



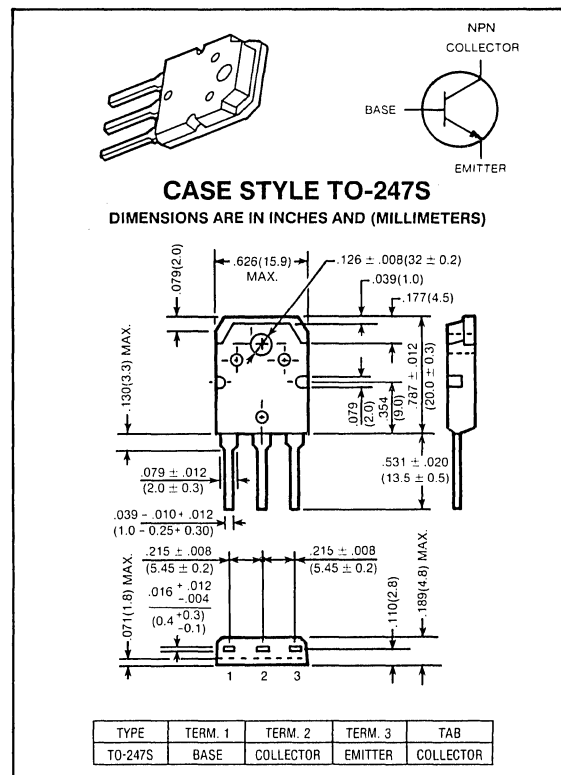
NPN POWER TRANSISTORS

GE3055P**80 VOLTS
10 AMP, 70 WATTS**

General purpose transistor designed for power regulator, switching and solenoid drive applications.

Features:

- High gain at high current:
 $h_{FE} = 20 \sim 100$ @ $V_{CE} = 4V$, $I_C = 4A$
- Low saturation voltage:
 $V_{CE(sat)} < 1.1V$ @ $I_C = 4A$, $I_B = 0.4A$



maximum ratings ($T_A = 25^\circ C$) (unless otherwise specified)

RATING	SYMBOL	GE3055P	UNITS
Collector-Emitter Voltage	V_{CEO}	80	Volts
Collector-Emitter Voltage	V_{CEX}	80	Volts
Emitter Base Voltage	V_{EBO}	5	Volts
Collector Current — Continuous Peak	I_C I_{CM}	10	A
Base Current — Continuous	I_B	6	A
Total Power Dissipation @ $T_C = 25^\circ C$ Derate above $25^\circ C$	P_D	70 0.56	Watts W/ $^\circ C$
Operating and Storage Junction Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ C$

thermal characteristics

Maximum Lead Temperature for Soldering Purposes: $\frac{1}{8}$ " from Case for 5 Seconds	T_L	260	$^\circ C$
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electrical characteristics ($T_C = 25^{\circ}\text{C}$) (unless otherwise specified)

CHARACTERISTIC	SYMBOL	MIN	TYP	MAX	UNIT
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off characteristics

Collector-Emitter Sustaining Voltage ($I_C = 200\text{mA}$)	$V_{CE(sus)}$	80	—	—	Volts
Collector Cutoff Current ($V_{CE} = 80\text{V}$, $V_{BE} = -1.5\text{V}$)	I_{CEX}	—	—	1.0	mA
Collector Cutoff Current ($V_{CE} = 80\text{V}$)	I_{CEO}	—	—	0.7	mA
Emitter Cutoff Current ($V_{EB} = 5\text{V}$)	I_{EBO}	—	—	5	mA

second breakdown

Second Breakdown with Base Forward Biased	FBSOA	SEE FIGURE 5			
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on characteristics

DC Current Gain ($I_C = 4\text{A}$, $V_{CE} = 4\text{V}$) ($I_C = 10\text{A}$, $V_{CE} = 4\text{V}$)	h_{FE}	20 5	— —	100 —	—
Collector-Emitter Saturation Voltage ($I_C = 4\text{A}$, $I_B = 0.4\text{A}$) ($I_C = 10\text{A}$, $I_B = 3.3\text{A}$)	$V_{CE(sat)}$	— —	— —	1.1 8.0	V
Base-Emitter Voltage ($I_C = 4\text{A}$, $V_{CE} = 4\text{V}$)	$V_{BE(on)}$	—	—	1.8	V

