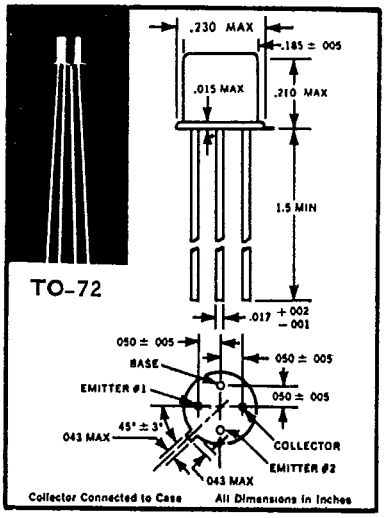
LOW r_{ee} (sat)
SILICON EPITAXIAL JUNCTION INTEGRATED CHOPPER TRANSISTORS

3N134
3N135
3N136

GEOMETRY 450

- ULTRA LOW r_{ee} (sat), 10 Ω TYP.
- LOW LEAKAGE, 2 na TYP.
- LOW C_{eb}, 3pfd TYP.
- HIGH V_{EE} & V_{EB}, UP TO 50 V



ELECTRICAL DATA ABSOLUTE MAXIMUM RATING

PARAMETER	SYMBOL	3N134	3N135	3N136	UNITS
Collector to Base Voltage	BV_{CBO}	−20	−40	−60	Volts
Emitter (1) to Base Voltage	BV_{E_1BO}	−15	−30	−50	Volts
Emitter (2) to Base Voltage	BV_{E_2BO}	−15	−30	−50	Volts
Emitter to Emitter Voltage	$BV_{E_1E_2O}$	15	30	50	Volts
Emitter (1) to Collector Voltage	BV_{E_1CO}	15	30	50	Volts
Emitter (2) to Collector Voltage	BV_{E_2CO}	15	30	50	Volts
Power Diss. @ 25°C Ambient	P_D	300(Derating 1.7mW/°C)			mW
Junction Temp. (Oper. & Store)	T_J	−65°C to +200°C			
Lead Temp. (@ 1/16" from Case)	T_L	240°C for 10 sec.			

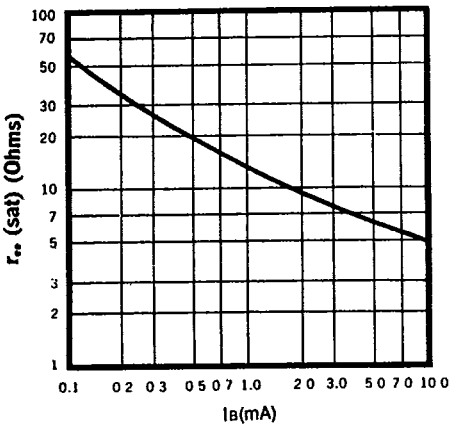
ELECTRICAL CHARACTERISTICS: T_A=25°C (UNLESS OTHERWISE STATED)

Parameter	Symbol	Condition	3N134 — 3N136 Typ.	3N134 — 3N136 Max.	Units
Offset Voltage	$V_{E_1E_2O}$	I_B = 1.0 MA TA = −25°C/+25°C/+85°C	50	100	μV
Offset Voltage Change	$\triangle V_{E_1E_2O}$	$\triangle I_B$ = 0.5 to 1.5 MA	10	25	μV
Saturation Resistance	$r_{e_1e_2}$ (sat)	I_B = 1.0 MA, I_{EE} = 0, i_e = 0.1 mA f = 1 kHz	10	15	Ohms
Collector Cutoff Current	I_{CBO}	$V_{CB} = V_{CB}$ MAX.	6.0	10.0	nA
Emitter Cutoff Current	I_{E_1BO} I_{E_2BO}	$V_{EB} = V_{EB}$ MAX	5.0	10.0	nA
Emitter Cutoff Current	$I_{E_1E_2O}$	$V_{EE} = V_{EE}$ MAX, V_{CB}=0 (shorted)	2.0	5.0	nA
Emitter Cutoff Current	$I_{E_1E_2O}$	$V_{EE} = V_{EE}$ MAX TEMP = 100°C	0.5	1.0	μA
Emitter to Base Capacitance	Ce_1b Ce_2b	V_{EB} = 5V, I_C = 0 f = 159 kHz	3.0	6	pfd
Emitter to Emitter Capacitance	Ce_1e_2	V_{EE}=5V, I_C=0 f = 159 kHz	2.0	5	pfd
Collector Base Capacitance	C_{ob}	V_{CB} = 5V, I_C = 0, f = 159 kHz	7.0	12.00	pfd

