



BC300 BC301 BC302

NPN SILICON AF MEDIUM POWER AMPLIFIERS & SWITCHES

CASE TO-39

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



C E B

ABSOLUTE MAXIMUM RATINGS

		BC300	BC301	BC302
Collector-Base Voltage	V _{CB0}	120V	90V	60V
Collector-Emitter Voltage	V _{CE0}	80V	60V	45V
Emitter-Base Voltage	V _{EB0}		7V	
Collector Current	I _C		1A	
Total Power Dissipation (T _C ≤25°C)	P _{tot}		6W	
			850mW	
Operating Junction & Storage Temperature	T _j , T _{stg}		-55 to 175°C	

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITIONS
Collector-Emitter Breakdown Voltage	V _{CE0} *					I _C =100mA I _B =0
BC300		80			V	
BC301		60			V	
BC302		45			V	
Collector-Emitter Breakdown Voltage	V _{CEV} *					I _C =100mA V _{EB} =1.5V
BC300 only		120			V	
BC301 only		90			V	
Collector Cutoff Current	I _{CBO}			20	nA	V _{CB} =60V I _E =0
Emitter Cutoff Current	I _{EB0}			20	nA	V _{EB} =7V I _C =0
Collector-Emitter Saturation Voltage	V _{CE(sat)} *		0.1	0.5	V	I _C =150mA I _B =15mA
Base-Emitter Voltage	V _{BE} *		0.78		V	I _C =150mA V _{CE} =10V
D.C. Current Gain	H _{FE} *	20				I _C =0.1mA V _{CE} =10V
		40		240		I _C =150mA V _{CE} =10V
		20				I _C =500mA V _{CE} =10V
D.C. Current Gain	H _{FE} *	40		80		I _C =150mA V _{CE} =10V
Group 4		70		140		
Group 5		120		240		
Group 6						
Current Gain-Bandwidth Product	f _T		120		MHz	I _C =10mA V _{CE} =10V
Collector-Base Capacitance	C _{ob}		10		pF	V _{CB} =10V I _B =0
						f=1MHz

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

MICRO ELECTRONICS LTD.

38 HUNG TO ROAD, KWUN TONG, HONG KONG. TELEX 43510
KWUN TONG P. O. BOX 69477 CABLE ADDRESS "MICROTRON"
TELEPHONE:- 3-430181-6 3-000000 3-000000
FAX: 3-410321