



SURFACE-MOUNT PNP POWER TRANSISTORS

D71G.05T1

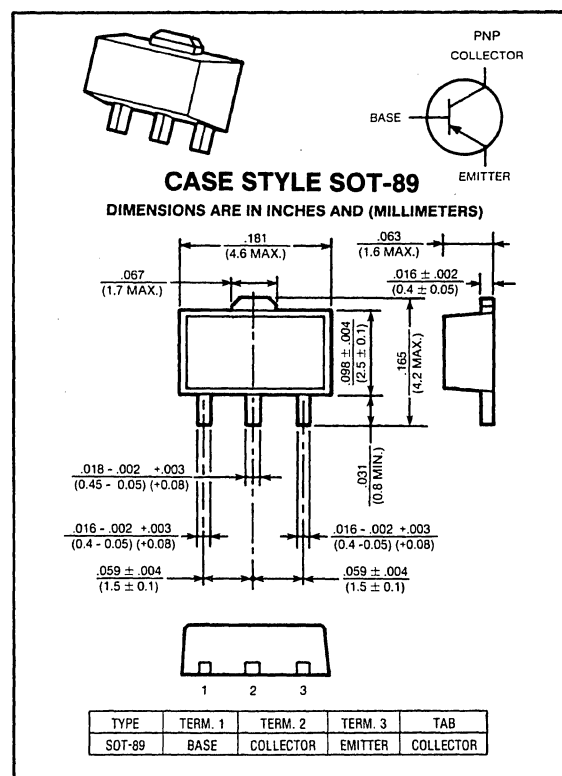
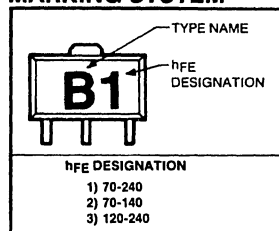
**-150 VOLTS
-50 mAMP, 500 mWATTS**

Designed for high voltage switching applications.

Features:

- High voltage: $V_{CEO} = -150V$
- High transition frequency: $f_T = 120MHz$
- $P_D = 1 \sim 2W$ (Mounted on ceramic substrate)
- Small flat package
- Complementary to D70G.05T1
- See page 840 for mounting and handling considerations.

MARKING SYSTEM



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

RATING	SYMBOL	D71G.05T1	UNITS
Collector-Emitter Voltage	V_{CEO}	-150	Volts
Collector-Base Voltage	V_{CBO}	-150	Volts
Emitter Base Voltage	V_{EBO}	-5	Volts
Collector Current — Continuous	I_C	-50	mA
Base Current — Continuous	I_B	-10	mA
Total Power Dissipation @ $T_C = 25^\circ C$ @ $T_C = 25^\circ C^{(1)}$	P_D	500 800	Watts
Operating and Storage Junction Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ C$

thermal characteristics⁽²⁾

- (1) Mounted on ceramic substrate (250mm² × 0.8t).
(2) See page 841 for thermal considerations.

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 ($I_C = -10\text{mA}$, $I_B = 0$)	$V_{CEO(sus)}$	150	—	—	Volts
Collector Cut-off Current ($V_{CB} = -150\text{V}$, $I_E = 0$)	I_{CBO}	—	—	-0.1	nA
Emitter Cutoff Current ($V_{EB} = -5\text{V}$, $I_C = 0$)	I_{EBO}	—	—	-0.1	nA

on characteristics

DC Current Gain ⁽³⁾ ($I_C = -10\text{mA}$, $V_{CE} = -5\text{V}$)	h_{FE}	70	—	240	—
Collector-Emitter Saturation Voltage ($I_C = -10\text{mA}$, $I_B = -1\text{mA}$)	$V_{CE(sat)}$	—	—	-0.8	V
Base-Emitter Voltage ($V_{CE} = -5\text{V}$, $I_C = -30\text{mA}$)	$V_{BE(on)}$	—	—	-0.9	V

(3) See page 44 for h_{FE} range.

