



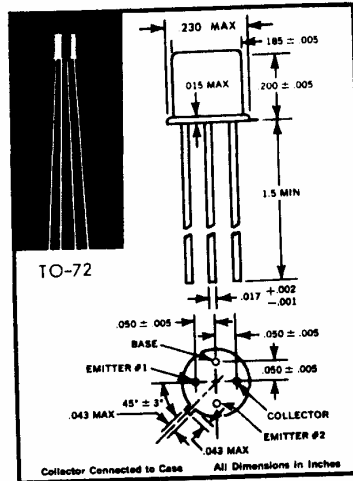
NPN
SILICON EPITAXIAL JUNCTION
INTEGRATED CHOPPER TRANSISTOR

3N74
 3N75
 3N76
 3N77
 3N78
 3N79

- LOW LEAKAGE
- LOW C_{eb}
- LOW r_{EE} (sat)
- HIGH V_{EE} & V_{EB}

ELECTRICAL DATA ABSOLUTE MAXIMUM RATING

PARAMETER	SYMBOL	3N74/75/76	3N77/78/79	UNITS
Collector To Base Voltage	BV_{CBO}	50	40	V
Emitter (1) To Base Voltage	BV_{E_1BO}	18	12	V
Emitter (2) To Base Voltage	BV_{E_2BO}	18	12	V
Emitter To Emitter Voltage	$BV_{E_1E_2O}$	18	12	V
Emitter (1) To Collector Voltage	BV_{E_1CO}	18	12	V
Emitter (2) To Collector Voltage	BV_{E_2CO}	18	12	V
DC Collector Current	I_C	20	20	mA
DC Base Current	I_B	20	20	mA
DC Emitter Current	I_E	10	10	mA
Power Diss. @ 25°C Ambient	P_D	300mW Derating 1.7mW/°C		
Junction Temp. (Oper. & Store)	T_J	-65°C to +200°C		
Lead Temp. (1/16" ± 1/32" From Case)	T_L	230°C for 10 sec.		



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ELECTRICAL CHARACTERISTICS: $T_A = 25^\circ\text{C}$ (UNLESS OTHERWISE STATED)

PARAMETER	SYMBOL	CONDITION	3N74		3N75		3N76		3N77		3N78		3N79		UNITS
			Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
Offset Voltage	$V_{E_1E_2O}$	$I_B = 1.0\text{mA}$, Temp. -25°C , $+25^\circ\text{C}$, $+100^\circ\text{C}$	-	50	-	100	-	200	-	50	-	100	-	200	μV
Offset Voltage Change	$\Delta V_{E_1E_2O}$	$I_B = 1.0\text{mA}$, Temp. -25°C to $+100^\circ\text{C}$	-	75	-	125	-	175	-	75	-	125	-	175	μV
Offset Voltage Change	$\Delta V_{E_1E_2O}$	$\Delta I_B = -0.5\text{mA}$ to -1.5mA	-	25	-	25	-	50	-	25	-	50	-	75	μV
Saturation Resistance	$r_{E_1E_2(\text{sat})}$	$I_B = 1.0\text{mA}$ $I_{E_1} = I_{E_2} = 100\mu\text{A}$ $f = 1\text{KC}$	10	40	10	40	10	50	10	50	10	50	10	60	Ohms
Emitter-Base Leakage Current	I_{E_1BO} I_{E_2BO}	$V_{EB} = 5\text{V}$ $V_{EB} = 15\text{V}$ (3N74-76)	-	2	-	2	-	2	-	5	-	5	-	10	nA
Emitter-Emitter Leakage Current	$I_{E_1E_2O}$	$V_{EE} = 5\text{V}$ $V_{CB} = 0$ (Shorted) $V_{EE} = \pm 15\text{V}$ (3N74-76)	-	±2	-	±2	-	±2	-	±5	-	±5	-	±10	nA
Emitter-Emitter Leakage Current	$I_{E_1E_2O}$	Temp: 100°C	-	±100	-	±100	-	±100	-	±100	-	±100	-	±200	nA
Collector-Base Leakage Current	I_{CBO}	$V_{CB} = 30\text{V}$, $I_{E_1} = I_{E_2} = 0$	-	10	-	10	-	10	-	10	-	10	-	20	nA
Emitter To Base Capacitance	C_{eb}	$V_{EB} = 5\text{V}$ $I_E = 0$ $f = 140\text{KC}$	-	5	-	5	-	5	-	3.0	-	3.0	-	3.0	pf
Collector To Base Capacitance	C_{ob}	$V_{CB} = 5\text{V}$ $I_{E_1} = I_{E_2} = 0$ $f = 140\text{KC}$	-	8	-	8	-	8	-	10	-	10	-	10	pf
Forward Current Gain	h_{fe}	$V_{CE} = 5\text{V}$ $I_C = 1\text{mA}$ $f = 20\text{MC}$	1.5	-	1.5	-	1.5	-	1.5	-	1.5	-	1.5	-	

CRYSTALONCS
 2805 Veterans Highway
 Suite 14
 Ronkonkoma, N.Y. 11779