

Silicon PNP Power Transistor

DESCRIPTION

- Collector Current $-I_C = -10A$
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = -45V(\text{Min})$ - BD246; $-60V(\text{Min})$ - BD246A
 $-80V(\text{Min})$ - BD246B; $-100V(\text{Min})$ - BD246C
- Complement to Type BD245/A/B/C

APPLICATIONS

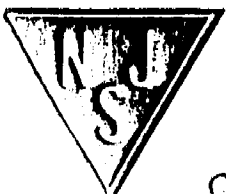
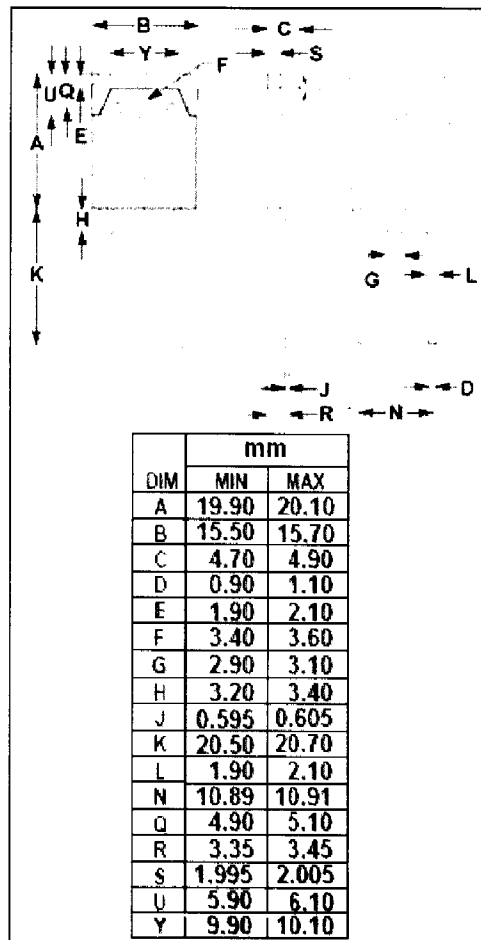
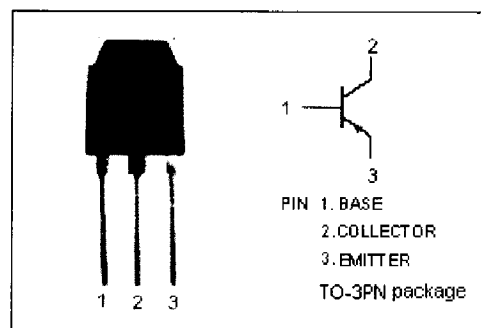
- Designed for use in general purpose power amplifier and switching applications

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

SYMBOL	PARAMETER	VALUE	UNIT	
V_{CER}	Collector-Emitter Voltage ($R_{BE} = 100 \Omega$)	BD246	-55	V
		BD246A	-70	
		BD246B	-90	
		BD246C	-115	
V_{CEO}	Collector-Emitter Voltage	BD246	-45	V
		BD246A	-60	
		BD246B	-80	
		BD246C	-100	
V_{EBO}	Emitter-Base Voltage	-5	V	
I_C	Collector Current-Continuous	-10	A	
I_{CM}	Collector Current-Peak	-15	A	
I_B	Base Current	-3	A	
P_C	Collector Power Dissipation @ $T_a=25^\circ C$	3	W	
	Collector Power Dissipation @ $T_c=25^\circ C$	80		
T_J	Junction Temperature	150	$^\circ C$	
T_{stg}	Storage Temperature Range	-65~150	$^\circ C$	

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R_{th-jc}	Thermal Resistance, Junction to Case	1.56	$^\circ C/W$



Silicon PNP Power Transistor

BD246/A/B/C

ELECTRICAL CHARACTERISTICS

T_C=25°C unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	BD246	I _C = -30mA; I _B = 0	-45			V
		BD246A		-60			
		BD246B		-80			
		BD246C		-100			
V _{CE(sat)-1}	Collector-Emitter Saturation Voltage		I _C = -3A; I _B = -0.3A			-1.0	V
V _{CE(sat)-2}	Collector-Emitter Saturation Voltage		I _C = -10A; I _B = -2.5A			-4.0	V
V _{BE(on)-1}	Base-Emitter On Voltage		I _C = -3A; V _{CE} = -4V			-1.6	V
V _{BE(on)-2}	Base-Emitter On Voltage		I _C = -10A; V _{CE} = -4V			-3.0	V
I _{CES}	Collector Cutoff Current	BD246	V _{CE} = -55V; V _{BE} = 0			-0.4	mA
		BD246A	V _{CE} = -70V; V _{BE} = 0				
		BD246B	V _{CE} = -90V; V _{BE} = 0				
		BD246C	V _{CE} = -115V; V _{BE} = 0				
I _{CEO}	Collector Cutoff Current	BD246/A	V _{CE} = -30V; I _B = 0			-0.7	mA
		BD246B/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	40			
h _{FE-2}	DC Current Gain		I _C = -3A; V _{CE} = -4V	20			
h _{FE-3}	DC Current Gain		I _C = -10A; V _{CE} = -4V	4			
f _T	Current-Gain—Bandwidth Product		I _C = -0.5A; V _{CE} = -10V; f _{test} = 1.0MHz	3.0			MHz
Switching times							
t _{on}	Turn-on Time		I _C = -1A; I _{B1} = -I _{B2} = -0.1A; R _L = 20 Ω; V _{BE(OFF)} = 3.7V		0.2		μs
t _{off}	Turn-off Time				0.8		μs