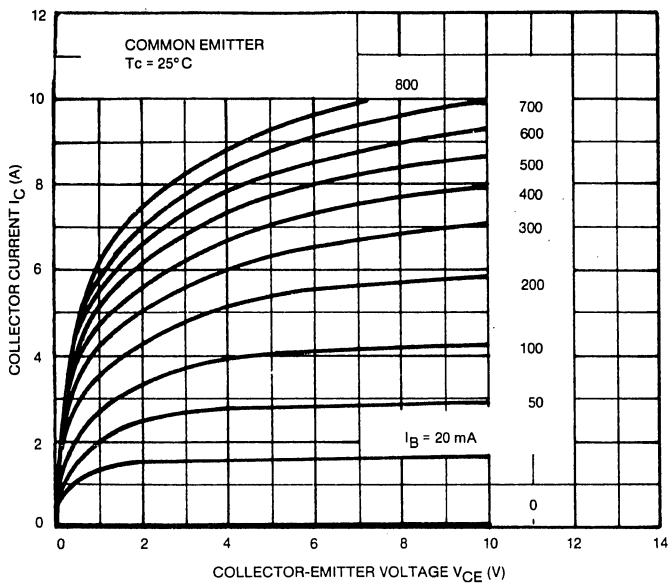


FIG. 1 $I_C - V_{CE}$

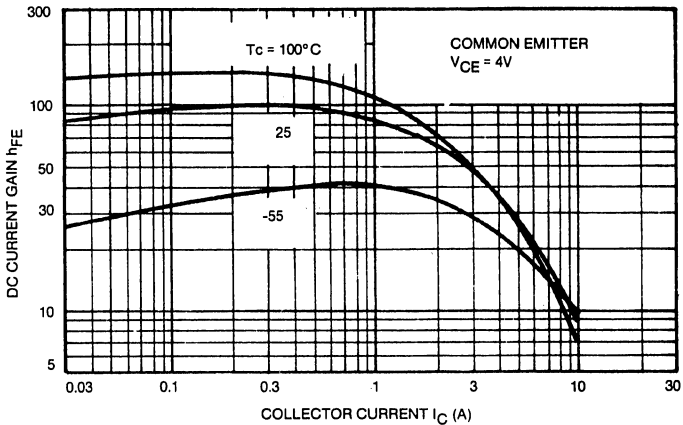


FIG. 2 $h_{FE} - I_C$

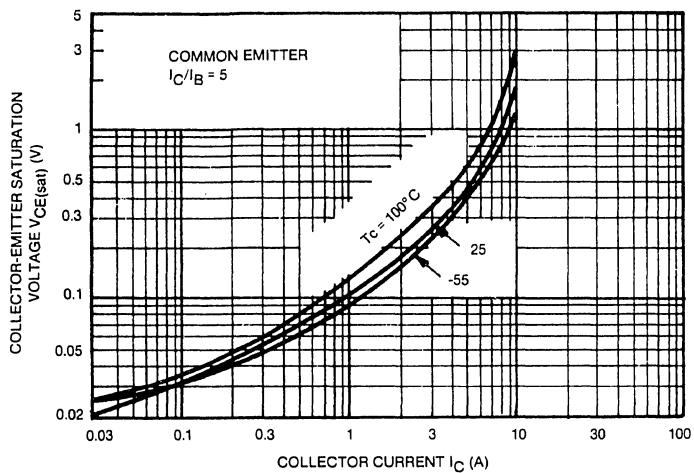


FIG. 3 $V_{CE(sat)} - I_C$

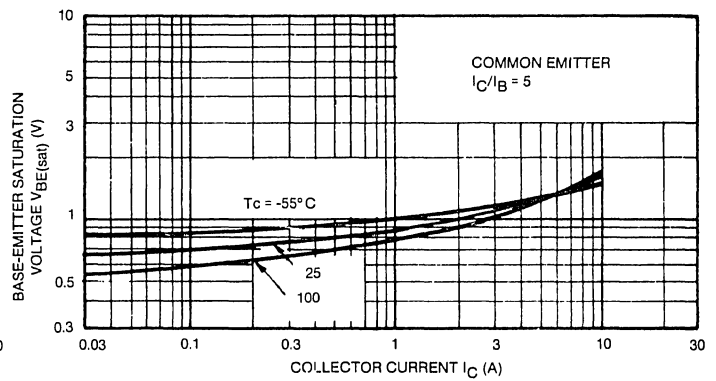


