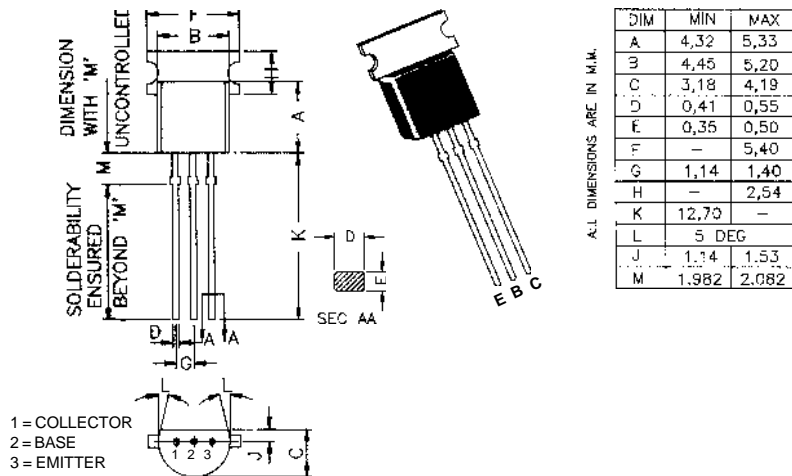


TO-237 Plastic Package

**CTN635, CTN637, CTN639
CTN636, CTN638, CTN640**

*CTN635, 637, 639 NPN SILICON PLANAR EPITAXIAL TRANSISTORS
CTN636, 638, 640 PNP SILICON PLANAR EPITAXIAL TRANSISTORS
Complementary Transistors in Plastic Package for Driver Stage of Audio Amplifier.*



A.L. DIMENSIONS ARE IN M.M.

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	0,50
F	-	5,40
G	1,14	1,40
H	-	2,54
K	12,70	-
L	5 DEG	
J	1,14	1,53
M	1,982	2,082

ABSOLUTE MAXIMUM RATINGS

Ratings	Symbol	CTN635	CTN637	CTN639	Units
		CTN636	CTN638	CTN640	
Collector-Base Voltage	V_{CBO}	45	60	100	V
Collector-Emitter Voltage	V_{CEO}	45	60	80	V
Emitter-Base Voltage	V_{EBO}	-	5	-	V
Collector Current - Continuous	I_C	-	1	-	A
Peak	I_{CM}	-	1.5	-	A
Base Current - Continuous	I_B	-	100	-	mA
Peak	I_{BM}	-	200	-	mA
Power Dissipation @ $T_a=25^\circ C$	P_D	-	750	-	mW
Derate above $25^\circ C$	-	-	6	-	mW/°C
Power Dissipation @ $T_c=25^\circ C$	P_D	-	2.5	-	W
Derate above $25^\circ C$	-	-	20	-	mW/°C
Operating And Storage Junction Temperature Range	T_j, T_{stg}	-55 to +150			°C

CTN635, CTN637, CTN639
CTN636, CTN638, CTN640

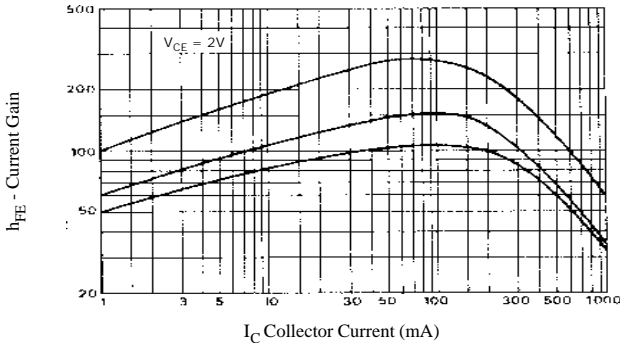
ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$ unless otherwise specified)

