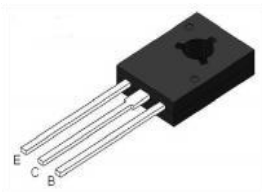




1.Features

- Complement to BD433, BD435 and BD437 respectively

Case:TO-126



2.Mechanical Data

- Case:Molded Plastic,TO-126
- Epoxy:UL 94V-0 rate flame retardant
- Terminals:Plated Leads Solderable per MIL-STD-750,Method-2026.
- Marking: marked on body.
- Mounting Position : Any.

3.Maximum Ratings and Electrical Characteristics

Rating at 25°C Cambient temperature unless otherwise specified

Parameters		Symbol	Value	Unit
Collector-Base Voltage	BD434	V_{CBO}	-22	V
	BD436		-32	
	BD438		-45	
Collector-Emitter Voltage	BD434	V_{CEO}	-22	V
	BD436		-32	
	BD438		-45	
Emitter-Base Voltage		V_{EBO}	-5	V
Collector Current -Continuous		I_C	-4	A
Collector Current(Pulse) *		I_{CP}	-7	A
		I_B	-1	A
Power Dissipation		P_C	36	W
Junction Temperature		T_j	150	°C
Operating and Storage Temperature Range		T_{stg}	-55 to +150	°C

**4. Electrical Characteristics** (TA=25°C unless otherwise noted)

Parameters		Symbol	Cindition	Min	TYP	Max	Unit
Collector-base breakdown voltage	BD434	$V_{(BR)CBO}$	$I_C= 100\mu A, I_E= 0$	-22	-	-	V
	BD436			-32			
	BD438			-45			
Collector-emitter breakdown voltage	BD434	$V_{(BR)CEO}$	$I_C = -10mA, I_B = 0$	-22	-	-	V
	BD436			-32			
	BD438			-45			
Emitter-base breakdown voltage		$V_{(BR)EBO}$	$I_E = -100\mu A, I_C = 0$	-5	-	-	V
Collector cut-off current	BD434	I_{CBO}	$V_{CB} = -22V, I_E = 0$	-	-	-100	μA
	BD436		$V_{CB} = -32V, I_E = 0$				
	BD438		$V_{CB} = -45V, I_E = 0$				
Collector cut-off current	BD434	I_{CEO}	$V_{CE} = -22V, V_{BE} = 0$	-	-	-100	μA
	BD436		$V_{CE} = -32V, V_{BE} = 0$				
	BD438		$V_{CE} = -45V, V_{BE} = 0$				
Emitter cut-off current		I_{EBO}	$V_{EB} = -5V, I_C = 0$	-	-	-100	μA
DC current gain*		h_{FE}	$V_{CE}= -5V, I_C= -10mA$	100	260	400	-
			$V_{CE}= -1V, I_C= -0.5A$	200			
			$V_{CE}= -1V, I_C= -2A$	100			
Collector-emitter saturation voltage		$V_{CE(sat)}$	$I_C= -2A, I_B= -0.2A$	-	-0.25	-0.5	V
Base-emitter saturation voltage		$V_{BE(sat)}$	$V_{CE}= -1V, I_C= -2A$	-	-	-1.1	V
Transition frequency		f_T	$V_{CE}= -1V, I_B= -250mA$	3	-	-	MHz

