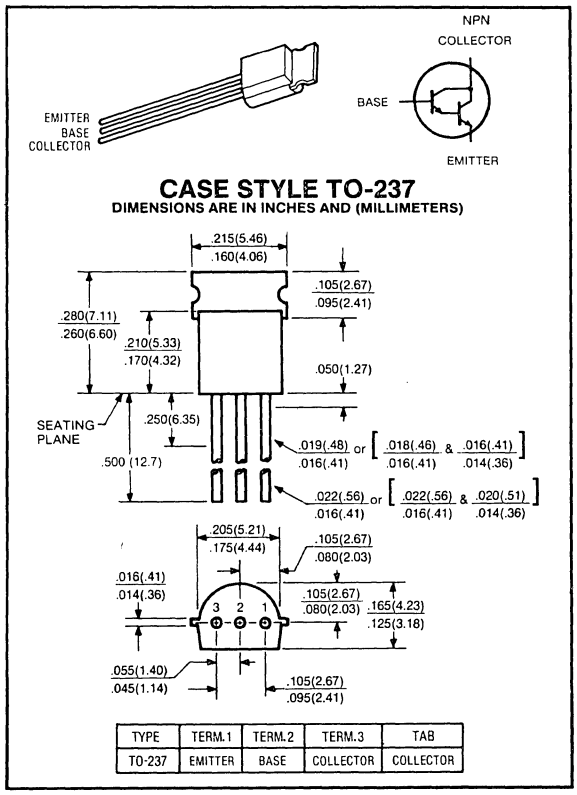
NPN POWER DARLINGTON TRANSISTORS

92GU45,45A
2N6724,25

40-50 VOLTS
2 AMPS, 1 WATTS

Features:

- Lamp driver
- Digit driver
- Directly compatible with bipolar and MOS I/C drive



maximum ratings (T_A = 25°C) (unless otherwise specified)

RATING	SYMBOL	92GU45/2N6724	92GU45A/2N6725	UNITS
Collector-Emitter Voltage	V_{CEO}	40	50	Volts
Collector-Emitter Voltage	V_{CES}	50	60	Volts
Emitter Base Voltage	V_{EBO}	12	12	Volts
Collector Current — Continuous	I_C	2.0	2.0	A
Total Power Dissipation @ T_A = 25°C	P_{DP}*	1.0	1.0	Watts
Operating and Storage Junction Temperature Range	T_J, T_{STG}	-55 to +150	-55 to +150	°C

thermal characteristics

Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	200	200	°C/W
Thermal Resistance, Junction to Case	$R_{\theta JC}$	62.5	62.5	°C/W

* P_{DP} = Practical Power Dissipation, i.e., that power which can be dissipated with the device installed in a typical manner on a printed circuit board with total copper run area equal to 1.0 in.^{2} minimum.

electrical characteristics (T_C = 25° C) (unless otherwise specified)

CHARACTERISTIC		SYMBOL	MIN	TYP	MAX	UNIT
off characteristics						
Collector-Emitter Breakdown Voltage (I_C = 1.0mA, V_{BE} = 0V)	92GU45,2N6724 92GU45A,2N6725	BV_{CES}	40 50	— —	— —	Volts
Collector Cutoff Current (V_{CB} = 30V, I_E = 0A) (V_{CB} = 40V, I_E = 0A)	 92GU45,2N6724 92GU45A,2N6725	I_{CBO}	—	—	100	nA
Emitter Cutoff Current (V_{EB} = 10V, I_C = 0)		I_{EBO}	—	—	100	μA
on characteristics						
DC Current Gain (I_C = 1mA, V_{CE} = 5V) (I_C = 500mA, V_{CE} = 5V) (I_C = 1000mA, V_{CE} = 5V)		h_{FE}	25,000 15,000 4,000	— — —	— — —	— — —
Collector-Emitter Saturation Voltage (I_C = 1000mA, I_B = 2mA) (I_C = 200mA, I_B = 2mA)		$V_{CE(sat)}$	— —	— —	1.5 1.0	V
Base-Emitter Saturation Voltage (I_C = 1000mA, V_{CE} = 2mA)		$V_{BE(sat)}$	—	—	2.0	Volts
Base-Emitter On Voltage (I_C = 1000mA, V_{CE} = 5V)		$V_{BE(on)}$	—	—	2.0	Volts