

DESCRIPTION

CL313, CL314 are complementary silicon planar epitaxial transistors for use AF small signal amplifiers and drivers.

ABSOLUTE MAXIMUM RATINGS

Collector-Base Voltage

Collector-Emitter Voltage

Emitter-Base Voltage

Collector Current

Continuous Power Dissipation

Operating & Storage Junction Temperature

	CL313	CL314
V_{CEO}	60V	60V
V_{CBO}	50V	60V
V_{EBO}	6V	5V
I_C	200mA	
P_d	300mW	
T_j, T_{stg}	-55° to +150°C	

ELECTRICAL CHARACTERISTICS (Ta=25°C)

PARAMETER	SYMBOL	CL313			CL314			UNIT	TEST CONDITIONS
		MIN	TYP	MAX	MIN	TYP	MAX		
Collector-Base Breakdown Voltage	BV_{CBO}	60			60			V	$I_C=0.01mA$ $I_E=0$
Collector-Emitter Breakdown Voltage	LV_{CEO}^*	50			50			V	$I_C=2mA$ $I_B=0$
Emitter-Base Breakdown Voltage	BV_{EBO}	6			5			V	$I_E=0.01mA$ $I_C=0$
Collector Cutoff Current	I_{CBO}			15				nA	$V_{CB}=50V$ $I_E=0$
							15	nA	$V_{CB}=30V$ $I_E=0$
Emitter Cutoff Current	I_{EBO}			15			15	nA	$V_{EB}=4V$ $I_C=0$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}^*$		0.05			0.05		V	$I_C=10mA$ $I_B=0.5mA$
			0.12	0.3		0.14	0.6	V	$I_C=100mA$ $I_B=5mA$
Base-Emitter Saturation Voltage	$V_{BE(sat)}^*$		0.85	1.2		0.85	1.1	V	$I_C=100mA$ $I_B=5mA$
Base-Emitter Voltage	V_{BE}^*	0.55		0.72	0.55		0.72	V	$I_C=2mA$ $V_{CE}=5V$
D.C. Current Gain	H_{FE}^*	40			40				$I_C=10\mu A$ $V_{CE}=5V$
		110		450	60				$I_C=2mA$ $V_{CE}=5V$
		80				110			$I_C=100mA$ $V_{CE}=5V$
Current Gain-Bandwidth Product	f_T	150	220		100			MHz	$I_C=10mA$ $V_{CE}=5V$

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		MIN	TYP	MAX	MIN	TYP	MAX		
Collector-Base Capacitance	Cob		3.7	5		5		pF	V _{CB} =10V I _E =0 f=1MHz
Figure	NF		2	10		1.5	10	dB	I _C =0.2mA V _{CE} =5V R _G =2K Ω f=1kHz Δf =200Hz

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

