

**DIONICS INC.**

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



DI 4044 • 4878

DI 4100 • 4879

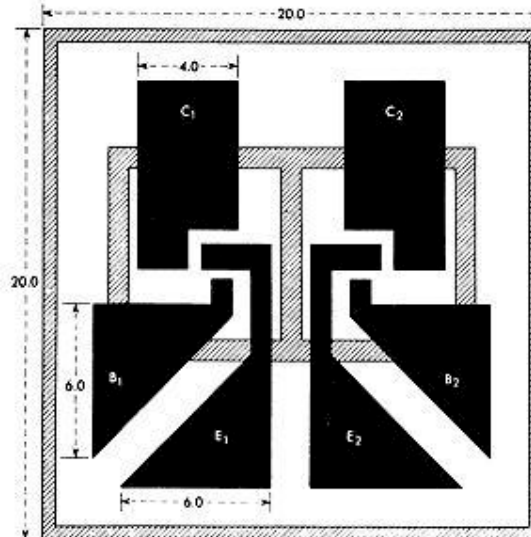
DI 4045 • 4880

DI 4045-1

NPN SILICON

MATCHED PAIR TRANSISTOR CHIPS

WITH MATCHING CHARACTERISTICS 100% PROBED



Dimensions in Mils

 Dielectric Isolation  Aluminum

- Chip Thickness=6 Mils  $\pm$ 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.

# DIONICS INC.

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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  $\mu$ A 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 $I_C=10 \mu A; V_{CE}=5V$		$V_{CE0}$	$V_{CE0}$	$V_{CE0}$	$I_{C05}$	$h_{FE}$ Min.		$C_{05}$	$f_t$
	$V_{BE}$ Diff. ( $V_{BE1}-V_{BE2}$ ) mV Max.	DC Gain Ratio $h_{FE1}/h_{FE2}$	Volts Min. @ $I_C=10 \mu A$ $I_E=0$	Volts Min. @ $I_C=1 mA$ $I_E=0$	Volts Min. @ $I_C=10 \mu A$ $I_E=0$	nA Max. @ $I_C=0$ $V_{CE}$ as below	@ $V_{CE}=5V$ 10 $\mu A$	@ $I_C=1 mA$	pF Max. @ $I_C=0$ $V_{CE}=5V$	MHz Min. @ $I_C=1 mA$ $V_{CE}=10V$
DI 4044 4878	3.0	0.9 to 1.0	60	60	7	0.1 @ $V_{CE}=45$	200	225	0.8	200
DI 4100 4879	5.0	0.85 to 1.0	55	55	7	0.1 @ $V_{CE}=45$	150	175	0.8	150
DI 4045 4880	5.0	0.8 to 1.0	45	45	7	0.1 @ $V_{CE}=30$	80	100	0.8	150
DI 4045-1	10.0	0.8 to 1.0	30	30	7	0.1 @ $V_{CE}=25$	80	100	0.8	150

Dimensional Drawing on Reverse Side.

2/82