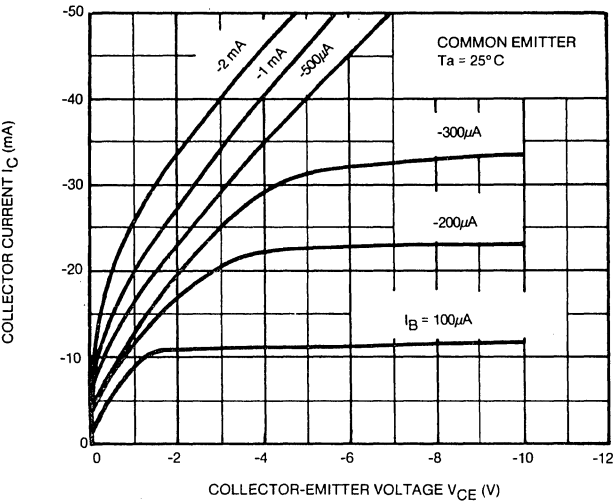


FIG. 1 $I_C - V_{CE}$

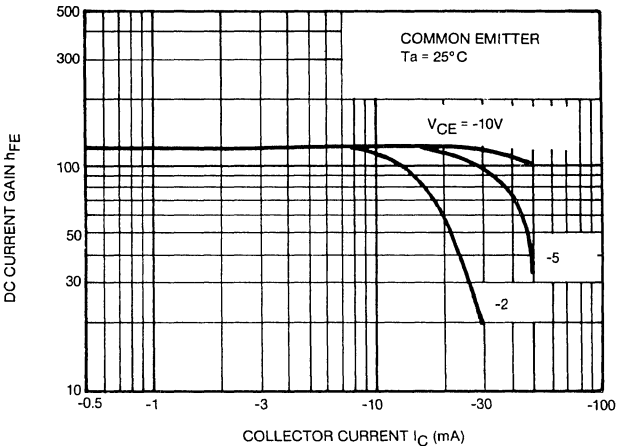


FIG. 2 $h_{FE} - I_C$

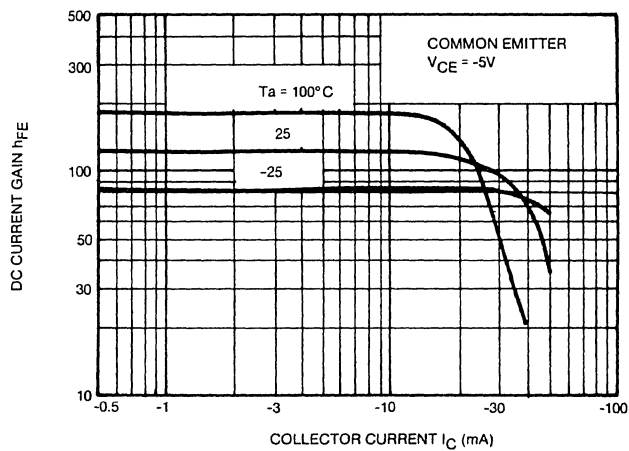


FIG. 3 $h_{FE} - I_C$

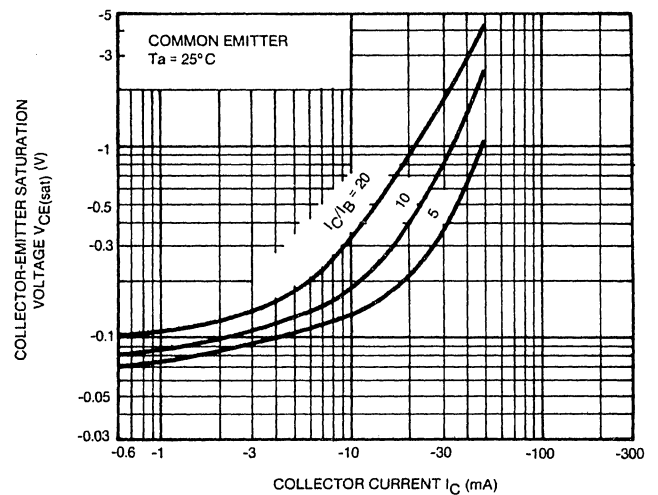


FIG. 4 $V_{CE(sat)} - I_C$

