

Silicon PNP Darlington Power Transistor

2SB601

DESCRIPTION

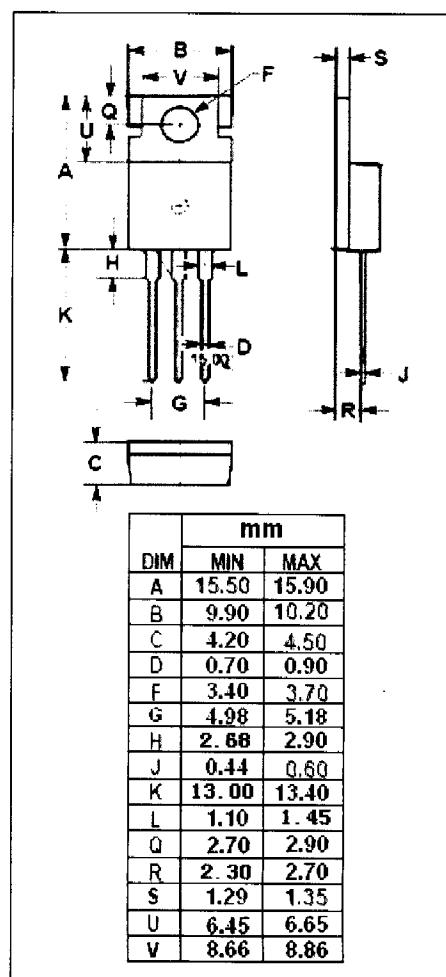
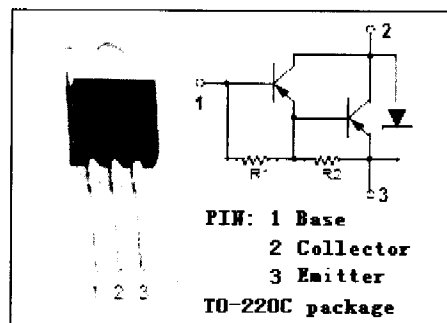
- High DC Current Gain-
: $h_{FE} = 2000(\text{Min}) @ I_C = -3A$
- Collector-Emitter Sustaining Voltage-
: $V_{CEO(\text{SUS})} = -100V(\text{Min})$
- Low Collector-Emitter Saturation Voltage-
: $V_{CE(\text{sat})} = -1.5V(\text{Max}) @ I_C = -3A$

APPLICATIONS

- Designed for use in low-frequency power amplifiers and low-speed switching applications.
- Ideal for use in direct drive from IC output for magnet drivers such as terminal equipment or cash registers.

ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	-100	V
V_{CEO}	Collector-Emitter Voltage	-100	V
V_{EBO}	Emitter-Base Voltage	-7	V
I_C	Collector Current-Continuous	-5	A
I_{CM}	Collector Current-Peak	-8	A
I_B	Base Current-DC	-0.5	A
P_C	Collector Power Dissipation $T_C = 25^\circ\text{C}$	30	W
	Collector Power Dissipation $T_a = 25^\circ\text{C}$	1.5	
T_j	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



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Quality Semi-Conductors

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ELECTRICAL CHARACTERISTICS

$T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -3A, I_B = -3mA$			-1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = -3A, I_B = -3mA$			-2.0	V
I_{CBO}	Collector Cutoff Current	$V_{CB} = -100V, I_E = 0$			-10	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB} = -5V, I_C = 0$			-3	mA
h_{FE-1}	DC Current Gain	$I_C = -3A, V_{CE} = -2V$	2000		15000	
h_{FE-2}	DC Current Gain	$I_C = -5A, V_{CE} = -2V$	500			

Switching times

t_{on}	Turn-on Time	$R_L = 17\Omega, V_{CC} \approx -50V$ $I_C = -3A; I_{B1} = -I_{B2} = -3mA$		0.5		μs
t_{stg}	Storage Time			1.0		μs
t_f	Fall Time			1.0		μs

◆ h_{FE-1} Classifications

M	L	K
2000-5000	3000-7000	5000-15000