

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 | 60V | 60V |
| Collector-Emitter Voltage | 50V | 60V |
| Emitter-Base Voltage | 6V | 5V |
| Collector Current | 200mA | |
| Continuous Power Dissipation | 300mW | |
| Operating & Storage Junction Temperature | -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 | BVCBO | 60 | | | 60 | | | V | IC=0.01mA IE=0 |
| Collector-Emitter Breakdown Voltage | LVCEO * | 50 | | | 50 | | | V | IC=2mA IB=0 |
| Emitter-Base Breakdown Voltage | BVEBO | 6 | | | 5 | | | V | IE=0.01mA IC=0 |
| Collector Cutoff Current | ICBO | | | 15 | | | | nA | VCB=50V IE=0 |
| | | | | | | | 15 | nA | VCB=30V IE=0 |
| Emitter Cutoff Current | IEBO | | | 15 | | | 15 | nA | VEB=4V IC=0 |
| Collector-Emitter Saturation Voltage | VCE(sat) * | | 0.05 | | | 0.05 | | V | IC=10mA IB=0.5mA |
| | | | 0.12 | 0.3 | | 0.14 | 0.6 | V | IC=100mA IB=5mA |
| Base-Emitter Saturation Voltage | VBE(sat) * | | 0.85 | 1.2 | | 0.85 | 1.1 | V | IC=100mA IB=5mA |
| Base-Emitter Voltage | VBE * | 0.55 | | 0.72 | 0.55 | | 0.72 | V | IC=2mA VCE=5V |
| D.C. Current Gain | HFE * | | 40 | | | 40 | | | IC=10µA VCE=5V |
| | | | 110 | | 450 | 60 | | | IC=2mA VCE=5V |
| | | | 80 | | | | 110 | | IC=100mA VCE=5V |
| Current Gain-Bandwidth Product | fT | 150 | 220 | | 100 | | | MHz | IC=10mA VCE=5V |



MICRO ELECTRONICS LTD.

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

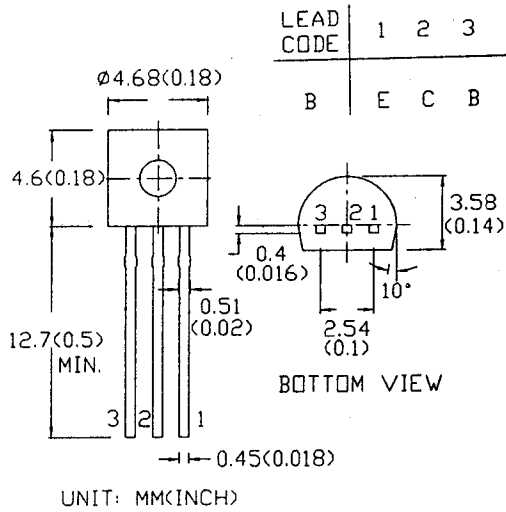
Kwun Tong P.O. Box 69477 Hong Kong. Fax No. 2341 0321 Telex: 43510 Micro Hx. Tel: 2343 0181-5

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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 |
| Gain Figure | NF | | 2 | 10 | | 1.5 | 10 | dB | I _C =0.2mA V _{CE} =5V R _C =2K Ω f=1kHz Δ f=200Hz |

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

TO-92B



MELF-008

