

PT-8502

ELECTRICAL CHARACTERISTICS 25°C

TEST	SYMBOL	LIMITS				UNITS	TEST CONDITIONS
		PT8502		2N5928			
		MIN.	MAX.	MIN.	MAX.		
D.C. Current Gain*	h_{FE}	10	40	10	40	—	$I_C = 100A, V_{CE} = 2V$
D.C. Current Gain*	h_{FE}	5	—	5	—	—	$I_C = 150A, V_{CE} = 4V$
Collector Saturation Voltg.*	$V_{CE(sat)}$	—	1.0	—	1.0	V	$I_C = 100A, I_B = 10A$
Collector Saturation Voltg.*	$V_{CE(sat)}$	—	2.0	—	2.0	V	$I_C = 150A, I_B = 25A$
Base Emitter Voltage*	V_{BE}	—	2.0	—	2.0	V	$I_C = 100A, V_{CE} = 2V$
Base Emitter Voltage*	V_{BE}	—	3.0	—	3.0	V	$I_C = 150A, V_{CE} = 4V$
Collector-Emitter Voltage*	$V_{CEO(sus)}$	100	—	120	—	V	$I_C = 200mA, I_B = 0$
Collector Cutoff Current	I_{CBO}	—	2	—	—	mA	$V_{CB} = 100V, I_{EB} = 0$
Collector Cutoff Current	I_{CBO}	—	—	—	2	mA	$V_{CB} = 120V, I_{EB} = 0$
Collector Cutoff Current @ 150°C	I_{CBO}	—	10	—	10	mA	$V_{CB} = 100V, I_{EB} = 0$
Emitter Cutoff Current	I_{EBO}	—	1	—	1	mA	$V_{EB} = 10V, I_{CB} = 0$
Gain Bandwidth Product (Typ.)	f_t	1	—	1	—	MHz	$I_C = 5A, V_{CE} = 10V, f = 100KHz$
Collector Capacitance	C_{obo}	—	1800	—	1800	pf.	$V_{CB} = 10V, f = 100KHz$
Switching Speed (Typ.) (PowerTech Test Circuit)	t_r	—	2.5	—	2.5	μsec	$I_C = 50A$
	t_s	—	3	—	3	μsec	
	t_f	—	2.5	—	2.5	μsec	$I_{B1} = 10A, -I_{B2} = 5A$

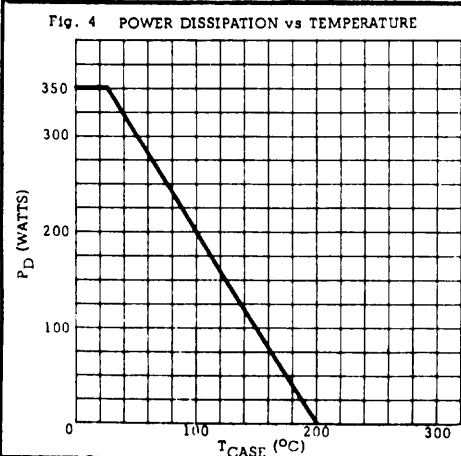
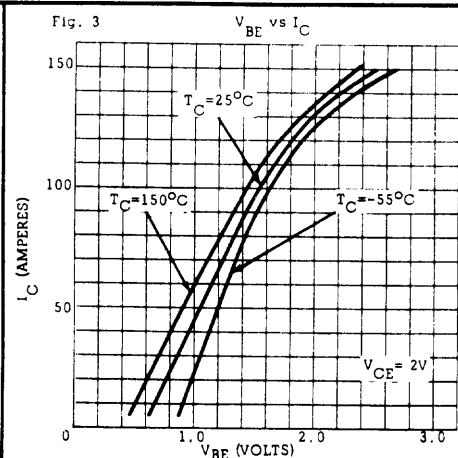
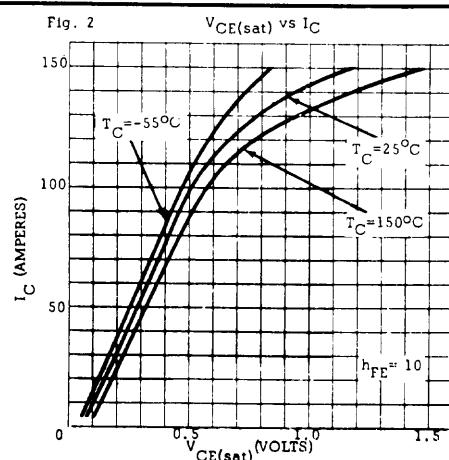
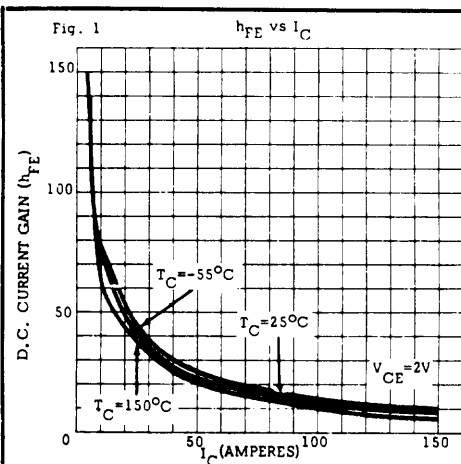
* $\leq 300 \mu sec$ Pulse 2% Duty Cycle

Fig. 5 SWITCHING TEST CIRCUIT

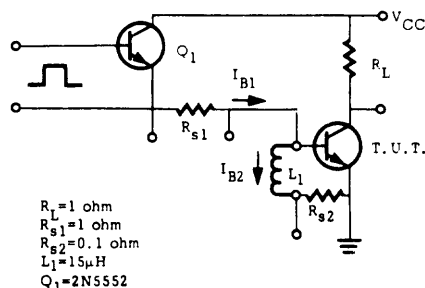
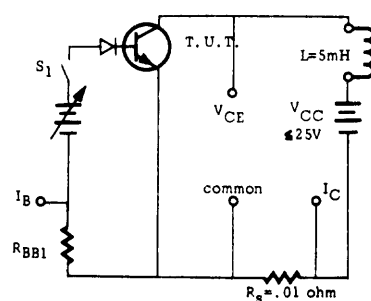


Fig. 6 UNCLAMPED INDUCTIVE SWEEP TEST



PROCEDURE

With S_1 closed, set $I_B = 8A, I_C = 50A$ Open S_1 $E_{S/b} = 1/2 L I^2 = 6.25 \text{ Joules}$