

T-29-23



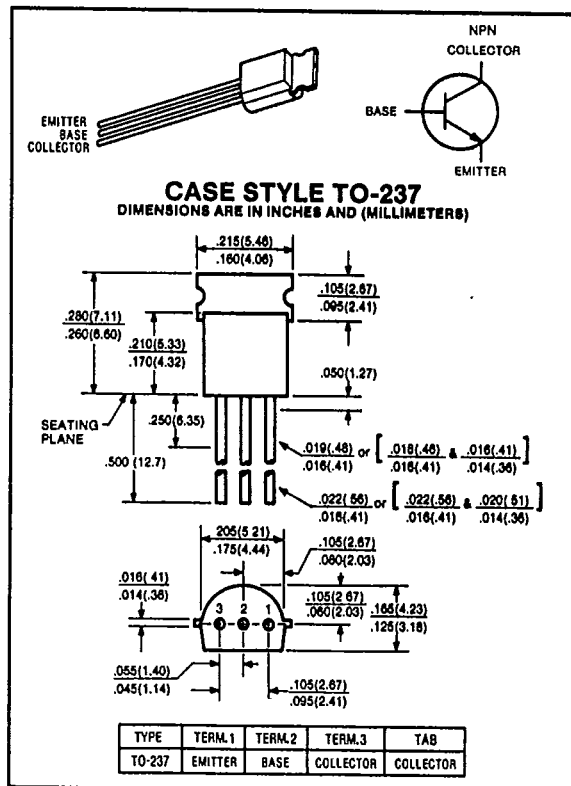
NPN POWER TRANSISTORS

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 ($T_A = 25^\circ C$) (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 @ $T_A = 25^\circ C$	P_{DP}^*	1.2	1.2	Watts
Operating and Storage Junction Temperature Range	T_J, T_{STG}	-55 to +150	-55 to +150	$^\circ C$

thermal characteristics

Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	167	167	$^\circ C/W$
Thermal Resistance, Junction to Case	$R_{\theta JC}$	50	50	$^\circ C/W$

* 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 ($T_A = 25^\circ\text{C}$) (unless otherwise specified)

CHARACTERISTIC	SYMBOL	MIN	TYP	MAX	UNIT
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off characteristics

Collector-Emitter Sustaining Voltage ($I_C = 10\text{mA}$, $I_B = 0\text{A}$)	92GU05,2N6716 92GU06,2N6717	$V_{CEO(sus)}$	60 80	— —	— —	Volts
Collector Cut-off Current ($V_{CB} = 40\text{V}$, $I_E = 0\text{A}$) ($V_{CB} = 50\text{V}$, $I_E = 0\text{A}$)		I_{CBO}	— —	— —	0.1 0.1	μA
Emitter Cutoff Current ($V_{EB} = 4\text{V}$, $I_C = 0\text{A}$)		I_{EBO}	—	—	100	μA

on characteristics

DC Current Gain ($I_C = 50\text{mA}$, $V_{CE} = 1\text{V}$) ($I_C = 250\text{mA}$, $V_{CE} = 1\text{V}$) ($I_C = 500\text{mA}$, $V_{CE} = 1\text{V}$)		h_{FE}	80 50 20	— — —	— — —	— — —
Base-Emitter On Voltage ($I_C = 250\text{mA}$, $V_{CE} = 1\text{V}$)		$V_{BE(on)}$	—	—	1.2	V
Base-Emitter Saturation Voltage ($I_C = 250\text{mA}$, $I_B = 10\text{mA}$) ($I_C = 250\text{mA}$, $I_B = 25\text{mA}$)		$V_{BE(sat)}$	— —	— —	.5 .35	Volts

dynamic characteristics

Collector Capacitance ($V_{CB} = 10\text{V}$, $I_E = 0$, $f = 1\text{MHz}$)		C_{BO}	—	—	30	pF
Current-Gain Bandwidth Product ($I_C = 200\text{mA}$, $V_{CE} = 5\text{V}$, $f = 100\text{MHz}$)		f_T	50	—	—	MHz