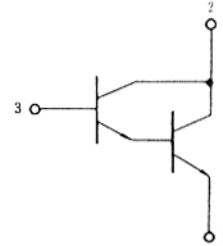


2SC3004

SILICON NPN EPITAXIAL
HIGH GAIN AMPLIFIER
MEDIUM SPEED SWITCHING



1. Emitter
2. Collector
3. Base
(Dimensions in mm)



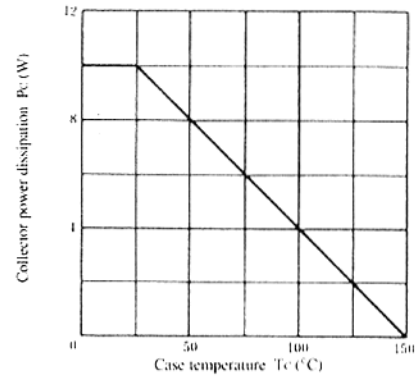
(JEDEC TO-126 MOD.)

■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Item	Symbol	2SC3004	Unit
Collector to base voltage	V _{CB0}	30	V
Collector to emitter voltage	V _{CE0}	30	V
Emitter to base voltage	V _{EB0}	7	V
Collector current	I _C	3	A
Collector peak current	i _{C(peak)}	4	A
Collector power dissipation	P _{C*}	10	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



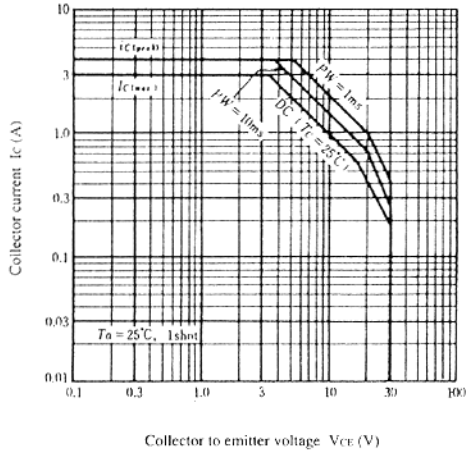
■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

Item	Symbol	Test Condition	min.	typ.	max.	Unit
Collector to base breakdown voltage	V _{(BR)CBO}	I _C = 0.1mA, I _E = 0	30	—	—	V
Collector to emitter breakdown voltage	V _{(BR)CEO}	I _C = 1mA, R _{BE} = ∞	30	—	—	V
Emitter to base breakdown voltage	V _{(BR)EBO}	I _E = 0.1mA, I _C = 0	7	—	—	V
Collector cutoff current	I _{CEO}	V _{CE} = 24V, R _{BE} = ∞	—	—	20	μA
DC current transfer ratio	h _{FE}	V _{CE} = 3V, I _C = 1.5A*	2000	—	50000	
Collector to emitter saturation voltage	V _{CE(sat)}	I _C = 1.5A, I _B = 3mA*	—	—	1.5	V
		I _C = 3A, I _B = 30mA*	—	—	2.0	V
Base to emitter saturation voltage	V _{BE(sat)}	I _C = 1.5A, I _B = 3mA*	—	—	2.0	V
		I _C = 3A, I _B = 30mA*	—	—	3.5	V
Turn on time	t _{on}	I _C = 1.5A, I _{B1} = -I _{B2} = 3mA V _{CC} = 30V	—	0.4	—	μs
Turn off time	t _{off}		—	1.2	—	μs
Storage time	t _{stg}		—	0.8	—	μs

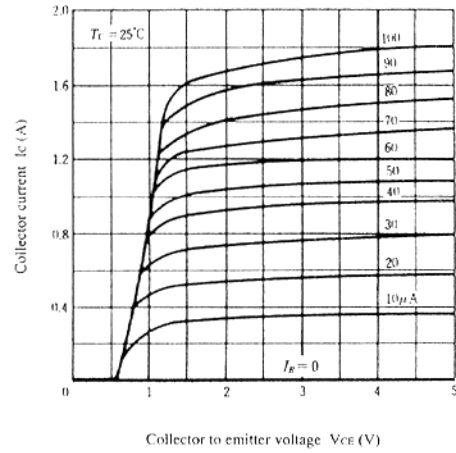
* Pulse Test

2SC3004

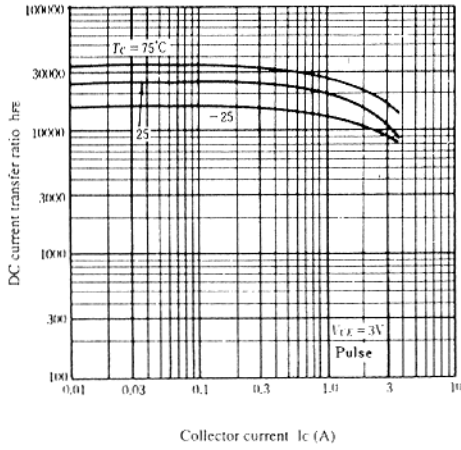
AREA OF SAFE OPERATION



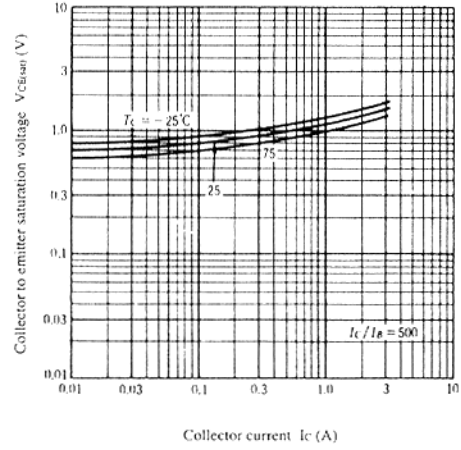
TYPICAL OUTPUT CHARACTERISTICS



DC CURRENT TRANSFER RATIO VS. COLLECTOR CURRENT



COLLECTOR TO EMITTER SATURATION VOLTAGE VS. COLLECTOR CURRENT



BASE TO EMITTER SATURATION VOLTAGE VS. COLLECTOR CURRENT

