Silicon NPN Power Transistors BD439 BD441

DESCRIPTION

·With TO-126 package

·Complement to type BD440,BD442

APPLICATIONS

·For medium power linear and switching applications

PINNING

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

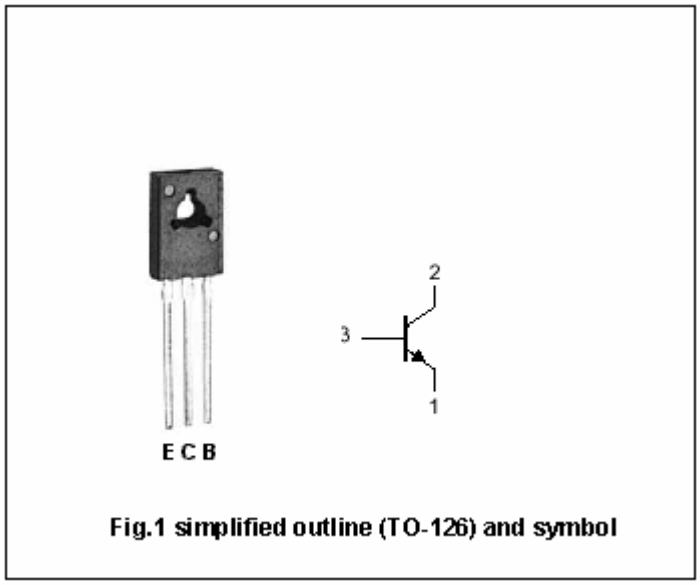

Fig.1 simplified outline (TO-126) and symbol

Absolute maximum ratings (Ta=25□)

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	BD439	Open emitter	60	V
		BD441		80	
V_{CEO}	Collector-emitter voltage	BD439	Open base	60	V
		BD441		80	
V_{EBO}	Emitter -base voltage		Open collector	5	V
I_C	Collector current (DC)			4	A
I_{CM}	Collector current-Peak			7	A
I_B	Base current			1	A
P_C	Collector power dissipation		T_C=25□	36	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_{CEsat}	Collector-emitter saturation voltage		I_C=2A; I_B=0.2A			0.8	V
V_{BE-1}	Base-emitter on voltage		I_C=10mA ; V_{CE}=5V		0.58		V
V_{BE-2}	Base-emitter on voltage		I_C=2A ; V_{CE}=1V			1.5	V
$V_{CEO(SUS)}$	Collector-emitter sustaining voltage	BD439	I_C=0.1A; I_B=0	60			V
		BD441		80			
I_{CBO}	Collector cut-off current	BD439	V_{CB}=60V; I_E=0			100	μA
		BD441	V_{CB}=80V; I_E=0				
I_{CES}	Collector cut-off current	BD439	V_{CE}=60V; V_{BE}=0			100	μA
		BD441	V_{CE}=80V; V_{BE}=0				
I_{EBO}	Emitter cut-off current		V_{EB}=5V; I_C=0			1	mA
h_{FE-1}	DC current gain	BD439	I_C=10mA ; V_{CE}=5V	20		130	
		BD441		15			
h_{FE-2}	DC current gain		I_C=0.5A ; V_{CE}=1V	40		140	
h_{FE-3}	DC current gain	BD439	I_C=2A ; V_{CE}=1V	25			
		BD441		15			
f_T	Transition frequency		I_C=250mA; V_{CE}=1V	3			MHz

PACKAGE OUTLINE

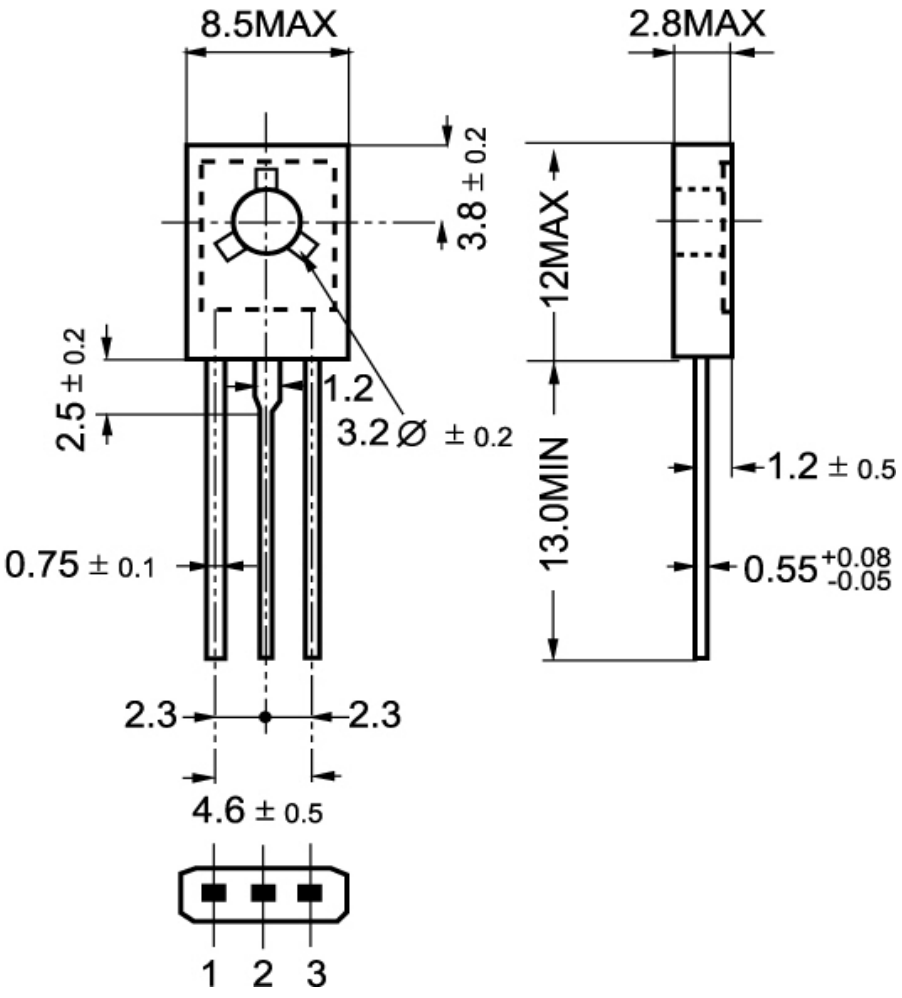

Fig.2 Outline dimensions