

THE CL155 (PNP) AND CL166 (NPN) ARE SILICON PLANAR EPITAXIAL COMPLEMENTARY PAIR SPECIALLY DESIGNED FOR 2-WATT AUDIO AMPLIFIER OUTPUT AND SWITCHING APPLICATIONS. THEY FEATURE LOW COLLECTOR-EMITTER KNEE VOLTAGE AND GOOD LINEARITY OF D.C. CURRENT GAIN.

TO-92A



EBC

ABSOLUTE MAXIMUM RATINGS

For unipolar devices, voltage and current values are negative

Collector-Base Voltage	V_{CBO}	30V
Collector-Emitter Voltage	V_{CEO}	25V
Emitter-Base Voltage	V_{EBO}	5V
Collector Current	I_C	1.5A
Collector Peak Current ($t \leq 50\text{ms}$)	I_{CM}	2.2A
Total Power Dissipation @ $T_C \leq 25^\circ\text{C}$	P_{tot}	1.5W
Without Heat Sink @ $T_A \leq 25^\circ\text{C}$		625mW
Operating Junction & Storage Temperature	T_j, T_{stg}	-55 to 150°C

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITIONS
Collector-Base Breakdown Voltage	BV_{CBO}	30			V	$I_C = 100\mu\text{A}$ $I_B = 0$
Collector-Emitter Breakdown Voltage	LV_{CEO}^*	25			V	$I_C = 10\text{mA}$ $I_B = 0$
Collector Cutoff Current	I_{CES}			0.5	μA	$V_{CE} = 20\text{V}$ $V_{BE} = 0$
Emitter Cutoff Current	I_{EBO}			1.0	μA	$V_{EB} = 5\text{V}$ $I_C = 0$
Collector-Emitter Knee Voltage	V_{CEK}		0.2	0.4	V	$I_C = 0.2\text{A}$ $I_B = \text{value at which } I_C = 0.22\text{A}$ $V_{CE} = 1\text{V}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}^*$		0.25	0.45	V	$I_C = 1\text{A}$ $I_B = 0.1\text{A}$
Base-Emitter Voltage	V_{BE}^*		0.82	1.2	V	$I_C = 0.5\text{A}$ $V_{CE} = 1\text{V}$
D.C. Current Gain (Note)	$H_{FE} 1^*$	50	160	360		$I_C = 0.1\text{A}$ $V_{CE} = 1\text{V}$
	$H_{FE} 2^*$	30	110			$I_C = 1\text{A}$ $V_{CE} = 2\text{V}$
Current Gain-Bandwidth Product	f_T		120		MHz	$I_C = 50\text{mA}$ $V_{CE} = 10\text{V}$

Note : $H_{FE} 1$ is classified as follows.

Group A : 50-100
Group C : 120-240

Group B : 80-160
Group D : 180-360

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

