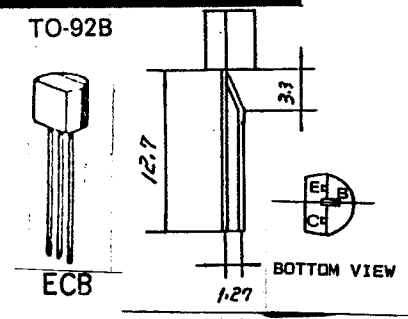
BC183,L · BC213,L

COMPLEMENTARY SILICON AF SMALL SIGNAL AMPLIFIERS & DRIVERS

The BC183, BC183L (NPN) & BC213, BC213L (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 D.C. current gain.



BC184L BC184
BC214L BC214

ABSOLUTE MAXIMUM RATINGS

		BC183,L	BC213,L
Collector-Base Voltage	V_{CBO}	45V	45V
Collector-Emitter Voltage	V_{CEO}	30V	30V
Emitter-Base Voltage	V_{EBO}	6V	5V
Collector Current	I_C	200mA	
Total Power Dissipation @ T_A=25°C Derate above 25°C	P_{tot}	300mW 2.4mW/°C	
Operating Junction and Storage Temperature	T_j, T_{stg}	-55 to +150°C	

ELECTRICAL CHARACTERISTICS (T_A=25°C)

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITIONS
Collector-Emitter Breakdown Voltage	BV_{CEO}	30			V	I_C=2mA I_B=0
Collector-Base Breakdown Voltage	BV_{CBO}	45			V	I_C=10μA I_E=0
Emitter-Base Breakdown Voltage BC183,L BC213,L	BV_{EBO}	6 5			V	I_E=10μA I_C=0
Collector Cutoff Current	I_{CBO}			15	nA	V_{CB}=30V I_E=0
Emitter Cutoff Current	I_{EBO}			15	nA	V_{EB}=4V I_C=0

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ELECTRICAL CHARACTERISTICS (T_A=25°C)

Collector-Emitter Saturation		$V_{CE(sat)}$			V	
	BC183,L			0.25		I_C=10mA I_B=0.5mA
	BC213,L		0.07			
				0.6		I_C=100mA I_B=5mA*
Base-Emitter Saturation		$V_{BE(sat)}$			V	I_C=100mA I_B=5mA*
	BC183,L			1.2		
	BC213,L			1.1		
Base-Emitter Voltage		V_{BE}			V	V_{CE}=5V I_C=2mA
	BC183,L		0.55	0.7		
	BC213,L		0.6	0.72		
D.C. Current Gain		H_{FE}	100			V_{CE}=5V I_C=10μA
	BC183,L		220			V_{CE}=5V I_C=2mA
	BC213,L		140			
	BC183,L		130			V_{CE}=5V I_C=100mA*
	BC213,L		120			
Small Signal Current Gain (f=1KHz)		h_{fe}				
	BC183,L		240	900		V_{CE}=5V I_C=2mA
	BC213,L		140			
	Group A		125	260		
	Group B		240	500		
	Group C		450	900		
Output Capacitance	BC183,L	C_{ob}		3 5	pF	V_{CB}=10V I_E=0 f=1MHz
	BC213,L			5		
Input Capacitance	BC183,L	C_{ib}		9.5	pF	V_{EB}=0.5V I_E=0 f=1MHz
Current Gain-Bandwidth Product		f_T			MHz	I_C=10mA V_{CE}=5V f=100MHz
	BC183,L			280		
	BC213,L			350		
Noise Figure	BC183,L	NF		10	dB	I_C=200μA V_{CE}=5V R_G=2KΩ NB=15.7KHz f1=10Hz f2=10KHz
	BC213,L					

* Pulse Test : Pulse Width = 300μS, Duty Cycle ≤ 2%.