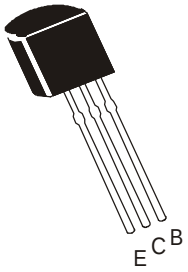
NPN SILICON PLANAR EPITAXIAL TRANSISTORS

CLD667, CLD667A



TO-92
Plastic Package

Low Frequency Power Amplifier

Complementary CLB647/CLB647A

ABSOLUTE MAXIMUM RATINGS (T_a=25ºC unless specified otherwise)

DESCRIPTION	SYMBOL	CLD667	CLD667A	UNITS
Collector Base Voltage	V_{CBO}	120	120	V
Collector Emitter Voltage	V_{CEO}	80	100	V
Emitter Base Voltage	V_{EBO}	5.0		V
Collector Current	I_C	1.0		A
Collector Current Peak	I_{CP}	2.0		A
Collector Power Dissipation	P_C	0.9		W
Junction Temperature	T_j	150		ºC
Storage Temperature	T_{stg}	- 55 to +150		ºC

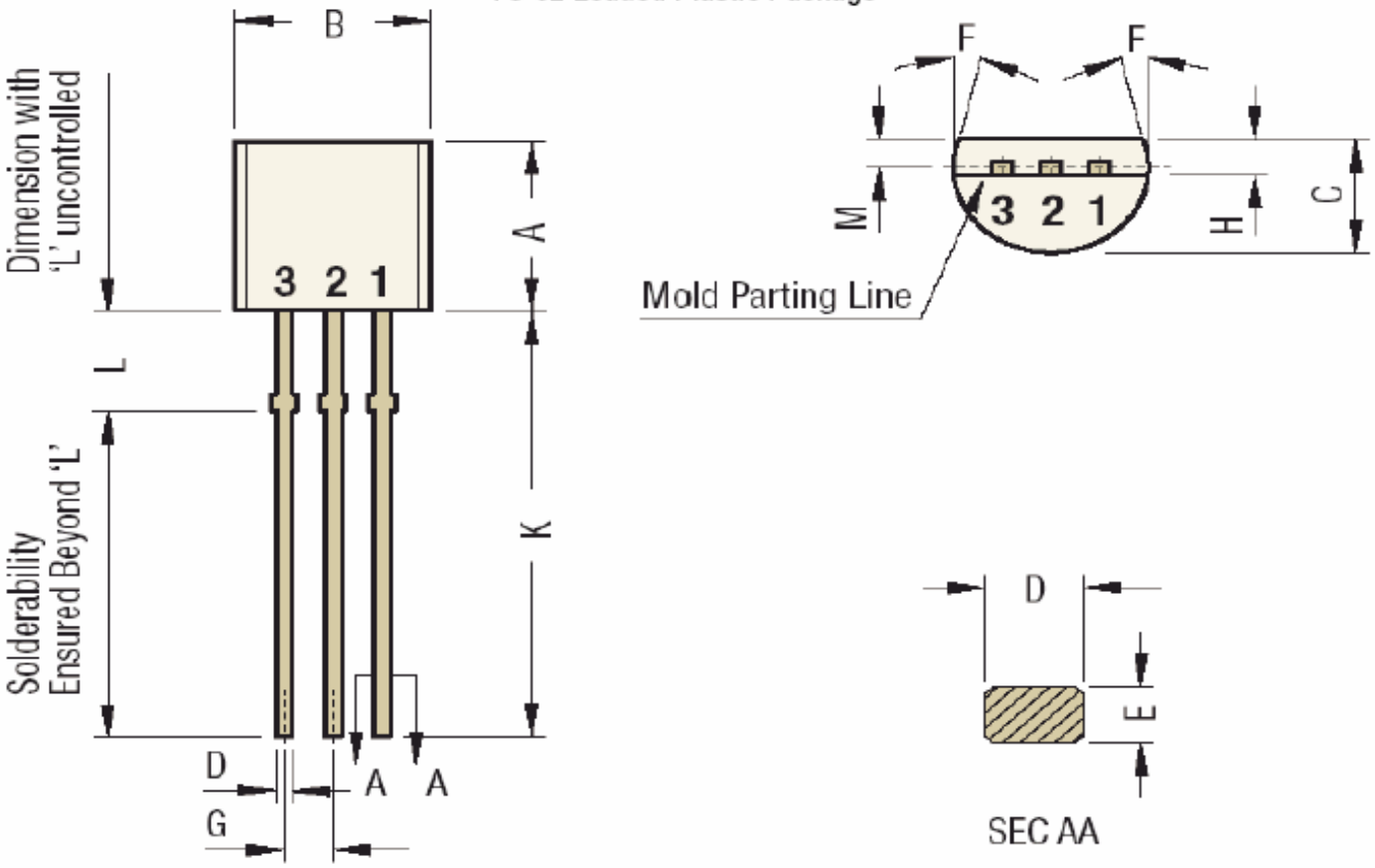
ABSOLUTE MAXIMUM RATINGS(T_a=25ºC unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	CLD667	CLD667A	UNITS
Collector Base Voltage	V_{CBO}	I_C=10µA, I_E=0	>120	>120	V
Collector Emitter Voltage	V_{CEO}	I_C=1mA, I_B=0	>80	>100	V
Emitter Base Voltage	V_{EBO}	I_E=10µA, I_C=0	>5.0	>5.0	V
Collector Cut Off Current	I_{CBO}	V_{CB}=100V, I_E = 0	<10	<10	µA
DC Current Gain	*h_{FE}	**V_{CE}=5V, I_C=150mA **V_{CE}=5V, I_C=500mA	60 - 320 >30	60 - 200 >30	
Collector Emitter Saturation Voltage	$V_{CE\ (sat)}$	**I_C=500mA, I_B=50mA	<1.0	<1.0	V
Base Emitter on Voltage	$V_{BE\ (on)}$	**V_{CE}=5V, I_C=150mA	<1.5	<1.5	V
Transition Frequency	f_T	**V_{CE}=5V, I_C=150mA	Typ 140	Typ 140	MHz
Collector Output Capacitance	C_{Ob}	V_{CB}=10V, I_E=0, f=1MHz	Typ 12	Typ 12	pF

