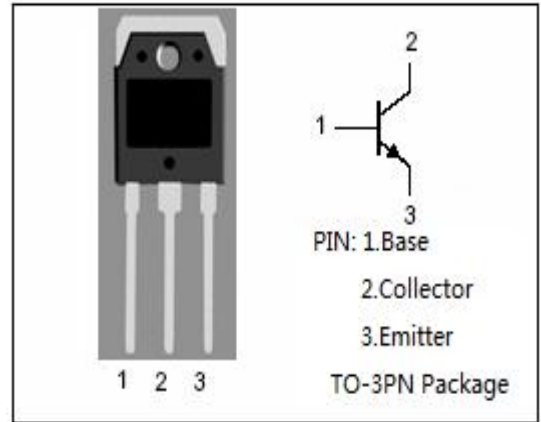


isc Silicon NPN Power Transistor
BD245/A/B/C
DESCRIPTION

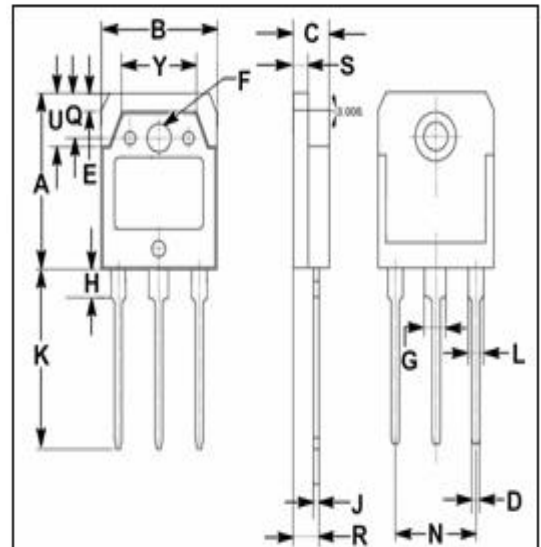
- Collector Current $-I_C = 10A$
- Collector-Emitter Breakdown Voltage:
: $V_{(BR)CEO} = 45V(\text{Min})$ - BD245; $60V(\text{Min})$ - BD245A
 $80V(\text{Min})$ - BD245B; $100V(\text{Min})$ - BD245C
- Complement to Type BD246/A/B/C
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

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


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

SYMBOL	PARAMETER	VALUE	UNIT	
V_{CER}	Collector-Emitter Voltage ($R_{BE} = 100\Omega$)	BD245	55	V
		BD245A	70	
		BD245B	90	
		BD245C	115	
V_{CEO}	Collector-Emitter Voltage	BD245	45	V
		BD245A	60	
		BD245B	80	
		BD245C	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 @ $T_a=25^\circ\text{C}$	3	W	
	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	80		
T_J	Junction Temperature	150	$^\circ\text{C}$	
T_{stg}	Storage Temperature Range	-65~150	$^\circ\text{C}$	



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

THERMAL CHARACTERISTICS

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

isc Silicon NPN Power Transistor

BD245/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	BD245	I _C = 30mA ; I _B =0	45			V
		BD245A		60			
		BD245B		80			
		BD245C		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	BD245	V _{CE} = 55V; V _{BE} = 0			0.4	mA
		BD245A	V _{CE} = 70V; V _{BE} = 0				
		BD245B	V _{CE} = 90V; V _{BE} = 0				
		BD245C	V _{CE} = 115V; V _{BE} = 0				
I _{CEO}	Collector Cutoff Current	BD245/A	V _{CE} = 30V; I _B = 0			0.7	mA
		BD245B/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

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