Silicon NPN Power Transistors BD239/A/B/C

DESCRIPTION

With TO-220C package

·Complement to type BD240/A/B/C

APPLICATIONS

·For medium power linear and switching applications

PINNING

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

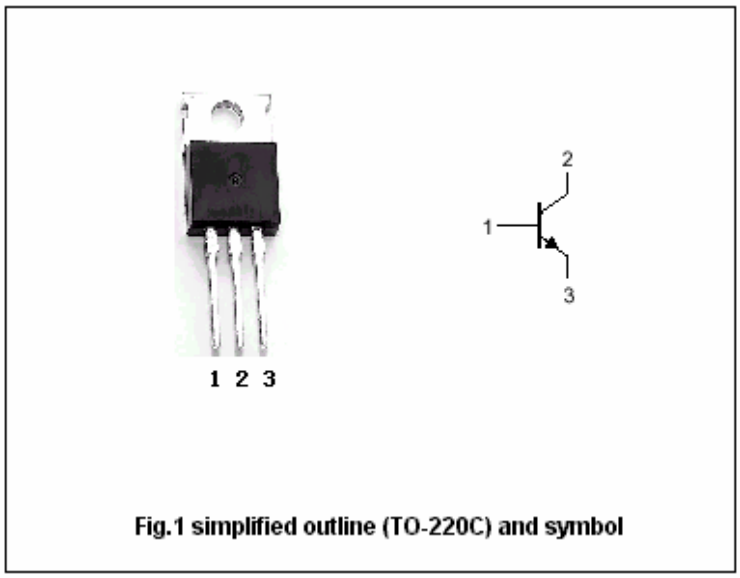

Fig.1 simplified outline (TO-220C) and symbol

Absolute maximum ratings (Ta=25□)

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	BD239	Open emitter	55	V
		BD239A		70	
		BD239B		90	
		BD239C		115	
V_{CEO}	Collector-emitter voltage	BD239	Open base	45	V
		BD239A		60	
		BD239B		80	
		BD239C		100	
V_{EBO}	Emitter-base voltage		Open collector	5	V
I_C	Collector current			2	A
I_{CM}	Collector current-peak			4	A
I_B	Base current			0.6	A
P_C	Collector power dissipation		T_C=25□	30	W
T_j	Junction temperature			150	□
T_{stg}	Storage temperature			-65~150	□

CHARACTERISTICS

Tj=25□ unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-emitter sustaining voltage	BD239	I_C=30mA; I_B=0	45			V
		BD239A		60			
		BD239B		80			
		BD239C		100			
V_{CEsat}	Collector-emitter saturation voltage		I_C=1 A;I_B=0.2 A			0.7	V
V_{BE}	Base-emitter on voltage		I_C=1A ; V_{CE}=4V			1.3	V
I_{CEO}	Collector cut-off current	BD239/A	V_{CE}=30V; I_B=0			0.3	mA
		BD239B/C	V_{CE}=60V; I_B=0				
I_{CES}	Collector cut-off current	BD239	V_{CE}=45V; V_{BE}=0			0.2	mA
		BD239A	V_{CE}=60V; V_{BE}=0				
		BD239B	V_{CE}=80V; V_{BE}=0				
		BD239C	V_{CE}=100V; V_{BE}=0				
I_{EBO}	Emitter cut-off current		V_{EB}=5V; I_C=0			1	mA
h_{FE-1}	DC current gain		I_C=0.2A ; V_{CE}=4V	40			
h_{FE-2}	DC current gain		I_C=1A ; V_{CE}=4V	15			

PACKAGE OUTLINE

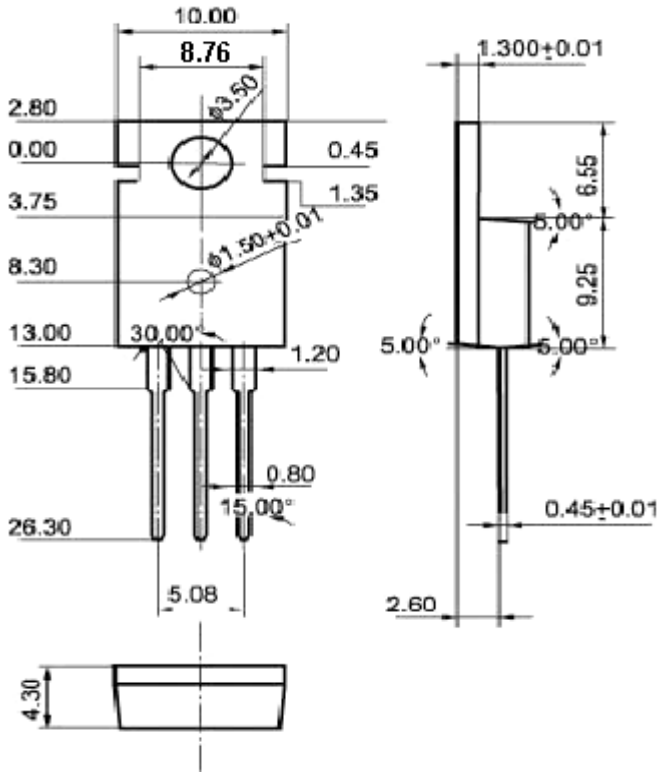

Fig.2 Outline dimensions (unindicated tolerance:±0.10 mm)