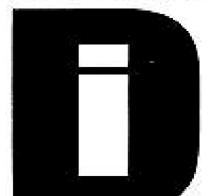
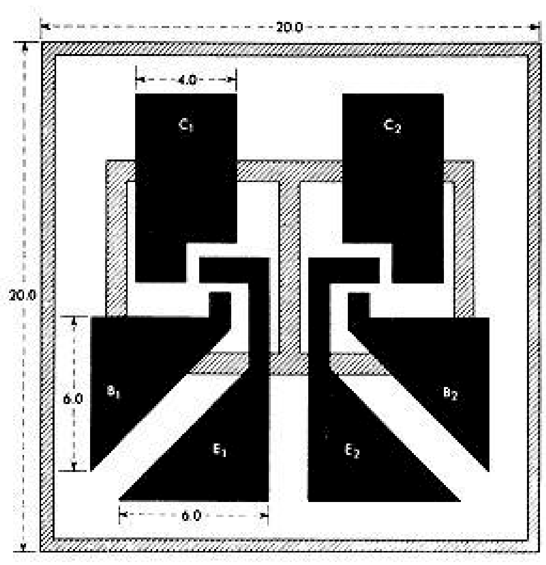
65 RUSHMORE ST., WESTBURY, N.Y. 11590   516 • 997 • 7474



DI 4044 • 4878
DI 4100 • 4879
DI 4045 • 4880
DI 4045-1

NPN SILICON
MATCHED PAIR TRANSISTOR CHIPS
WITH MATCHING CHARACTERISTICS 100% PROBED



Dimensions in Mils

Dielectric Isolation Aluminum

- Chip Thickness = 6 Mils ±1 Mil
- Min. Dimension Across Bonding Pads = 4.0 Mils
- Min. Separation Between Bonding Pads = 1.6 Mils
- Distance from Bonding Pads to Edge of Chip = 2.0 Mils

Detailed Specifications on Reverse Side.

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DI 4044 • 4878
DI 4100 • 4879
DI 4045 • 4880
DI 4045-1

NPN SILICON MATCHED PAIR TRANSISTOR CHIPS WITH MATCHING CHARACTERISTICS 100% PROBED

- Dielectric Isolation • Monolithic Construction • Superior Thermal Tracking
- Close Parameter Match • Available in Chip or TO — 5 Package

For hybrid circuits and differential amplifier circuits. The DI number signifies the chip version of the equivalent 2N number.
Among the features are: Dielectric Isolation; monolithic construction; high DC gain; low capacitance; close parameter match, from 10 μA to 1 mA; and superior thermal tracking.
The transistor collectors are isolated from each other, and from the bottom of the chip. The chips are gold-backed, permitting conventional eutectic die-bonding techniques. Aluminum metallizing on bonding pads permits utilization of conventional wire-bonding techniques.

Since the bottom of the DI chip is not used for electrical contact, it is possible to die-bond with *pure* epoxy or adhesive films. Excellent mechanical and thermal properties are thus easily achieved, without the substrate or its components being exposed to high temperatures.
A complete cold assembly technique is possible using room-temperature ultrasonic wire-bonding, in conjunction with adhesive die-bonding.
Chips are shipped in 2" x 2" plastic compartmented containers, 400 chips in each container, with each chip in its own compartment. Probed slices are individually packed in plastic carriers.

← 100% Probe Tested to These Parameters @ 25°C →← Guaranteed → (tested on sample basis)

	Matched Characteristics I_C=10 μA; V_{CE}=5V		V_{CBO} Volts Min. @ I_C=10 μA I_E=0	V_{CEO} Volts Min. @ I_C=1 mA I_B=0	V_{EBO} Volts Min. @ I_E=10 μA I_C=0	I_{CBO} nA Max. @ I_E=0 V_{CB} as below	h_{FE} Min. @ V_{CE}=5V		C_{OB} pF Max. @ I_E=0 V_{CB}=5V	f_t MHz Min. @ I_C=1 mA V_{CE}=10V
	V_{BE} Diff. (V_{BE1}-V_{BE2}) mV Max.	DC Gain Ratio h_{FE1}/h_{FE2}					@ I_C= 10 μA	@ I_C= 1 mA		
DI 4044 4878	3.0	0.9 to 1.0	60	60	7	0.1 @ V_{CB}=45	200	225	0.8	200
DI 4100 4879	5.0	0.85 to 1.0	55	55	7	0.1 @ V_{CB}=45	150	175	0.8	150
DI 4045 4880	5.0	0.8 to 1.0	45	45	7	0.1 @ V_{CB}=30	80	100	0.8	150
DI 4045-1	10.0	0.8 to 1.0	30	30	7	0.1 @ V_{CB}=25	80	100	0.8	150

Dimensional Drawing on Reverse Side.

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