

Silicon PNP Power Transistor

BD546/A/B/C

DESCRIPTION

- Collector Current $-I_C = -15A$
- Collector-Emitter Breakdown Voltage-
 $V_{(BR)CEO} = -40V(\text{Min})- BD546; -60V(\text{Min})- BD546A$
 $-80V(\text{Min})- BD546B; -100V(\text{Min})- BD546C$
- Complement to Type BD545/A/B/C

APPLICATIONS

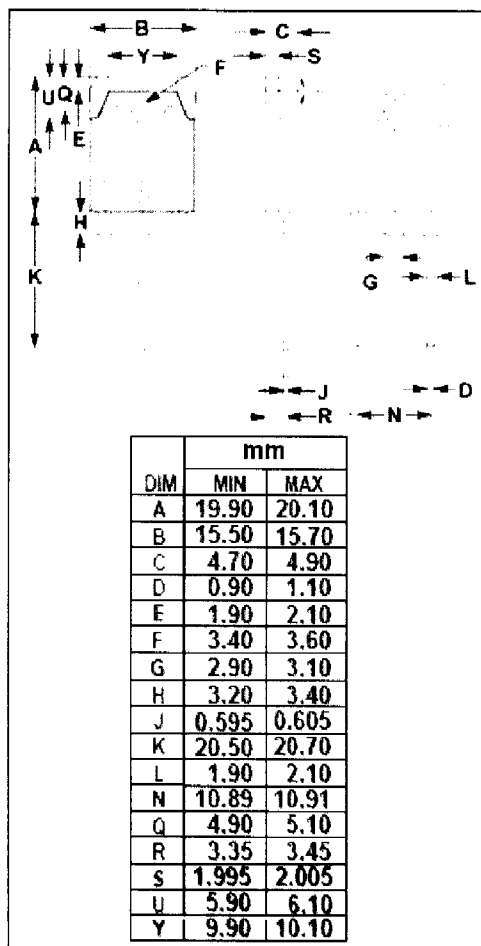
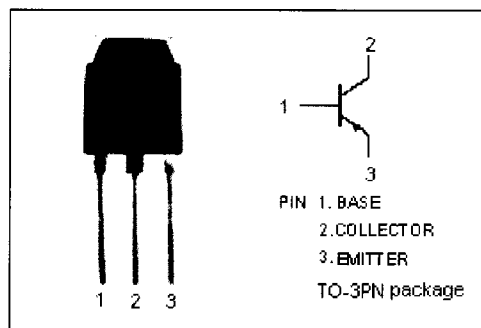
- Designed for use in general purpose power amplifier and switching applications

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

SYMBOL	PARAMETER	VALUE	UNIT	
V_{CBO}	Collector-Base Voltage	BD546	-40	V
		BD546A	-60	
		BD546B	-80	
		BD546C	-100	
V_{CEO}	Collector-Emitter Voltage	BD546	-40	V
		BD546A	-60	
		BD546B	-80	
		BD546C	-100	
V_{EBO}	Emitter-Base Voltage	-5	V	
I_C	Collector Current-Continuous	-15	A	
	Collector Power Dissipation @ $T_a=25^\circ C$	3.5	W	
P_C	Collector Power Dissipation @ $T_c=25^\circ C$	85		
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	1.47	$^\circ C/W$
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	35.7	$^\circ C/W$



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ELECTRICAL CHARACTERISTICS

T_c=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT	
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	BD546	-40			V	
		BD546A	-60				
		BD546B	-80				
		BD546C	-100				
V _{CE(sat)-1}	Collector-Emitter Saturation Voltage	I _C = -5A; I _B = -0.625A			-0.8	V	
V _{CE(sat)-2}	Collector-Emitter Saturation Voltage	I _C = -10A; I _B = -2A			-1.0	V	
V _{BE(on)}	Base-Emitter On Voltage	I _C = -10A; V _{CE} = -4V			-1.8	V	
I _{CES}	Collector Cutoff Current	BD546	V _{CE} = -40V; V _{BE} = 0			-0.4	mA
		BD546A	V _{CE} = -60V; V _{BE} = 0				
		BD546B	V _{CE} = -80V; V _{BE} = 0				
		BD546C	V _{CE} = -100V; V _{BE} = 0				
I _{CEO}	Collector Cutoff Current	BD546/A	V _{CE} = -30V; I _B = 0			-0.7	mA
		BD546B/C	V _{CE} = -60V; I _B = 0				
I _{EBO}	Emitter Cutoff Current	V _{EB} = -5V; I _C = 0			-1.0	mA	
h _{FE-1}	DC Current Gain	I _C = -1A; V _{CE} = -4V	60				
h _{FE-2}	DC Current Gain	I _C = -5A; V _{CE} = -4V	25				
h _{FE-3}	DC Current Gain	I _C = -10A; V _{CE} = -4V	10				
Switching times							
t _{on}	Turn-on Time	I _C = -6A; I _{B1} = -I _{B2} = -0.6A; R _L = 5 Ω; V _{BE(off)} = 4V		0.4		μs	
t _{off}	Turn-off Time			0.7		μs	