FIG. 4 $V_{BE(sat)} - I_C$

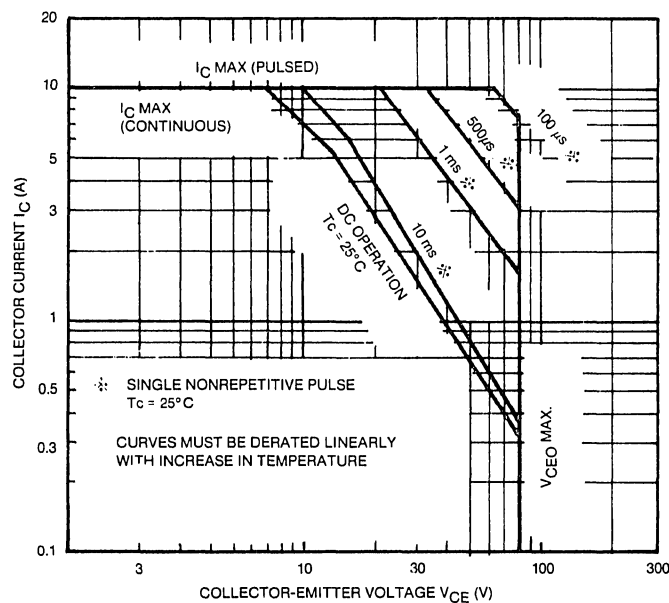


FIG. 5 SAFE OPERATING AREA

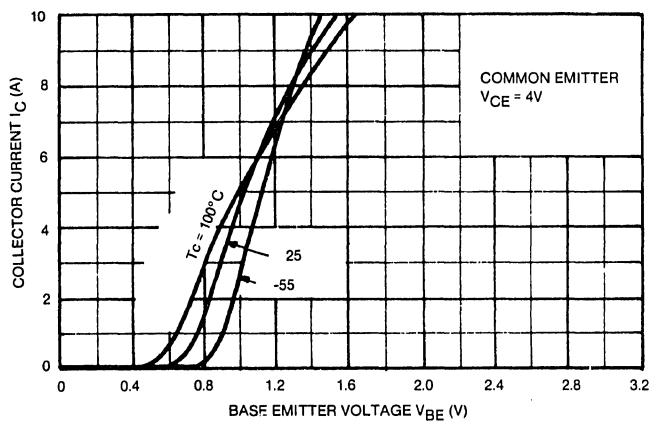


FIG. 6 $I_C - V_{BE}$

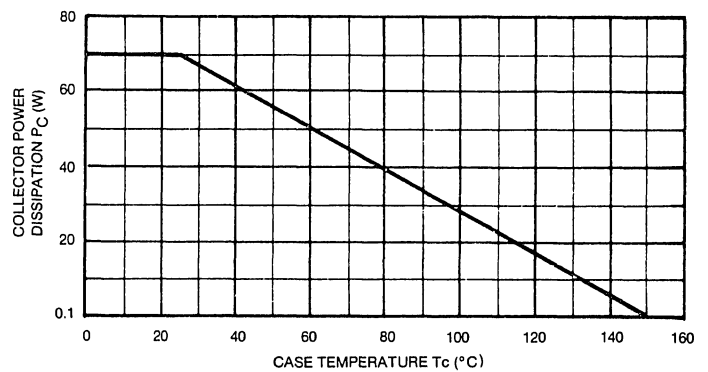


FIG. 7 $P_C - T_C$