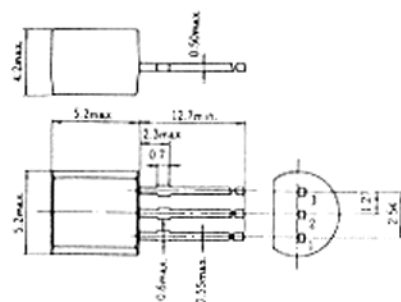


2SC2396, 2SC2543, 2SC2544

SILICON NPN EPITAXIAL

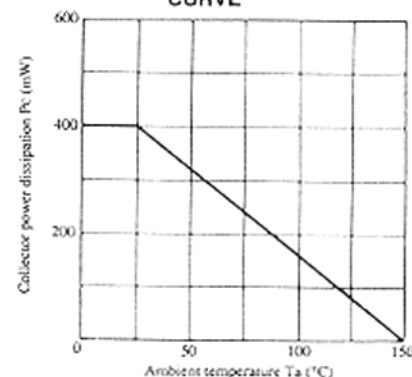
LOW FREQUENCY AMPLIFIER

Complementary pair with 2SA1025,
2SA1081 and 2SA1082

(JEDEC TO-92)

■ ABSOLUTE MAXIMUM RATINGS ($T_a=25^\circ\text{C}$)

Item	Symbol	2SC2396	2SC2543	2SC2544	Unit
Collector to base voltage	V_{CB0}	60	90	120	V
Collector to emitter voltage	V_{CE0}	60	90	120	V
Emitter to base voltage	V_{EB0}	5	5	5	V
Collector current	I_C	100	100	100	mA
Emitter current	I_E	-100	-100	-100	mA
Collector power dissipation	P_C	400	400	400	mW
Junction temperature	T_j	150	150	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	-55 to +150	-55 to +150	$^\circ\text{C}$

MAXIMUM COLLECTOR DISSIPATION
CURVE■ ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$)

Item	Symbol	Test Condition	2SC2396			2SC2543			2SC2544			Unit
			min.	typ.	max.	min.	typ.	max.	min.	typ.	max.	
Collector to base breakdown voltage	$V_{(BR)CBO}$	$I_C = 10\mu\text{A}, I_E = 0$	60	—	—	90	—	—	120	—	—	V
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 1\text{mA}, R_{BE} = \infty$	60	—	—	90	—	—	120	—	—	V
Emitter to base breakdown voltage	$V_{(BR)EBO}$	$I_E = 10\mu\text{A}, I_C = 0$	5	—	—	5	—	—	5	—	—	V
Collector cutoff current	I_{CBO}	$V_{CB} = 50\text{V}, I_E = 0$	—	—	0.1	—	—	0.1	—	—	0.1	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = 2\text{V}, I_C = 0$	—	—	0.1	—	—	0.1	—	—	0.1	μA
DC current transfer ratio	h_{FE}	$V_{CE} = 12\text{V}, I_C = 2\text{mA}$	250	—	1200	250	—	1300	250	—	800	
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 10\text{mA}, I_B = 1\text{mA}$	—	—	0.2	—	—	0.2	—	—	0.2	V
Base to emitter voltage	V_{BE}	$V_{CE} = 12\text{V}, I_C = 2\text{mA}$	—	0.6	—	—	0.6	—	—	0.6	—	V
Gain bandwidth product	f_T	$V_{CE} = 12\text{V}, I_C = 2\text{mA}$	—	90	—	—	90	—	—	90	—	MHz
Collector output capacitance	C_{ob}	$V_{CB} = 10\text{V}, I_E = 0, f = 1\text{MHz}$	—	3.0	—	—	3.0	—	—	3.0	—	pF

* The 2SC2396, 2SC2543 and 2SC2544 are grouped by hFE as follows.

	D	E	F
2SC2396, 2SC2543	250 to 500	400 to 800	600 to 1200
2SC2544	250 to 500	400 to 800	—

■ See characteristic curves of 2SC2545, 2SC2546 and 2SC2547.