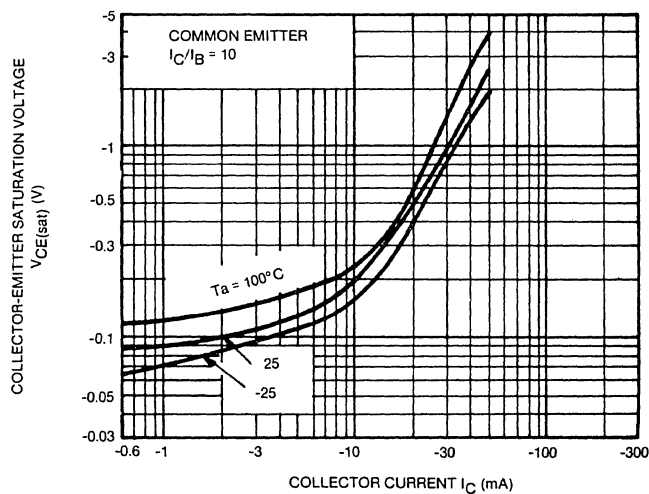


FIG. 5 $V_{CE(sat)} - I_C$

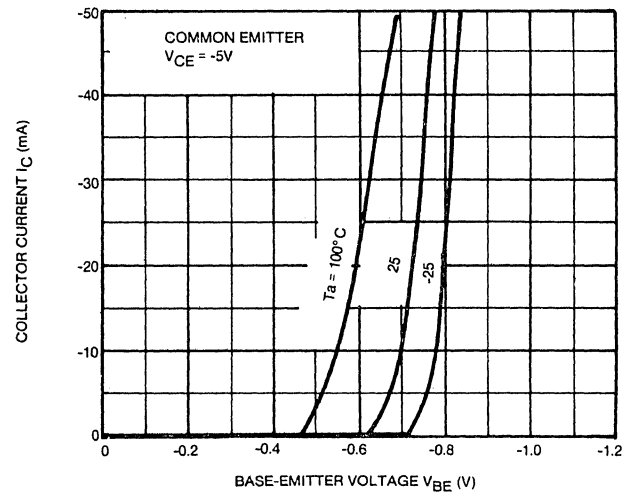


FIG. 6 $I_C - V_{BE}$

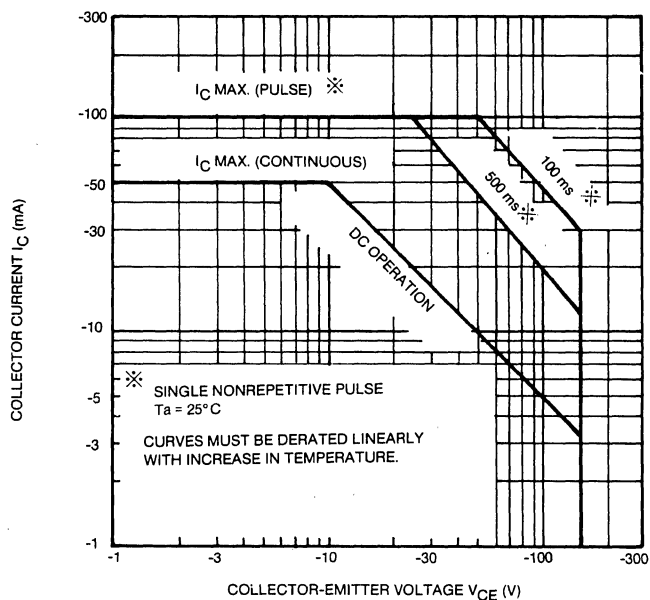


FIG. 7 SAFE OPERATING AREA

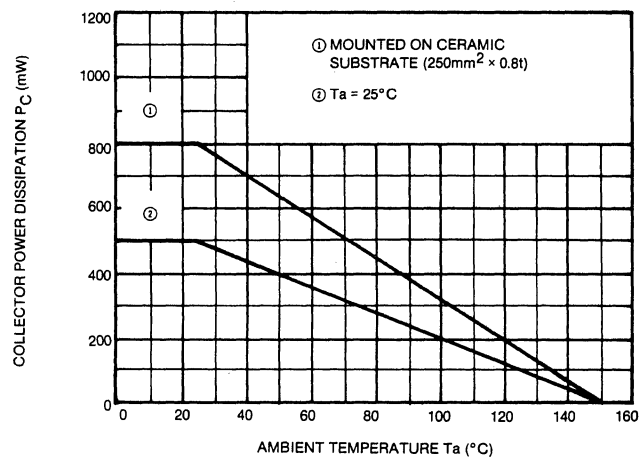


FIG. 8 $P_C - T_a$