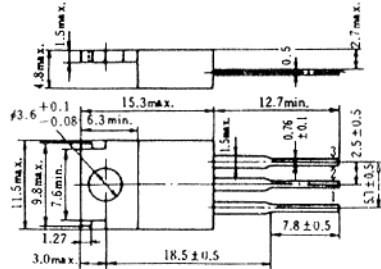
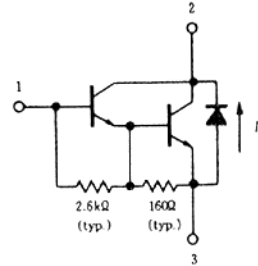


2SD1606

SILICON NPN TRIPLE DIFFUSED
LOW FREQUENCY POWER AMPLIFIER



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



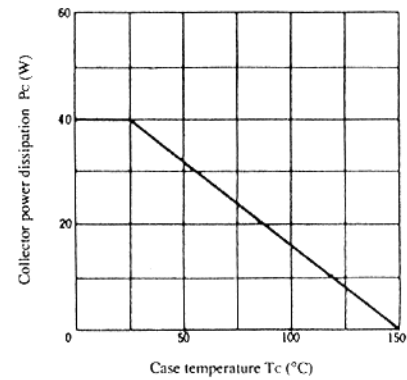
(JEDEC TO-220AB)

■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Item	Symbol	2SD1606	Unit
Collector to base voltage	V _{CB0}	120	V
Collector to emitter voltage	V _{CEO}	120	V
Emitter to base voltage	V _{EBO}	7	V
Collector current	I _C	6	A
Collector peak current	i _{C(peak)}	12	A
Collector power dissipation	P _{C*}	40	W
Junction temperature	T _j	150	°C
Storage temperature	T _{stg}	-55 to +150	°C
C to E diode forward current	I _{D*}	6	A

* Value at T_C = 25°C.

MAXIMUM COLLECTOR DISSIPATION CURVE

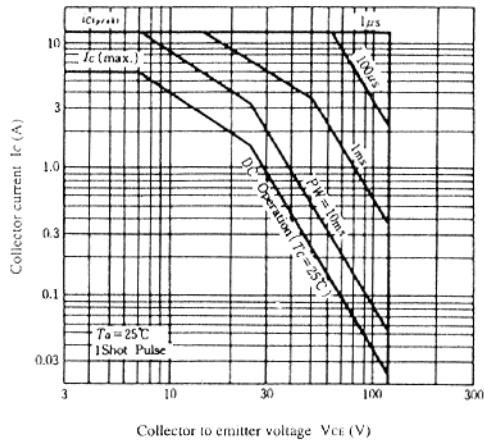


■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

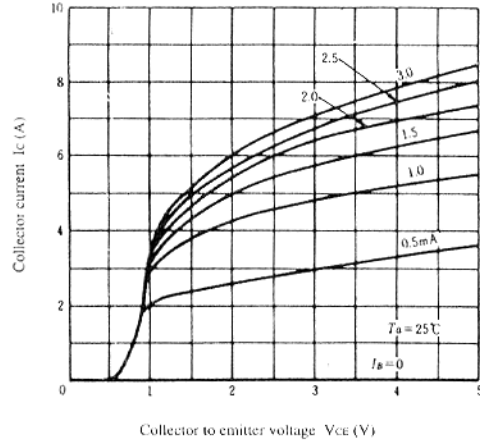
Item	Symbol	Test Condition	min.	typ.	max.	Unit
Collector to emitter breakdown voltage	V _{(BR)CEO}	I _C = 25mA, R _{BE} = ∞	120	—	—	V
Emitter to base breakdown voltage	V _{(BR)EBO}	I _E = 50mA, I _C = 0	7	—	—	V
Collector cutoff current	I _{CB0}	V _{CB} = 120V, I _E = 0	—	—	100	μA
	I _{CEO}	V _{CE} = 100V, R _{BE} = ∞	—	—	10	μA
DC current transfer ratio	h _{FE}	V _{CE} = 3V, I _C = 3A*	1000	—	20000	
Collector to emitter saturation voltage	V _{CE(sat)1}	I _C = 3A, I _B = 6mA*	—	—	1.5	V
	V _{CE(sat)2}	I _C = 6A, I _B = 60mA*	—	—	3.0	V
Base to emitter saturation voltage	V _{BE(sat)1}	I _C = 3A, I _B = 6mA*	—	—	2.0	V
	V _{BE(sat)2}	I _C = 6A, I _B = 60mA*	—	—	3.5	V
C to E diode forward voltage	V _D	I _D = 5A*	—	—	3.0	V
Turn on time	t _{on}	I _C = 3A, I _{B1} = -I _{B2} = 6mA	—	0.6	—	μs
Storage time	t _{stg}		—	7.0	—	μs
Fall time	t _f		—	2.0	—	μs

* Pulse Test.

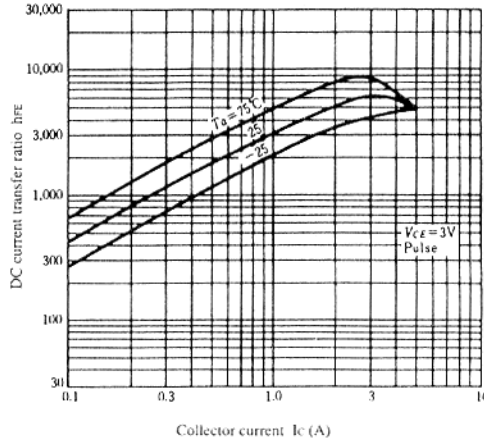
AREA OF SAFE OPERATION



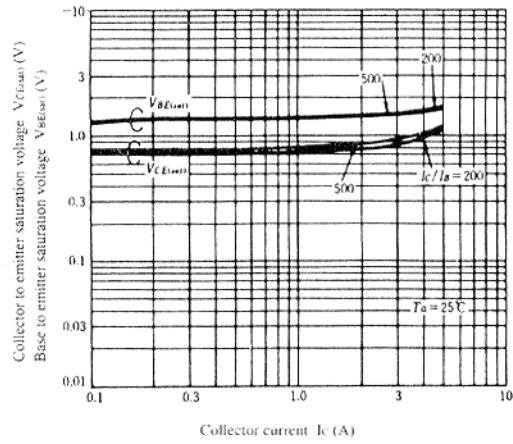
TYPICAL OUTPUT CHARACTERISTICS



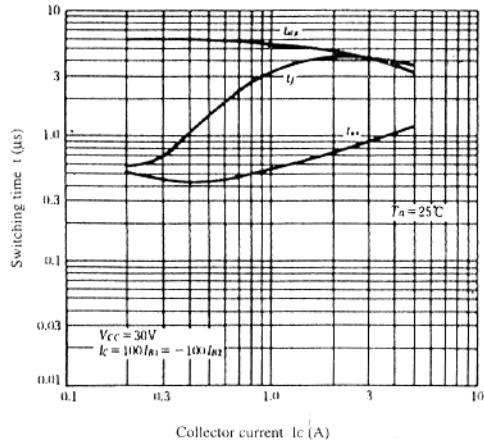
DC CURRENT TRANSFER RATIO VS. COLLECTOR CURRENT



SATURATION VOLTAGE VS. COLLECTOR CURRENT



SWITCHING TIME VS. COLLECTOR CURRENT



TRANSIENT THERMAL RESISTANCE

