Silicon NPN Power Transistors BD683

DESCRIPTION

・With TO-126 package
・Complement to type BD684
・DARLINGTON

APPLICATIONS

・For audio and video applications

PINNING

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

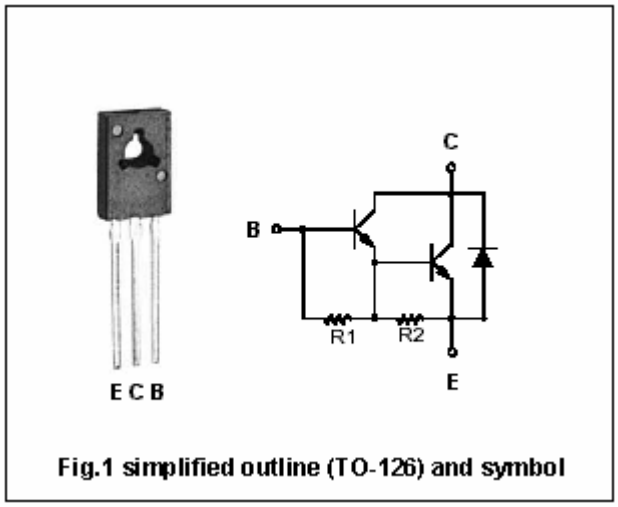

Fig.1 simplified outline (TO-126) and symbol

Absolute maximum ratings (Ta=25℃)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	140	V
V_{CEO}	Collector-emitter voltage	Open base	120	V
V_{EBO}	Emitter -base voltage	Open collector	5	V
I_C	Collector current (DC)		4	A
I_{CM}	Collector current-Peak		6	A
I_{BM}	Base current-Peak		0.1	A
P_T	Total power dissipation	T_C=25℃	40	W
T_j	Junction temperature		150	℃
T_{stg}	Storage temperature		-65~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}mb}$	Thermal resistance, junction to mouting base	3.12	K/W

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CHARACTERISTICS

Tj=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V_{CEsat}	Collector-emitter saturation voltage	I_C=1.5A; I_B=6mA			2.5	V
V_{BE}	Base-emitter on voltage	I_C=1.5A ; V_{CE}=3V			2.5	V
I_{CBO}	Collector cut-off current	V_{CB}=120V; I_E=0			0.2	mA
I_{CEO}	Collector cut-off current	V_{CE}=60V; I_B=0			0.2	mA
I_{EBO}	Emitter cut-off current	V_{EB}=5V; I_C=0			5	mA
h_{FE-1}	DC current gain	I_C=500mA ; V_{CE}=3V		2200		
h_{FE-2}	DC current gain	I_C=1.5A ; V_{CE}=3V	750			
h_{FE-3}	DC current gain	I_C=4A ; V_{CE}=3V		1500		
t_{on}	Turn-on time	I_C=1.5A;I_{B1}=-I_{B2}=6mA V_{CC}=30V		0.8	2	μs
t_{off}	Turn-off time			4.5	8	μs

PACKAGE OUTLINE

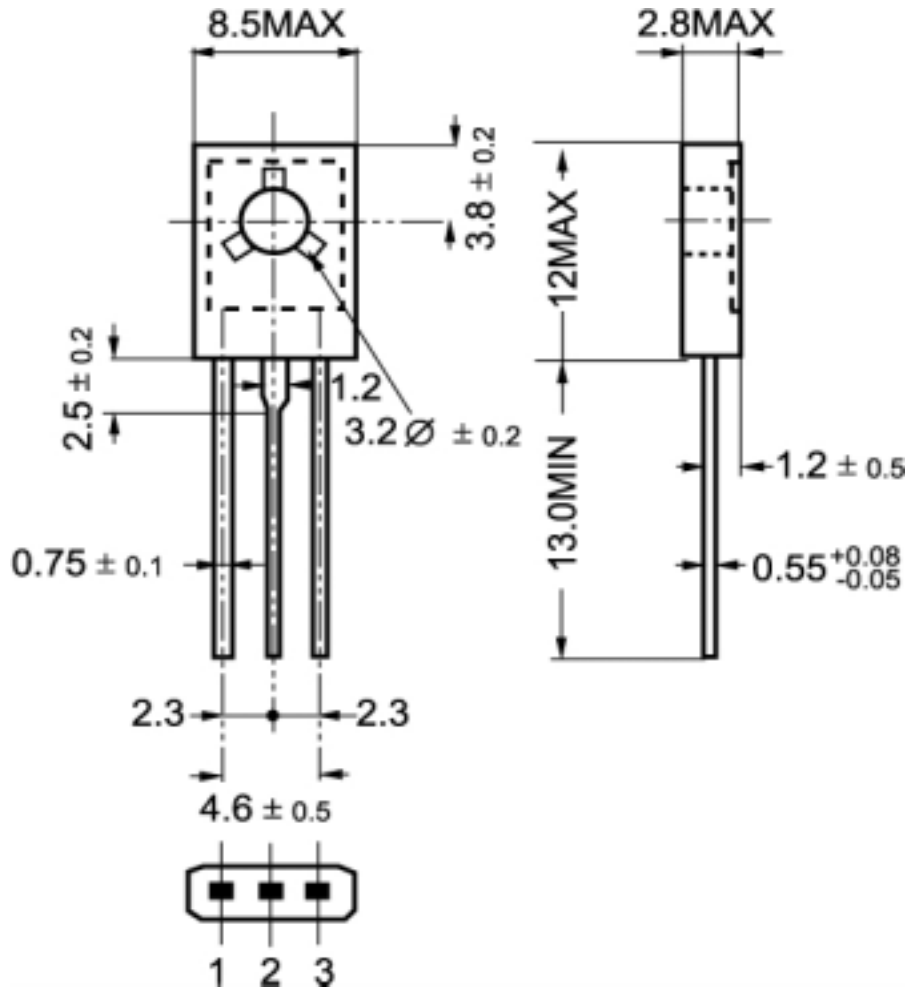

Fig.2 Outline dimensions