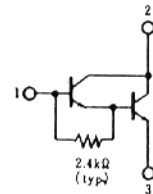
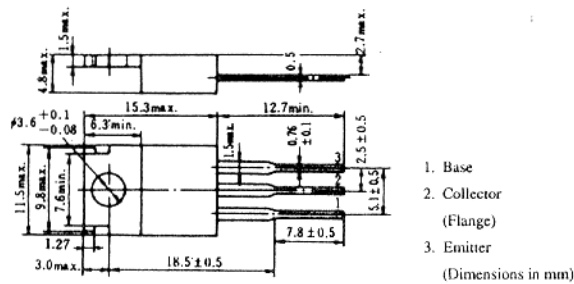


2SD1377

SILICON NPN EPITAXIAL
LOW FREQUENCY POWER AMPLIFIER



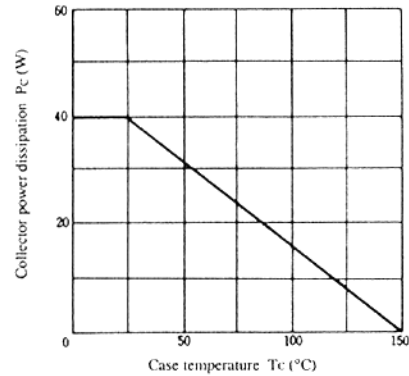
(JEDEC TO-220AB)

■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Item	Symbol	2SD1377 	Unit
Collector to base voltage	VCBO	120	V
Collector to emitter voltage	VCEO	120	V
Emitter to base voltage	VEBO	7	V
Collector current	IC	8	A
Collector peak current	ic(peak)	12	A
Collector power dissipation	PC*	40	W
Junction temperature	Tj	150	°C
Storage temperature	Tstg	-55 to +150	°C

* Value at Tc = 25°C.

MAXIMUM COLLECTOR DISSIPATION
CURVE



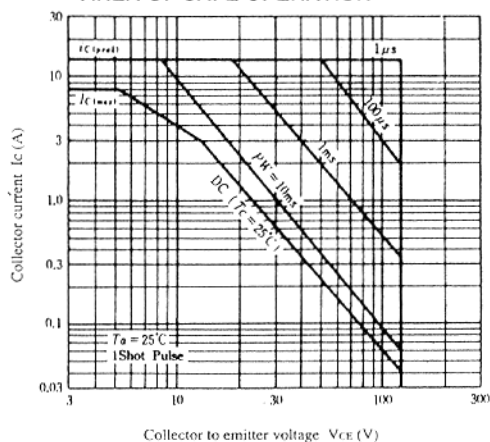
■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

Item	Symbol	Test Condition	min.	typ.	max.	Unit
Collector to emitter breakdown voltage	V(BR)CEO	IC = 25mA, RBE = ∞	120	—	—	V
Emitter to base breakdown voltage	V(BR)EBO	IE = 50mA, IC = 0	7	—	—	V
Collector cutoff current	ICBO	VCE = 120V, IE = 0	—	—	100	μA
	ICEO	VCE = 100V, RBE = ∞	—	—	10	μA
DC current transfer ratio	hFE	VCE = 3V, IC = 4A*	1000	—	20000	
Collector to emitter saturation voltage	VCE(sat)1	IC = 4A, IB = 8mA*	—	—	1.5	V
	VCE(sat)2	IC = 8A, IB = 80mA*	—	—	3.0	V
Base to emitter saturation voltage	VBE(sat)1	IC = 4A, IB = 8mA*	—	—	2.0	V
	VBE(sat)2	IC = 8A, IB = 80mA*	—	—	3.5	V
Turn on time	ton	IC = 4A, IB1 = -IB2 = 8mA	—	0.5	—	μs
Storage time	tstg		—	5.4	—	μs
Fall time	tf		—	1.1	—	μs

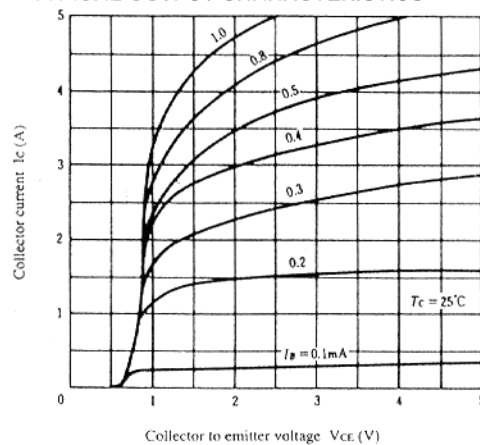
* Pulse Test.

2SD1377K

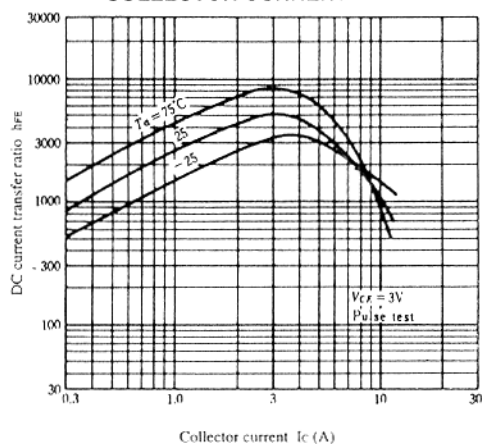
AREA OF SAFE OPERATION



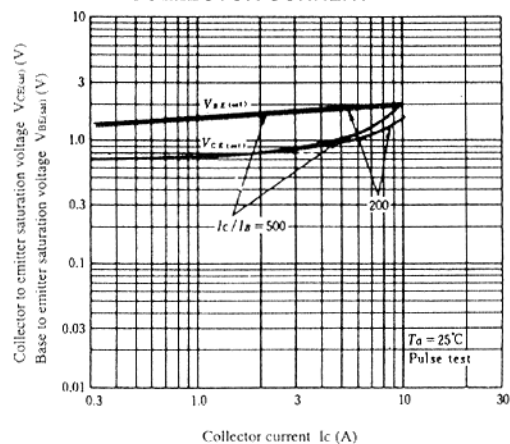
TYPICAL OUTPUT CHARACTERISTICS



DC CURRENT TRANSFER RATIO VS. COLLECTOR CURRENT



SATURATION VOLTAGE VS. COLLECTOR CURRENT



SWITCHING TIME VS. COLLECTOR CURRENT

