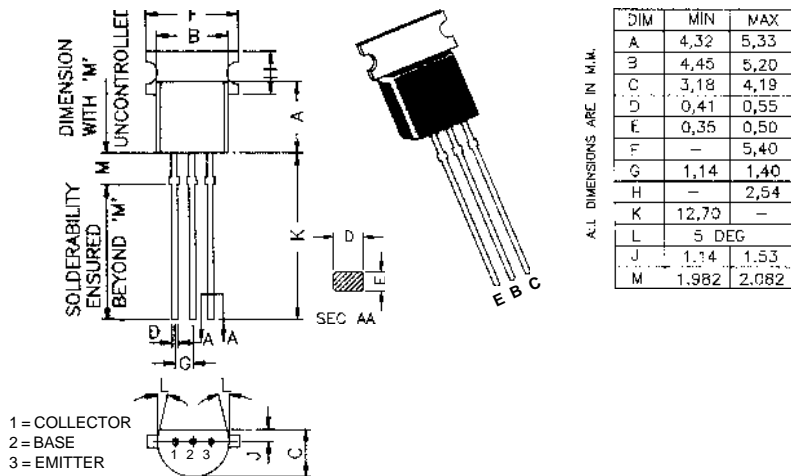


TO-237 Plastic Package

**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

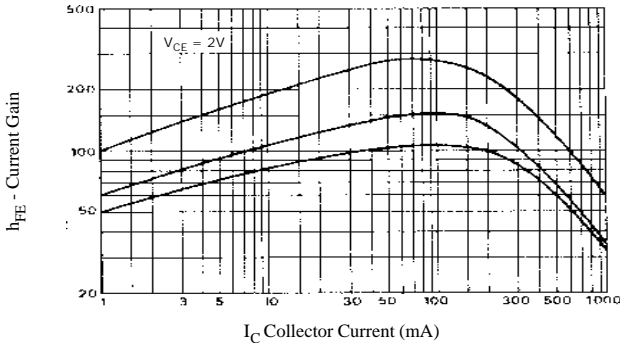
ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$ unless otherwise specified)

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

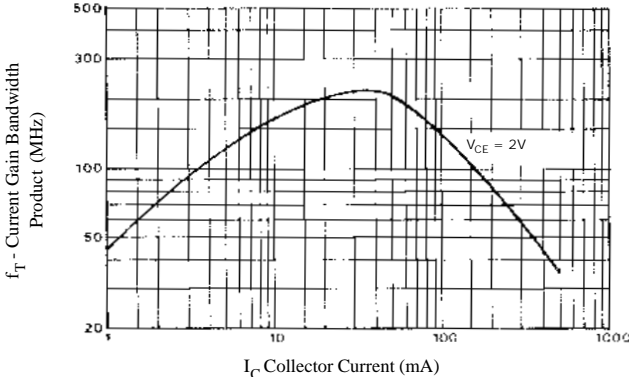
* Pulse Test: Pulse width $\leq 300\mu\text{s}$, Duty cycle $\leq 2\%$.

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

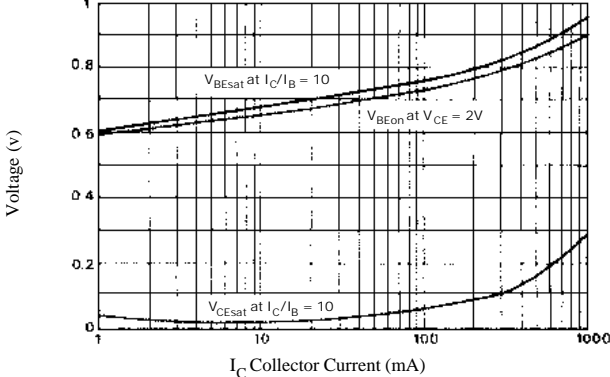
DC Current Gain



Current Gain Bandwidth Product



Saturation and On Voltages



Disclaimer

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