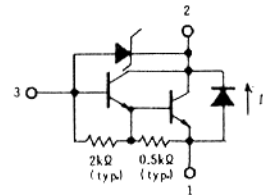
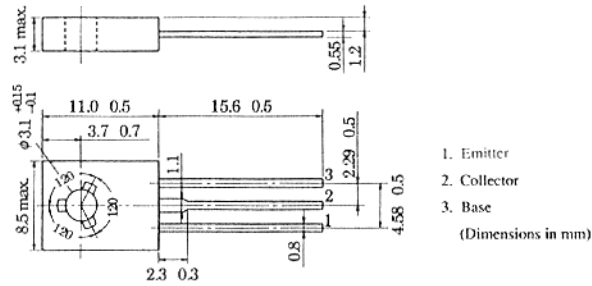


2SD1521

SILICON NPN EPITAXIAL
LOW FREQUENCY POWER AMPLIFIER



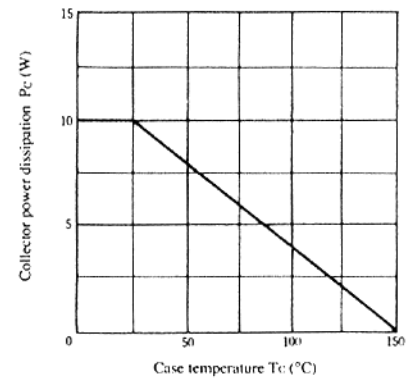
(JEDEC TO-126 MOD)

■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Item	Symbol	2SD1521	Unit
Collector to emitter voltage	V _{CEO}	50	V
Emitter to base voltage	V _{EBO}	7	V
Collector current	I _C	1.5	A
Collector peak current	i _{c(peak)}	3.0	A
Collector power dissipation	P _C	10	W
Junction temperature	T _j	150	°C
Storage temperature	T _{stg}	-55 to +150	°C
C to E diode forward current	I _D *	1.5	A

* Value at T_C = 25°C.

MAXIMUM COLLECTOR DISSIPATION CURVE

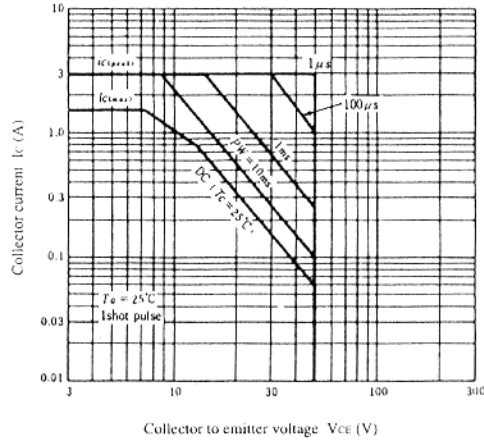


■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

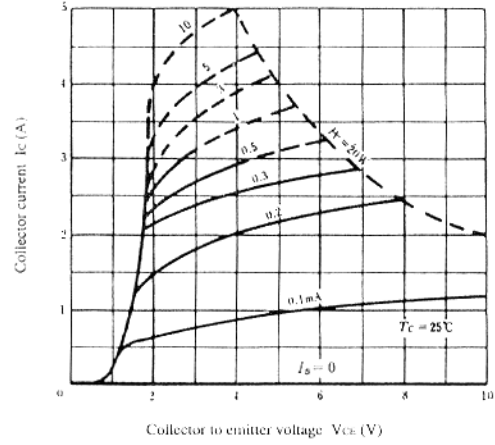
Item	Symbol	Test Condition	min.	typ.	max.	Unit
Collector to base breakdown voltage (Zener breakdown voltage)	V _{(BR)CBO} [V _Z]	I _C = 0.1mA, I _E = 0	50	60	70	V
Emitter to base breakdown voltage	V _{(BR)EBO}	I _E = 50mA, I _C = 0	7	—	—	V
Collector cutoff current	I _{CEO}	V _{CE} = 50V, R _{BE} = ∞	—	—	10	μA
DC current transfer ratio	h _{FE}	V _{CE} = 3V, I _C = 1A*	2000	—	30000	
Collector to emitter saturation voltage	V _{CE(sat)1}	I _C = 1A, I _B = 1mA*	—	—	1.5	V
	V _{CE(sat)2}	I _C = 1.5A, I _B = 1.5mA*	—	—	2.0	V
Base to emitter saturation voltage	V _{BE(sat)1}	I _C = 1A, I _B = 1mA*	—	—	2.0	V
	V _{BE(sat)2}	I _C = 1.5A, I _B = 1.5mA*	—	—	2.5	V
C to E diode forward voltage	V _D	I _D = 1.5A	—	—	3.0	V
Turn on time	t _{on}	I _C = 1A, I _{B1} = -I _{B2} = 1mA	—	0.5	—	μs
Turn off time	t _{off}		—	2.0	—	μs

* Pulse Test.

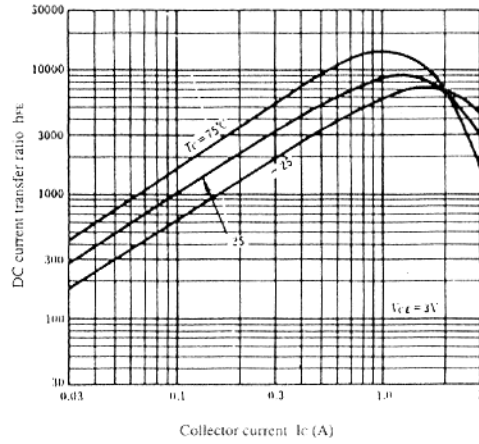
AREA OF SAFE OPERATION



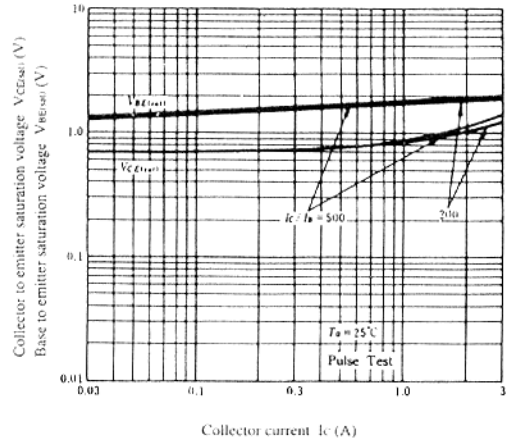
TYPICAL OUTPUT CHARACTERISTICS



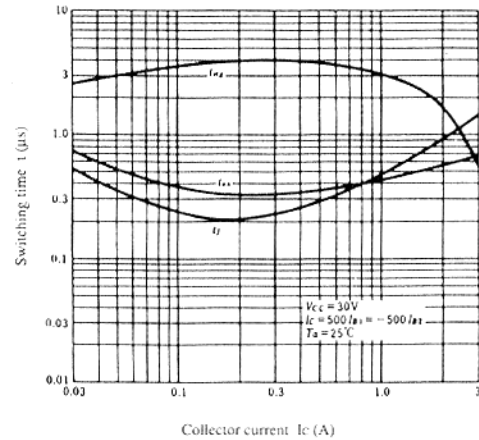
DC CURRENT TRANSFER RATIO VS. COLLECTOR CURRENT



SATURATION VOLTAGE VS. COLLECTOR CURRENT



SWITCHING TIME VS. COLLECTOR CURRENT



TRANSIENT THERMAL RESISTANCE

