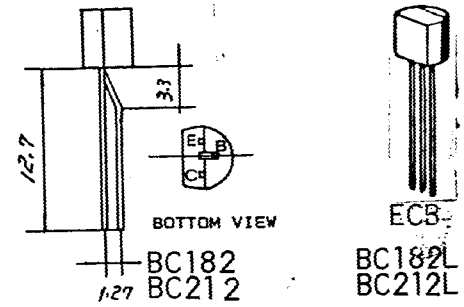


# MICRO ELECTRONIC

BC182L  
BC212  
BC212L

## DESCRIPTION

The BC182, BC182L (NPN) & BC212, BC212L (PNP) are complementary silicon planar epitaxial transistors for use in AF small signal amplifiers and drivers, as well as for low power universal applications. Both types feature good linearity of DC current gain.



## ABSOLUTE MAXIMUM RATINGS

	BC182, L	BC212, L
Collector-Emitter Voltage	V <sub>CEO</sub>	50V
Collector-Base Voltage	V <sub>CBO</sub>	60V
Emitter-Base Voltage	V <sub>EBO</sub>	6V
Collector Current Continuous	I <sub>C</sub>	200mA
Total Power Dissipation @ Ta < 25°C	P <sub>tot</sub>	300mW
Operating & Storage Junction Temperature	T <sub>j</sub> , T <sub>stg</sub>	-55 to +150°C

## ELECTRICAL CHARACTERISTICS (Ta = 25°C unless otherwise noted)

PARAMETER	SYMBOL	BC182, L			BC212, L			UNIT	TEST CONDITIONS
		MIN	TYP	MAX	MIN	TYP	MAX		
Collector-Base Breakdown Voltage	V <sub>CBO</sub>	60			60			V	I <sub>C</sub> =0.01mA I <sub>B</sub> =0
Collector-Emitter Breakdown Voltage	V <sub>CEO</sub> *	50			50			V	I <sub>C</sub> =2mA I <sub>B</sub> =0
Emitter-Base Breakdown Voltage	V <sub>EBO</sub>	6			5			V	I <sub>E</sub> =0.01mA I <sub>C</sub> =0
Collector Cutoff Current	I <sub>CBO</sub>			15			15	nA	V <sub>CB</sub> =50V I <sub>B</sub> =0
							15	nA	V <sub>CB</sub> =30V I <sub>B</sub> =0
Emitter Cutoff Current	I <sub>EBO</sub>			15			15	nA	V <sub>EB</sub> =4V I <sub>C</sub> =0
Collector-Emitter Saturation Voltage	V <sub>CE(sat)</sub> *	0.05	0.25		0.05			V	I <sub>C</sub> =10mA I <sub>B</sub> =0.5mA
		0.12	0.6		0.14	0.6		V	I <sub>C</sub> =100mA I <sub>B</sub> =5mA
Base-Emitter Saturation Voltage	V <sub>BE(sat)</sub> *	0.85	1.2		0.85	1.1		V	I <sub>C</sub> =100mA I <sub>B</sub> =5mA
Base-Emitter Voltage	V <sub>BE</sub> *	0.55	0.62	0.7	0.55	0.62	0.7	V	I <sub>C</sub> =2mA V <sub>CE</sub> =5V
D.C. Current Gain	h <sub>FE</sub> *	40			40				I <sub>C</sub> =10μA V <sub>CE</sub> =5V
		110		800	60		600		I <sub>C</sub> =2mA V <sub>CE</sub> =5V
		80				110			I <sub>C</sub> =100mA V <sub>CE</sub> =5V
Small Signal Current Gain	h <sub>fe</sub>								I <sub>C</sub> =2mA V <sub>CE</sub> =5V
Group A		125		260	100		300		f=1kHz
Group B		240		500	200		400		
Group C		450		900	350		600		
Current Gain-Bandwidth Product	f <sub>T</sub>	150	220		200	300		MHz	I <sub>C</sub> =10mA V <sub>CE</sub> =5V
Collector-Base Capacitance	C <sub>ob</sub>		3.7	5		5		pF	V <sub>CB</sub> =10V I <sub>E</sub> =0
									f=1MHz
Noise Figure	N <sub>F</sub>		2	10		1.5	10	dB	I <sub>C</sub> =0.2mA V <sub>CE</sub> =5V
									R <sub>G</sub> =2KΩ f=1kHz
									Δf=200Hz

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

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