



# BC303

# BC304

PNP SILICON AF MEDIUM POWER AMPLIFIERS & SWITCHES

CASE TO-39

THE BC303, BC304 ARE PNP SILICON PLANAR EPITAXIAL TRANSISTORS RECOMMENDED FOR AF DRIVERS & OUTPUTS, AS WELL AS FOR SWITCHING APPLICATIONS UP TO 1 AMPERE. THEY ARE COMPLEMENTARY TO THE NPN TYPE BC300, BC301, BC302.



### ABSOLUTE MAXIMUM RATINGS

		BC303	BC304
Collector-Base Voltage	-V <sub>CB0</sub>	85V	60V
Collector-Emitter Voltage	-V <sub>CE0</sub>	60V	45V
Emitter-Base Voltage	-V <sub>EB0</sub>	7V	7V
Collector Current	-I <sub>C</sub>	1A	
Total Power Dissipation (T <sub>C</sub> ≤ 25°C)	P <sub>tot</sub>	6W	
		850mW	
Operating Junction & Storage Temperature	T <sub>j</sub> , T <sub>stg</sub>	-55 to 175°C	

### ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C unless otherwise noted)

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITIONS
Collector-Emitter Breakdown Voltage	-LV <sub>CEO</sub> *					-I <sub>C</sub> =100mA I <sub>B</sub> =0
		BC303	60		V	
		BC304	45		V	
Collector-Emitter Breakdown Voltage	-LV <sub>CEV</sub>					-I <sub>C</sub> =100mA -V <sub>EB</sub> =1.5V
		BC303 only	85		V	
Collector Cutoff Current	-I <sub>CBO</sub>			20	nA	-V <sub>CB</sub> =60V I <sub>E</sub> =0
Emitter Cutoff Current	-I <sub>EBO</sub>			20	nA	-V <sub>EB</sub> =5V I <sub>C</sub> =0
Collector-Emitter Saturation Voltage	-V <sub>CE(sat)</sub> *		0.1	0.65	V	-I <sub>C</sub> =150mA -I <sub>B</sub> =15mA
Base-Emitter Voltage	-V <sub>BE</sub> *		0.78		V	-I <sub>C</sub> =150mA -V <sub>CE</sub> =10V
D.C. Current Gain	H <sub>FE</sub> *		20			-I <sub>C</sub> =0.1mA -V <sub>CE</sub> =10V
			40	240		-I <sub>C</sub> =150mA -V <sub>CE</sub> =10V
			20			-I <sub>C</sub> =500mA -V <sub>CE</sub> =10V
D.C. Current Gain	H <sub>FE</sub> *	Group 4	40	80		-I <sub>C</sub> =150mA -V <sub>CE</sub> =10V
		Group 5	70	140		
		Group 6	120	240		
Current Gain-Bandwidth Product	f <sub>T</sub>		100		MHz	-I <sub>C</sub> =10mA -V <sub>CE</sub> =10V
Collector-Base Capacitance	C <sub>ob</sub>		17		pF	-V <sub>CB</sub> =10V I <sub>E</sub> =0 f=1MHz

\* Pulse Test : Pulse Width=0.3mS, Duty Cycle=1%

**MICRO ELECTRONICS LTD.**

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TYPICAL CHARACTERISTICS