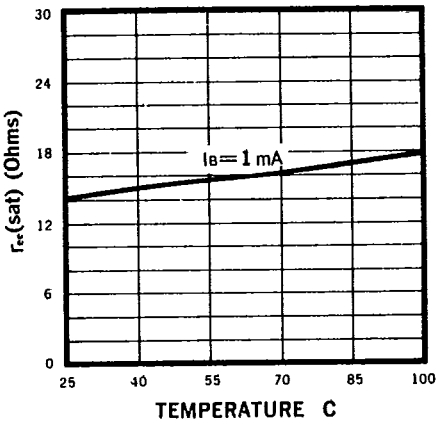
TELEDYNE CRYSTALONICS 147 Sherman Street, Cambridge, MA 02140 USA
Tel: (617) 491-1670 • FAX: 617/547-6119 • TWX: 710-320-1196

TYPICAL CHARACTERISTICS
3N123 Thru 3N136

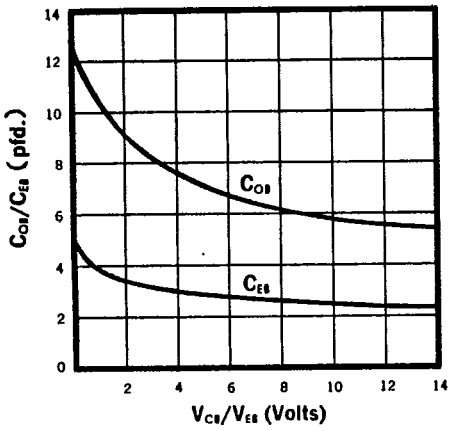
r_{ee} (sat) vs I_B



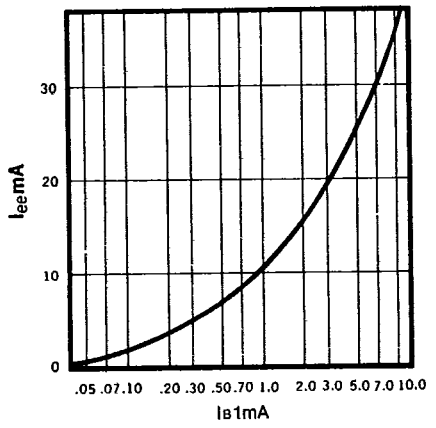
r_{ee} (sat) vs Temp.



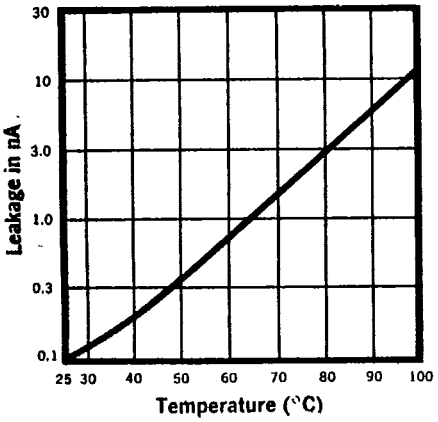
C_{OB}/C_{EB} vs Voltage



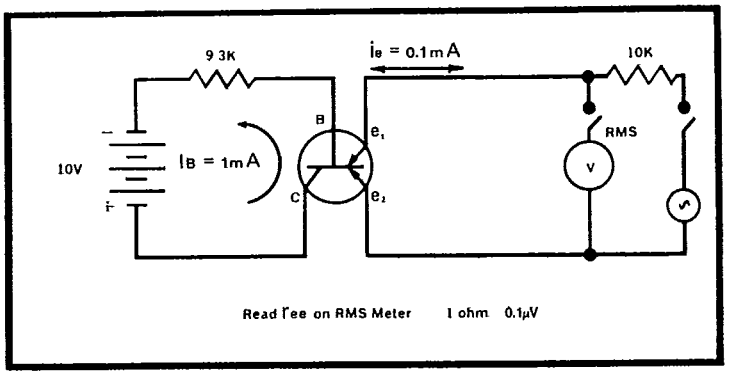
I_{ee}(sat) vs I_B



I_{eeo} vs Temp.



r_{ee} (sat) Test Circuit



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