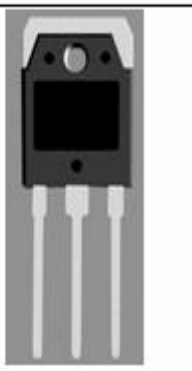
isc Silicon PNP Power Transistor — BD546/A/B/C

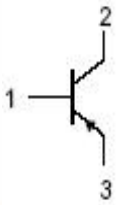
DESCRIPTION

- Collector Current -I_C= -15A
- Collector-Emitter Breakdown Voltage-
  : $V_{(BR)CEO}$ = -40V(Min)- BD546; -60V(Min)- BD546A
  -80V(Min)- BD546B; -100V(Min)- BD546C
- Complement to Type BD545/A/B/C
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

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





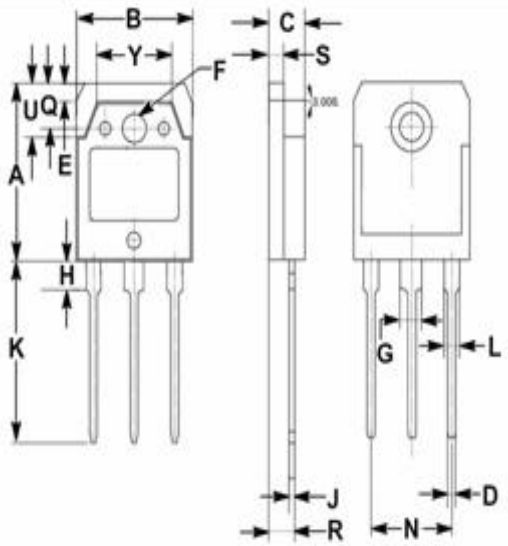
PIN: 1.Base
2.Collector
3.Emitter
TO-3PN Package

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

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
P_C	Collector Power Dissipation @ T_a=25℃		3.5	W
	Collector Power Dissipation @ T_C=25℃		85	
T_J	Junction Temperature		150	℃
T_{stg}	Storage Temperature Range		-65~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	1.47	℃/W
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Ambient	35.7	℃/W



DIM	mm MIN	MAX
A	19.60	20.30
B	15.50	15.70
C	4.70	4.90
D	0.90	1.10
E	1.90	2.10
F	3.40	3.60
G	2.90	3.20
H	3.20	3.40
J	0.595	0.605
K	19.80	20.70
L	1.90	2.20
N	10.89	10.91
Q	4.90	5.10
R	3.35	3.45
S	1.995	2.100
U	5.90	6.20
Y	9.90	10.10

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	BD546	I_C= -30mA ;I_B=0	-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= 5Ω ; $V_{BE(off)}$= 4V		0.4		μs
t_{off}	Turn-off Time				0.7		μs

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