NPN POWER TRANSISTORS

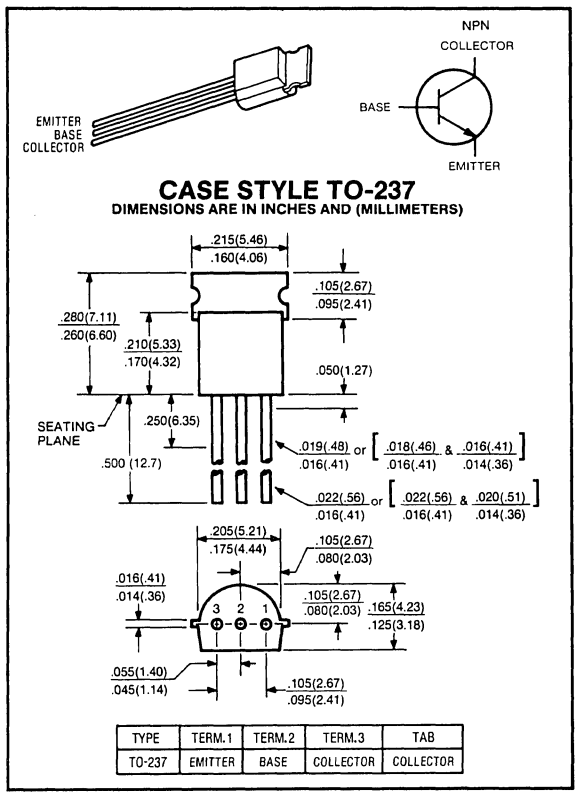
COMPLEMENTARY TO THE 2N6728, 29/92GU55, 56 SERIES

92GU05,06 2N6716,17

60-80 VOLTS 2 AMPS, 1.2 WATTS

Applications:

- High V_{CE} ratings:
  92GU05 = 60V min. V_{CEO}
  92GU06 = 80V min. V_{CEO}
- Exceptional power-to-price ratio



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

RATING	SYMBOL	92GU05/2N6716	92GU06A/2N6717	UNITS
Collector-Emitter Voltage	V_{CEO}	60	80	Volts
Collector-Base Voltage	V_{CB}	60	80	Volts
Emitter Base Voltage	V_{EB}	4.0	4.0	Volts
Collector Current — Continuous	I_C	2.0	2.0	A
Total Power Dissipation @ T_A = 25°C	P_{DP}*	1.2	1.2	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	$R_{\theta JA}$	167	167	°C/W
Thermal Resistance, Junction to Case	$R_{\theta JC}$	50	50	°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_A = 25° C) (unless otherwise specified)

CHARACTERISTIC		SYMBOL	MIN	TYP	MAX	UNIT
off characteristics						
Collector-Emitter Sustaining Voltage (I_C = 10mA, I_B = 0A)	92GU05,2N6716 92GU06,2N6717	$V_{CEO(sus)}$	60 80	— —	— —	Volts
Collector Cut-off Current	(V_{CB} = 40V, I_E = 0A) (V_{CB} = 50V, I_E = 0A)	I_{CBO}	— —	— —	0.1 0.1	μA
Emitter Cutoff Current (V_{EB} = 4V, I_C = 0A)		I_{EBO}	—	—	100	μA
on characteristics						
DC Current Gain (I_C = 50mA, V_{CE} = 1V) (I_C = 250mA, V_{CE} = 1V) (I_C = 500mA, V_{CE} = 1V)		h_{FE}	 80 50 20	 — — —	 — — —	 — — —
Base-Emitter On Voltage (I_C = 250mA, V_{CE} = 1V)		$V_{BE(on)}$	—	—	1.2	V
Base-Emitter Saturation Voltage (I_C = 250mA, I_B = 10mA) (I_C = 250mA, I_B = 25mA)		$V_{BE(sat)}$	 — —	 — —	 .5 .35	 Volts
dynamic characteristics						
Collector Capacitance (V_{CB} = 10V, I_E = 0, f = 1MHz)		C_{BO}	—	—	30	pF
Current-Gain Bandwidth Product (I_C = 200mA, V_{CE} = 5V, f = 100MHz)		f_T	50	—	—	MHz