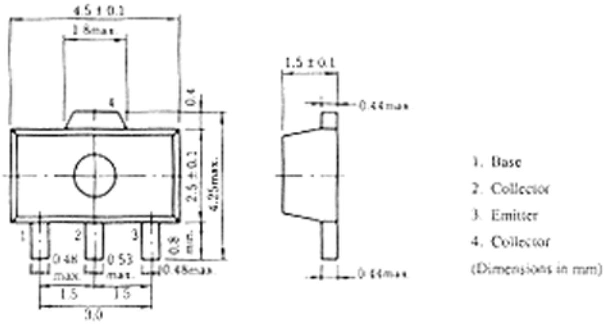
2SD1367

SILICON NPN EPITAXIAL

LOW FREQUENCY POWER AMPLIFIER
Complementary pair with 2SB1001



(UPAK)

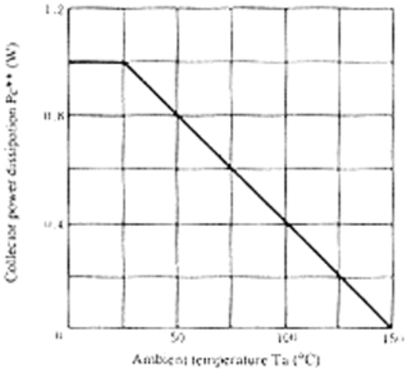
■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Item	Symbol	2SD1367	Unit
Collector to base voltage	V_{CBO}	20	V
Collector to emitter voltage	V_{CEO}	16	V
Emitter to base voltage	V_{EBO}	6	V
Collector current	I_C	2	A
Collector peak current	$i_{C(peak)}$*	3	A
Collector power dissipation	P_C**	1	W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	−55 to +150	°C

* PW≤10ms, Duty cycle ≤20%.

** Value on the alumina ceramic board (12.5×20×0.7mm)

MAXIMUM COLLECTOR DISSIPATION CURVE



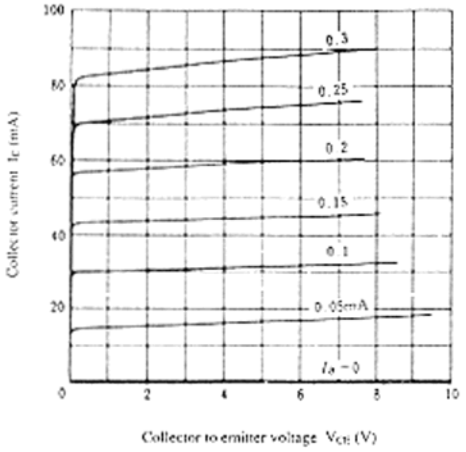
■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

Item	Symbol	Test Condition	min.	typ.	max.	Unit
Collector to base breakdown voltage	$V_{(BR)CBO}$	$I_C = 10\mu A$, $I_E = 0$	20	—	—	V
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 1mA$, $R_{BE} = \infty$	16	—	—	V
Emitter to base breakdown voltage	$V_{(BR)EBO}$	$I_E = 10\mu A$, $I_C = 0$	6	—	—	V
Collector cutoff current	I_{CBO}	$V_{CB} = 16V$, $I_E = 0$	—	—	0.1	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = 5V$, $I_C = 0$	—	—	0.1	μA
DC current transfer ratio	h_{FE}*	$V_{CE} = 2V$, $I_C = 0.1A$, Pulse	100	—	500	
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 1A$, $I_B = 0.1A$, Pulse	—	0.15	0.3	V
Base to emitter saturation voltage	$V_{BE(sat)}$	$I_C = 1A$, $I_B = 0.1A$, Pulse	—	0.9	1.2	V
Gain bandwidth product	f_T	$V_{CE} = 2V$, $I_C = 10mA$	—	100	—	MHz
Collector output capacitance	C_{ob}	$V_{CB} = 10V$, $I_E = 0$, $f = 1MHz$	—	20	—	pF

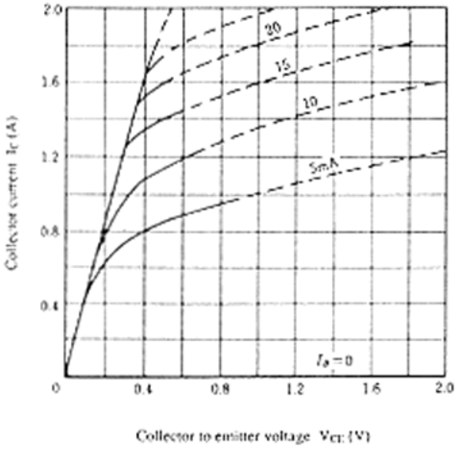
* The 2SD1367 is grouped by h_{FE} as follows.

Mark	BA	BB	BC
h_{FE}	100 to 200	160 to 320	250 to 500

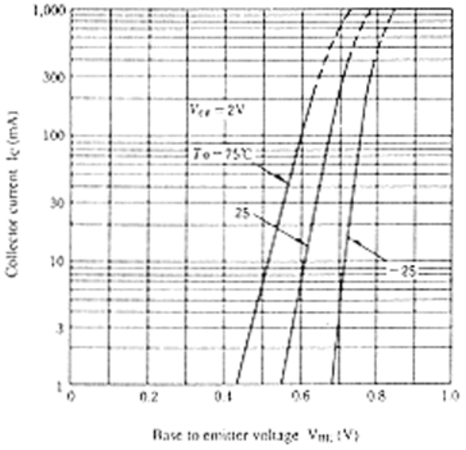
TYPICAL OUTPUT CHARACTERISTICS



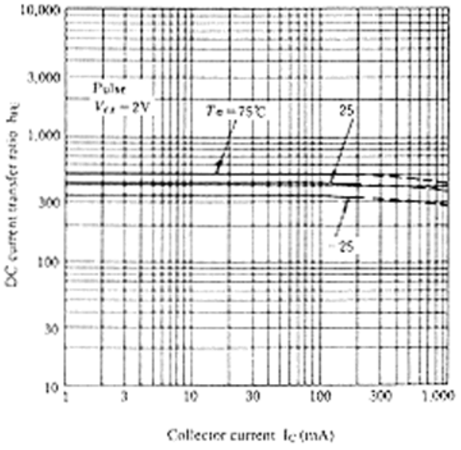
TYPICAL OUTPUT CHARACTERISTICS



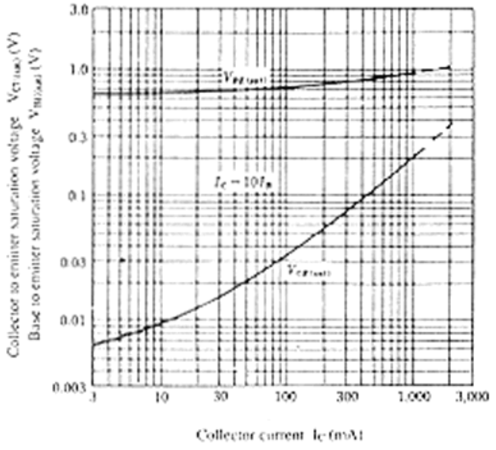
TYPICAL TRANSFER CHARACTERISTICS



DC CURRENT TRANSFER RATIO VS. COLLECTOR CURRENT



SATURATION VOLTAGE VS. COLLECTOR CURRENT



COLLECTOR OUTPUT CAPACITANCE VS. COLLECTOR TO BASE VOLTAGE