Characteristic		Symbol	Min.	Typ.	Max.	Unit
Collector-Emitter Voltage $I_C=10\text{mA}, I_B=0$	635, 636	BV_{CEO}	45	-	-	V
	637, 638		60	-	-	V
	639, 640		80	-	-	V
Collector-Base Voltage $I_C=100\mu\text{A}, I_E=0$	635, 636	BV_{CBO}	45	-	-	V
	637, 638		60	-	-	V
	639, 640		100	-	-	V
Emitter-Base Voltage $I_E=10\mu\text{A}, I_C=0$		BV_{EBO}	5	-	-	V
Collector Cutoff Current $V_{CB}=30\text{V}, I_E=0$ $V_{CB}=30\text{V}, I_E=0, T_a=125^\circ\text{C}$		I_{CBO}	-	-	100	nA
					10	μA
Base Emitter On Voltage $I_C=500\text{mA}, V_{CE}=2\text{V}$		$V_{BE(on)}^*$	-	-	1.0	V
Collector-Emitter (Sat) Voltage $I_C=500\text{mA}, I_B=50\text{mA}$		$V_{CE(sat)}^*$	-	-	0.5	V
D.C. Current Gain $I_C=5\text{mA}, V_{CE}=2\text{V}$ $I_C=150\text{mA}, V_{CE}=2\text{V}^*$ $I_C=500\text{mA}, V_{CE}=2\text{V}^*$	635, 636	h_{FE}	25	-	-	
	637, 638		40	-	160	
	639, 640		40	-	160	
				25	-	-
DYNAMIC CHARACTERISTICS						
Input Capacitance $V_{BE}=0.5\text{V}, I_C=0,$ $f=1\text{MHz}$	NPN	C_{ib}	-	50	-	pF
	PNP		-	110	-	pF
Input Capacitance $V_{CB}=10\text{V}, I_C=0,$ $f=1\text{MHz}$	NPN	C_{ob}	-	7	-	pF
	PNP		-	9	-	pF
Transition Frequency $I_C=10\text{mA}, V_{CE}=5\text{V},$ $f=35\text{MHz}$	NPN	f_T	-	130	-	MHz
	PNP		-	50	-	MHz

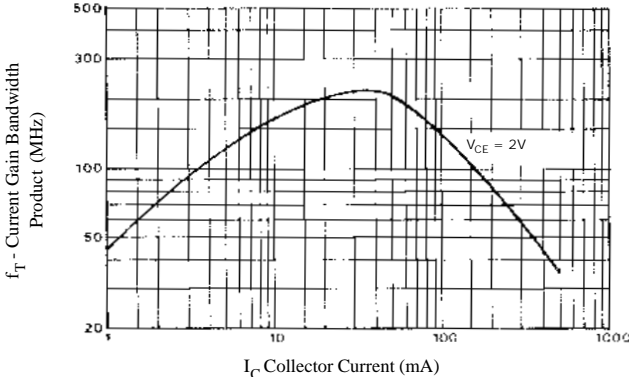
* Pulse Test: Pulse width $\leq 300\mu\text{s}$, Duty cycle $\leq 2\%$.

CTN635, CTN637, CTN639
 CTN636, CTN638, CTN640

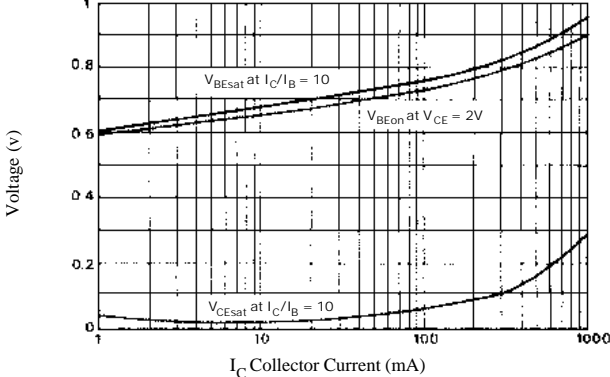
DC Current Gain



Current Gain Bandwidth Product



Saturation and On Voltages



Disclaimer

The product information and the selection guides facilitate selection of the CDIL's Discrete Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished on the CDIL Web Site/ CD is believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Discrete Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

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CDIL is a registered Trademark of
Continental Device India Limited

C-120 Naraina Industrial Area, New Delhi 110 028, India.
Telephone + 91-11-579 6150 Fax + 91-11-579 9569, 579 5290
e-mail sales@cdil.com www.cdil.com