*h_{FE} Classifications				
	CLD667	B : 60 - 120	C : 100 - 200	D : 160 - 320
	CLD667A	B : 60 - 120	C : 100 - 200	

****Pulse Test**

TO-92 Leaded Plastic Package

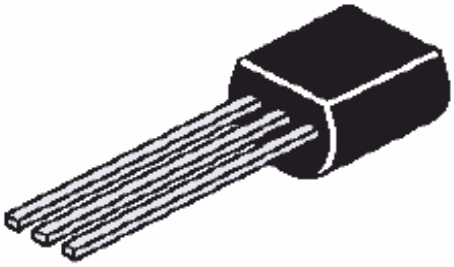


DIM	Min	Max
A	4.32	5.33
B	4.45	5.20
C	3.18	4.19
D	0.41	0.55
E	0.35	0.55
F	5°	

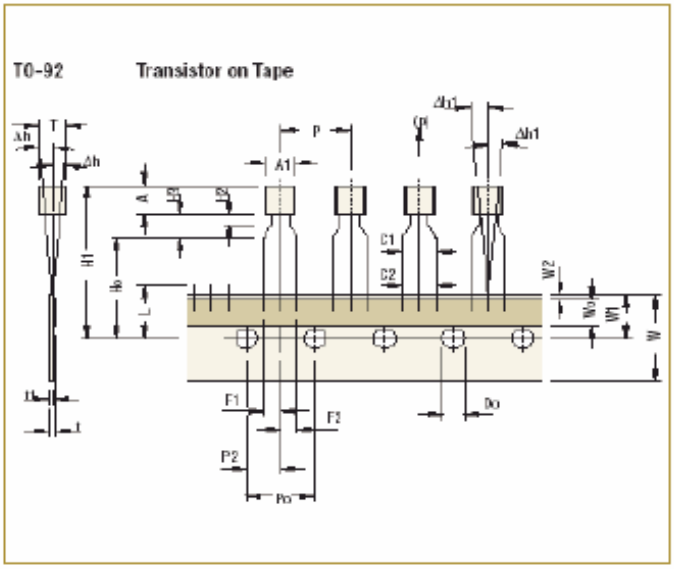
All Dimensions are in mm

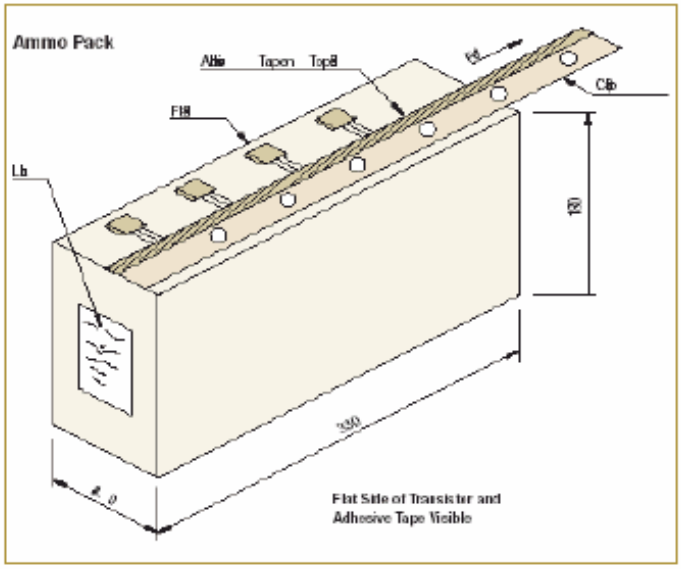
DIM	Min	Max
G	1.14	1.40
H	1.20	1.80
K	12.5	
L	1.982	2.082
M	1.03	1.53

Pin 1 Base
Pin 2 Collector
Pin 3 Emitter



TO-92 Tape and Ammo Packaging





All Dimensions are in mm

Tape Specifications

		TO-92			
Item description	Symbol	Min	Nom	Max	Tol
Body width	A1	4.45		5.20	
Body height	A	4.32		5.33	
Body thickness	T	3.18		4.19	
Pitch of component[Cr]	P		12.7		±1.0
Feed hole pitch[§1]	Po		12.7		±0.3
Feed hole center to component centre[§2]	P2		6.35		±0.4
Comp. alignment, Side view[§3]	Dh		0	1.0	
Comp. alignment, Front view[§3]	Dh1		0	1.3	
Tape width[Cr]	W		18		±0.5
Hold down tape width[Cr]	Wo		6		±0.2
Hole position	W1		9		+0.7 -0.5
Hold-down tape position	W2	0.0		0.7	
Lead wire clinch height	Ho		16		±0.5
Component height	H1			24.0	
Length of snipped leads	L			11.0	
Feed hole diameter[Cr]	Do		4		±0.2
Total tape thickness[§4]	t			1.2	
Lead-to-lead distance[Cr]	F1, F2	2.4		2.7	
Stand off	H2	0.45		1.45	
Clinch height	H3			3.0	
Lead parallelismCr	C1-C2			0.22	
Pull-out force	(p)	6N			

