

Silicon PNP Power Transistor

BD227/229/231

DESCRIPTION

- DC Current Gain-
: $h_{FE} = 40(\text{Min}) @ I_C = -0.15A$
- Complement to Type BD226/228/230

APPLICATIONS

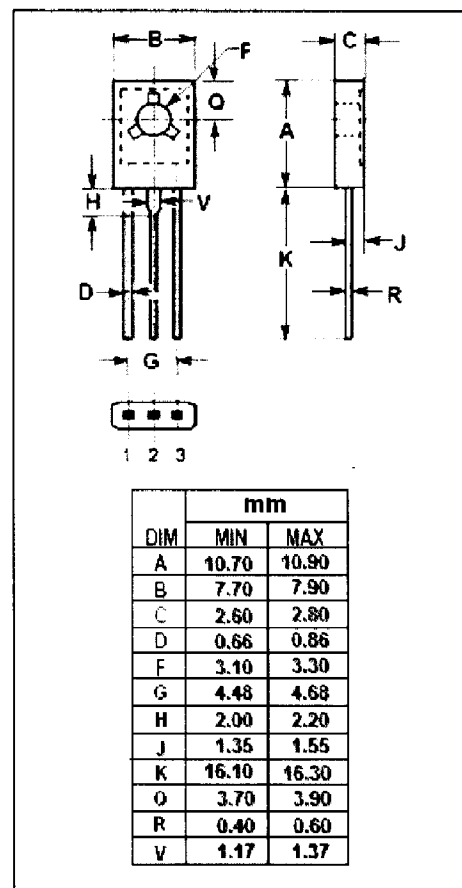
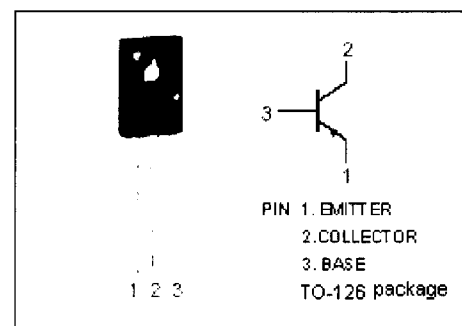
- Designed for use in driver stages in television circuits.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	BD227	-45
		BD229	-60
		BD231	-100
V_{CEO}	Collector-Emitter Voltage	BD227	-45
		BD229	-60
		BD231	-80
V_{CER}	Collector-Emitter Voltage($R_{BE} = 1k\Omega$)	BD227	-45
		BD229	-60
		BD231	-100
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current-Continuous	-1.5	A
I_{CM}	Collector Current-Peak	-3.0	A
P_C	Collector Power Dissipation @ $T_C \leq 62^\circ C$	12.5	W
T_J	Junction Temperature	150	$^\circ C$
T_{stg}	Storage Temperature Range	-65~150	$^\circ C$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th J-C}$	Thermal Resistance, Junction to Case	7	$^\circ C/W$
$R_{th J-A}$	Thermal Resistance, Junction to Ambient	100	$^\circ C/W$



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ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	BD227	$I_C = -100\text{mA}; I_B = 0$	-45			V
		BD229		-60			
		BD231		-80			
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage		$I_C = -1\text{A}; I_B = -0.1\text{A}$			-0.8	V
$V_{BE(on)}$	Base-Emitter On Voltage		$I_C = -1\text{A}; V_{CE} = -2\text{V}$			-1.3	V
I_{CBO}	Collector Cutoff Current		$V_{CB} = -30\text{V}; I_E = 0$ $V_{CB} = -30\text{V}; I_E = 0, T_C = 125^\circ\text{C}$			-0.1 -10	μA
I_{EBO}	Emitter Cutoff Current		$V_{EB} = -5\text{V}; I_C = 0$			-10	μA
h_{FE-1}	DC Current Gain		$I_C = -5\text{mA}; V_{CE} = -2\text{V}$	25			
h_{FE-2}	DC Current Gain		$I_C = -1\text{A}; V_{CE} = -2\text{V}$	25			
h_{FE-3}	DC Current Gain		$I_C = -0.15\text{A}; V_{CE} = -2\text{V}$	40		250	
f_T	Current-Gain—Bandwidth Product		$I_C = -50\text{mA}; V_{CE} = -5\text{V}$		50		MHz