

DESCRIPTION

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

ABSOLUTE MAXIMUM RATINGS

		CL313	CL314
Collector-Base Voltage	V_{CE0}	60V	60V
Collector-Emitter Voltage	V_{CBO}	50V	60V
Emitter-Base Voltage	V_{EBO}	6V	5V
Collector Current	I_C	200mA	
Continuous Power Dissipation	P_d	300mW	
Operating & Storage Junction Temperature	T_j, T_{stg}	-55 to +150°C	

ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$)

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



MICRO ELECTRONICS LTD.

38, Hung To Road, Microtron Building, Kwun Tong, Kowloon, Hong Kong.

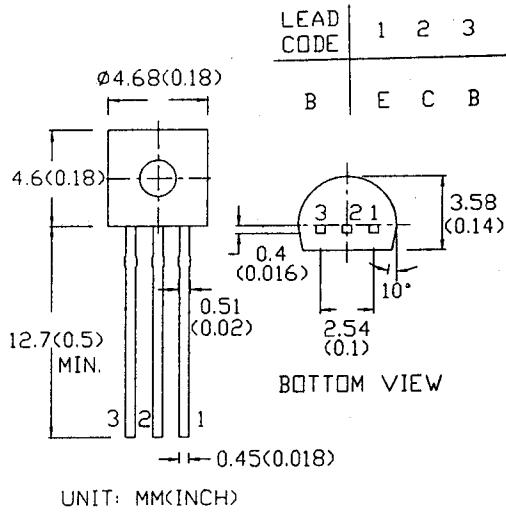
Kwun Tong P.O. Box 69477 Hong Kong. Fax No. 2341 0321 Telex: 43510 Micro Hx. Tel: 2343 0181-5

Oct-96

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

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

TO-92B



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