Taping Specification

- Maximum alignment deviation between leads not to be greater than 0.20 mm.
- Maximum non-cumulative variation between tape feed holes shall not exceed 1 mm in 20 pitches.
- Hold down tape not to exceed beyond the edge(s) carrier tape and there shall be no exposure of adhesive.
- No more than 3 consecutive missing components is permitted.
- A tape trailer, having at least three feed holes is required after the last component.
- Splices shall not interfere with the sprocket feed holes.

§1 Cumulative pitch error 1.0 mm/20 pitch.
§2 To be measured at bottom of clinch.
§3 At top of body.
§4 t1 = 0.3 – 0.6 mm
Cr Critical Dimension.

All Dimensions are in mm

Packaging Information

T & A: Tape and Ammo Pack; T & R: Tape and Red; Bulk: Loose in Poly bags; Tube: Tube and Ammo Pack; k: 1.000

Package/Case Type	Packaging Type	Std. Packing	Inner Carton			Outer Carton		
		Qty	Qty	Size L x W x H (cm)	Gross Weight (Kg)	Qty	Size L x W x H (cm)	Gross Weight (Kg)
TO-92	Bulk	1,000	5K	19x19x8	1.10	80K	43x40x35	20.0
	T&A	2,000	2K	32x4.5x20	0.70	40K	43x40x35	15.20

Component Disposal Instructions

1. CDIL Semiconductor Devices are RoHS compliant, customers are requested to please dispose as per prevailing Environmental Legislation of their Country.

2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).

Disclaimer

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