Silicon NPN Power Transistors BD245/A/B/C

DESCRIPTION

·With TO-3PN package
·Complement to type BD246/A/B/C

APPLICATIONS

·For use in medium power linear and switching applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector;connected to mounting base
3	Emitter

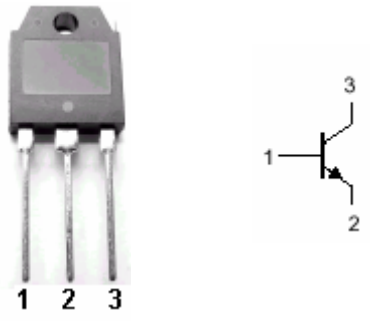

Fig.1 simplified outline (TO-3PN) and symbol

Absolute maximum ratings(Ta=□)

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	BD245	Open emitter	55	V
		BD245A		70	
		BD245B		90	
		BD245C		115	
V_{CEO}	Collector-emitter voltage	BD245	Open base	45	V
		BD245A		60	
		BD245B		80	
		BD245C		100	
V_{EBO}	Emitter-base voltage		Open collector	5	V
I_C	Collector current			10	A
I_{CM}	Collector current-peak			15	A
I_B	Base current			3	A
P_C	Collector power dissipation		T_C=25□	80	W
T_j	Junction temperature			-65~150	□
T_{stg}	Storage temperature			-65~150	□

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th\ j\text{-}c}$	Thermal resistance junction to case	1.56	□/W

CHARACTERISTICS

Tj=25□ unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(BR)}$	Collector-emitter breakdown voltage	BD245	I_C=30mA ;I_B=0	45			V
		BD245A		60			
		BD245B		80			
		BD245C		100			
$V_{CEsat-1}$	Collector-emitter saturation voltage		I_C=3A ;I_B=0.3A			1.0	V
$V_{CEsat-2}$	Collector-emitter saturation voltage		I_C=10A ;I_B=2.5A			4.0	V
V_{BE-1}	Base-emitter on voltage		I_C=3A ; V_{CE}=4V			1.6	V
V_{BE-2}	Base-emitter on voltage		I_C=10A ; V_{CE}=4V			3.0	V
I_{CEO}	Collector cut-off current	BD245/245A	V_{CE}=30V; I_B=0			0.7	mA
		BD245B/245C	V_{CE}=60V; I_B=0				
I_{EBO}	Emitter cut-off 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			

Switching times

t_{on}	Turn-on time	I_C=1A; I_{B1}=-I_{B2}=0.1A R_L=20Ω		0.3		μs
t_{off}	Turn-off time			1.0		μs

PACKAGE OUTLINE

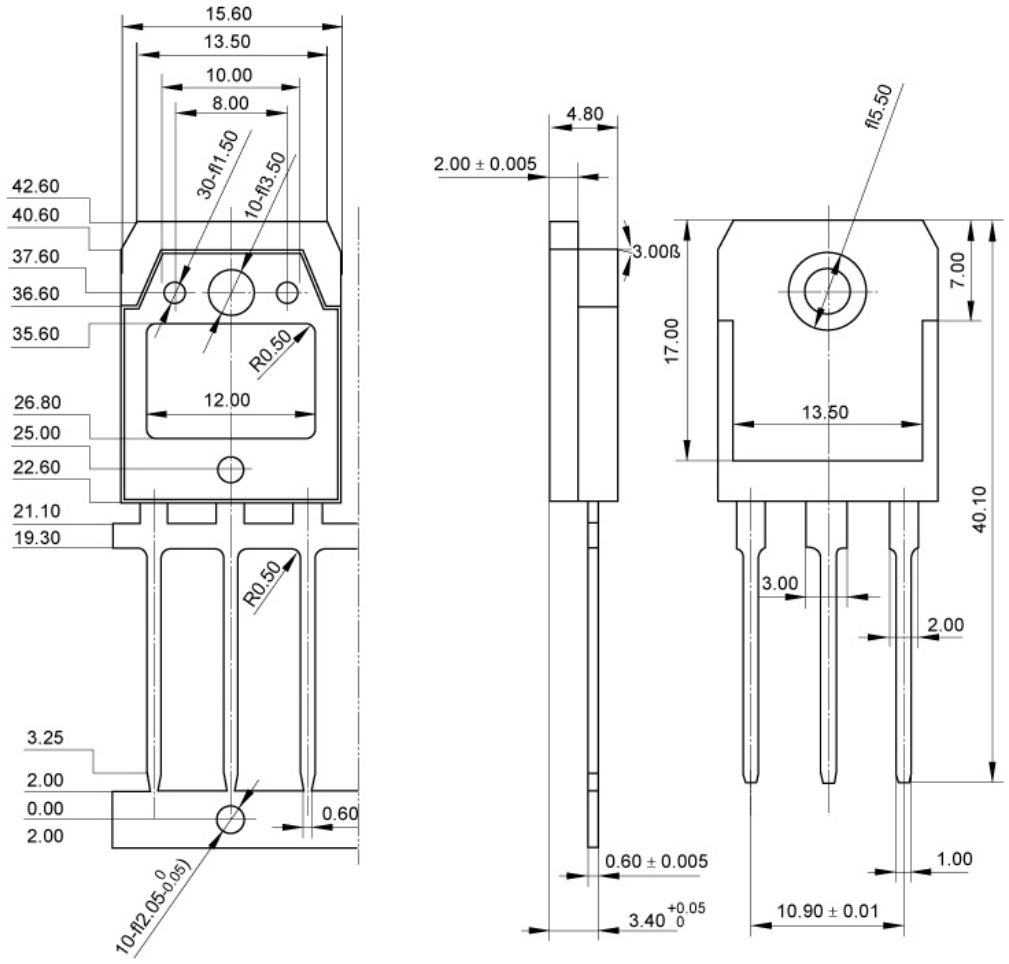

Fig.2 outline dimensions (unindicated tolerance:±0.1mm)