

New Jersey Semi-Conductor Products, Inc.

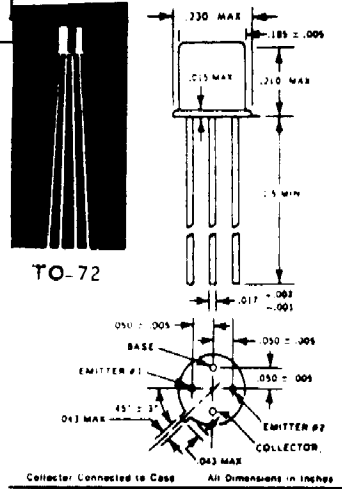
20 STERN AVE.
SPRINGFIELD, NEW JERSEY 07081
U.S.A.

TELEPHONE: (973) 376-2922
(212) 227-6005
FAX: (973) 376-8960

DEVICE	POLARITY	V_{EBO} V MIN.	V_{CBO} V MIN.	I_{E0} nA MAX.	$r_{e(s0)}$ Ω MAX.	V_{off} μ V MAX.	t_{on} ns MAX.	f_t MHz MIN.
3N121	NPN	20	10	0.5	25	10		40
3N123	PNP	25	30	1.0	100	250		6
3N129	PNP	10	20	0.3	15	30		8
3N130	PNP	20	30	0.3	15	30		8
3N131	PNP	30	40	0.3	15	30		8

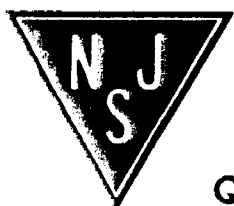
ELECTRICAL DATA ABSOLUTE MAXIMUM RATING

PARAMETER	SYMBOL	3N123	UNITS
Collector to Base Voltage	V_{CBO}	30	V
Emitter (1) to Base Voltage	V_{E_1BO}	25	V
Emitter (2) to Base Voltage	V_{E_2BO}	25	V
Emitter to Emitter Voltage	$V_{E_1E_2O}$	25	V
Emitter (1) to Collector Voltage	V_{E_1CO}	25	V
Emitter (2) to Collector Voltage	V_{E_2CO}	25	V
DC Collector Current	I_C	20	mA
DC Base Current	I_B	20	mA
DC Emitter Current	I_E	10	mA
Power Diss. 25°C Ambient	P_T	300 (Derating 1.7 mW/°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: $T_A = 25^\circ\text{C}$ (UNLESS OTHERWISE STATED)

PARAMETER	SYMBOL	CONDITIONS	3N123		UNITS
			Min.	Max.	
Collector Cutoff Current	I_{CBO}	$V_{CB} = -25V, I_{E_1} = I_{E_2} = 0$		10	nA
Emitter Cutoff Current	$I_{E_1E_2O}$	$V_{E_1E_2} = \pm 10V, V_{CB} = 0$ (shorted)		1	nA
Emitter Cutoff Current	$I_{E_1E_2O}$	$V_{E_1E_2} = \pm 10V, V_{CB} = 0, T_A = 100^\circ\text{C}$ (shorted)		±100	nA
Emitter Base Cutoff Current	I_{E_1BO}	V_{E_1B} (or V_{E_2B}) = -10V I_{E_2} (or I_{E_1}) = 0, $I_C = 0$		1	nA
Offset Voltage	V_O	$I_B = 1mA, I_{E_1} = I_{E_2} = 0, T_A = 0^\circ\text{C}, 25^\circ\text{C} \& 85^\circ\text{C}$		250	μ V
Offset Voltage/ I_B	$\Delta V_{E_1E_2O}$	I_B (1) = 0.5mA, I_B (2) = 1.5mA $I_{E_1} = I_{E_2} = 0$		100	μ V
Offset Voltage/Temp.	$\Delta V_{E_1E_2O}$	T_A (1) = 0°C, T_A (2) = +85°C $I_B = 1mA, I_{E_1} = I_{E_2} = 0$		150	μ V
Emitter to Base Capacitance	C_{eb}	V_{E_1B} (or V_{E_2B}) = -6V, $I_C = 0, f = 4MHz$		3	pf
Collector to Base Capacitance	C_{cb}	$V_{CB} = -6V, I_E = I_{E_2} = 0, f = 4MHz$		10	pf
Forward Current Gain	h_{fe}	V_{CE_1} (or V_{CE_2}) = -6V, $I_C = -1mA, f = 4MHz$	1.5		
Series "ON" Resistance	$r_{E_1E_2}$	$I_B = 1mA, I_{E_1} = I_{E_2} = 100\mu A$ $f = 60Hz$	10	100	Ohms



NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However, NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

Quality Semi-Conductors