

**POWER CONVERTER
 TRANSISTORS**

2N637, 2N637A, and 2N637B are a series of high gain transistors especially designed as high current switching devices for DC-DC converter and DC-AC inverter circuits. The series have three different voltage breakdown ratings for use in both 12 and 28 volt supplies without danger of burnout. The current gain is held to a close tolerance to eliminate the need for matching. The transistors are capable of switching up to 250 watts. There are also numerous applications for relay replacements, drivers for relays, magnetic clutches, solenoids and other loads requiring high current.

Absolute Maximum Ratings:

<u>Vce</u> <u>Vdc</u>	<u>Ic</u> <u>Adc</u>	<u>Pc*</u> <u>W</u>	<u>Ib</u> <u>mAdc</u>	<u>T storage</u> <u>°C</u>	<u>Tj</u> <u>°C</u>
40 (2N637)	5	25	500	-60 to +100	100
70 (2N637A)					
80 (2N637B)					

*Pc is the maximum average power dissipation. It can be exceeded during the switching time.

Electrical Characteristics: Mounting base temperature 25°C unless otherwise specified.

		<u>Min.</u>	<u>Typical</u>	<u>Max.</u>	<u>Units</u>
Current Gain	hFE	30	....	60	....
Vce = -5 Vdc; Ic = 3 Adc					
	gFE	1.5	2.0	....	mhos
Collector Saturation Voltage	Vce	....	0.8	1.5	Vdc
Ic = 3.0 Adc; Ib = 300 mAdc					
Switching Characteristics Rise Time tr		....	15	....	usec
Ic = 3.0 Adc; Fall Time tf		....	35	....	usec
Ib = 300 mAdc					
Thermal Resistance		1.5	2.0	°C/W
Emitter-to-Base Cutoff Current	Iebo	0.5	2.0	mAdc
Veb = -15 Vdc; Ic = 0					

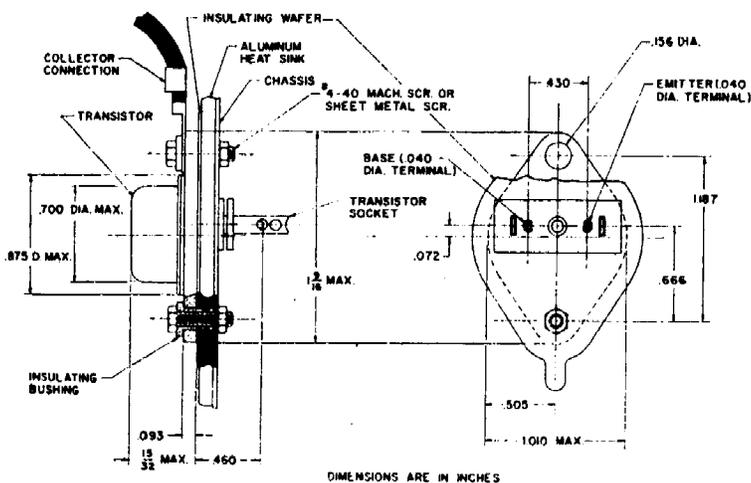


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		<u>Min.</u>	<u>Typical</u>	<u>Max.</u>	<u>Units</u>
Collector-to-Emitter Breakdown Voltage $I_c = 200 \text{ mA dc}; R_{be} = 30 \text{ ohms}$	BV_{ce}				
	2N637	35	....	....	Vdc
	2N637A	65	....	....	Vdc
	2N637B	75	....	....	Vdc
Collector-to-Base Cutoff Current $V_{cb} = -25 \text{ Vdc}; I_e = 0$ $V_{cb} = -60 \text{ Vdc}; I_e = 0$ $V_{cb} = -60 \text{ Vdc}; I_e = 0$	I_{cbo}				
	2N637	....	0.5	1	mA dc
	2N637A	....	2	5	mA dc
	2N637B	....	2	5	mA dc
Collector-to-Base Cutoff Current $+85^\circ\text{C}$ $V_{cb} = -25 \text{ Vdc}; I_e = 0$ $V_{cb} = -60 \text{ Vdc}; I_e = 0$ $V_{cb} = -60 \text{ Vdc}; I_e = 0$	I_{cbo}				
	2N637	....	5	10	mA dc
	2N637A	....	8	15	mA dc
	2N637B	....	8	15	mA dc

Life Test: Maximum DC current gain change of 30% after 1000 hours at 100°C .

TRANSISTOR AND MOUNTING KIT OUTLINE



SWITCHING CIRCUIT

