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2N637, A, B

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:

Vce Vdc		Ic Adc	Pc* W	Ib mAdc	T storage °C	Tj °C
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.

		Min.	Typical	Max.	Units
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					

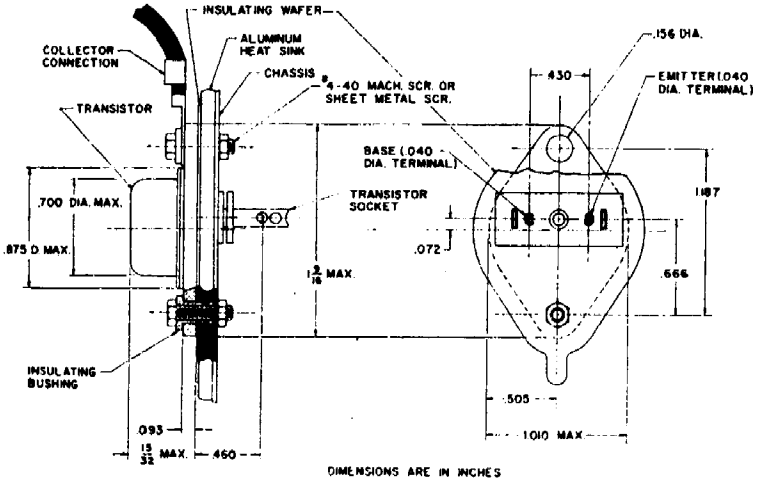
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Quality Semi-Conductors

		Min.	Typical	Max.	Units
Collector-to-Emitter Breakdown Voltage	BVce				
Ic = 200 mAdc; Rbe = 30 ohms	2N637	35	....	....	Vds
	2N637A	65	....	....	Vdc
	2N637B	75	....	....	Vdc
Collector-to-Base Cutoff Current	Icbo				
Vcb = -25 Vdc; Ie = 0	2N637	....	0.5	1	mAdc
Vcb = -60 Vdc; Ie = 0	2N637A	....	2	5	mAdc
Vcb = -60 Vdc; Ie = 0	2N637B	....	2	5	mAdc
Collector-to-Base Cutoff Current +85°C	Icbo				
Vcb = -25 Vdc; Ie = 0	2N637	....	5	10	mAdc
Vcb = -60 Vdc; Ie = 0	2N637A	....	8	15	mAdc
Vcb = -60 Vdc; Ie = 0	2N637B	....	8	15	mAdc

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

TRANSISTOR AND MOUNTING KIT OUTLINE



SWITCHING CIRCUIT