* Pulse test: PW≤300μs, duty cycle≤2% Pulse



6. Typical Characteristics

Fig.1 DC current Gain

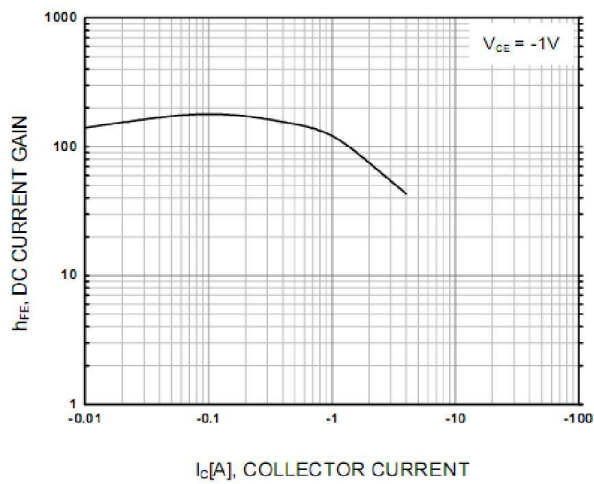


Fig.2 Collector-Emitter Saturation Voltage

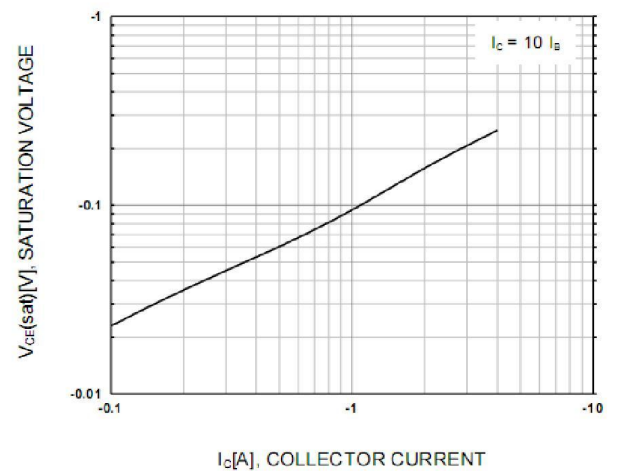


Fig.3 Base-Emitter On Voltage

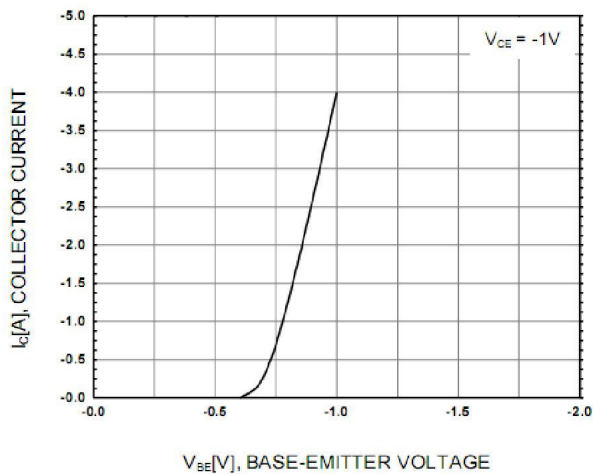


Fig.4 Collector-Base Capacitance

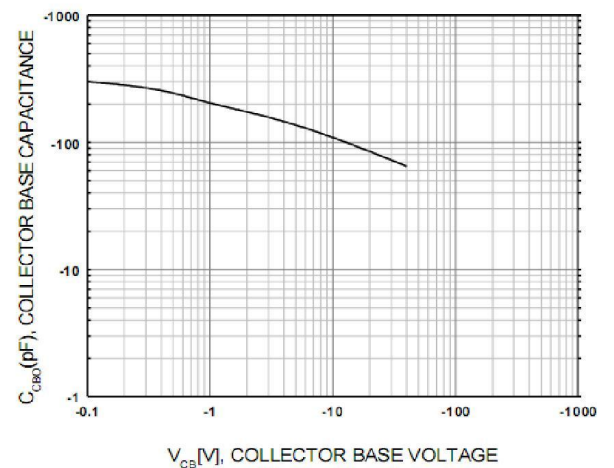


Fig.5 Safe Operating Area

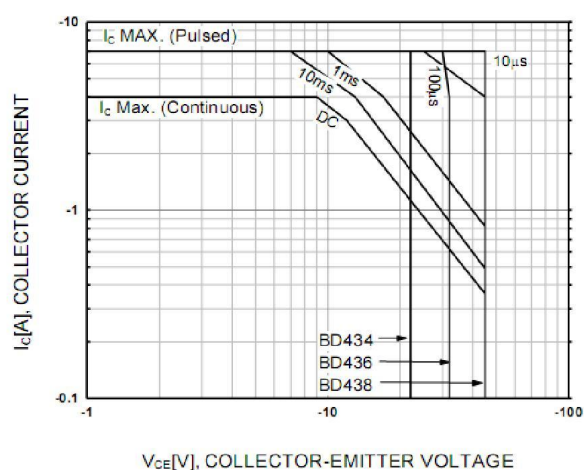
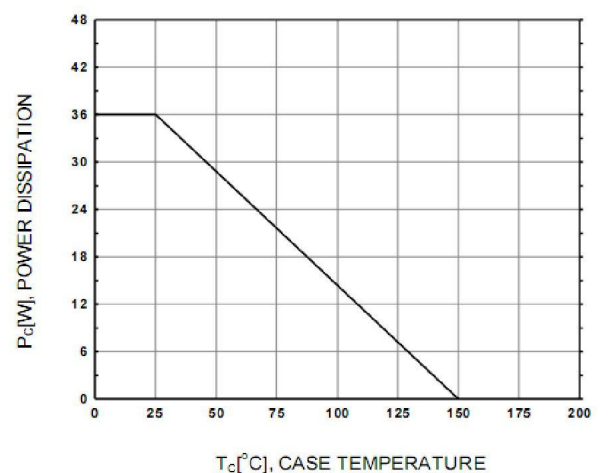
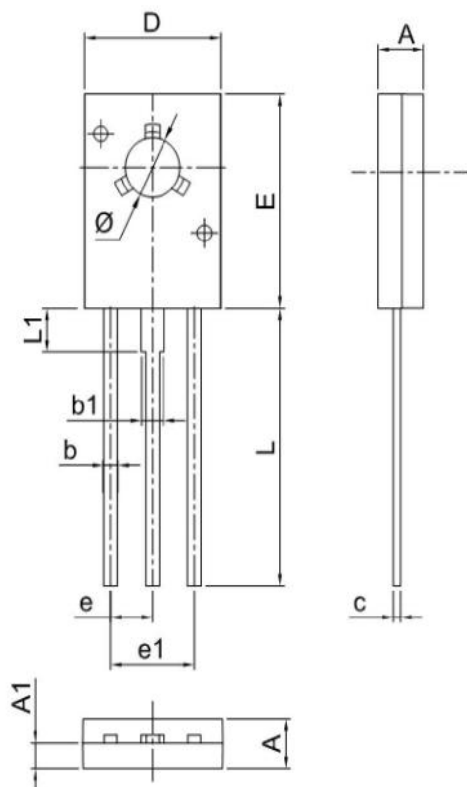


Fig.6 Power Derating



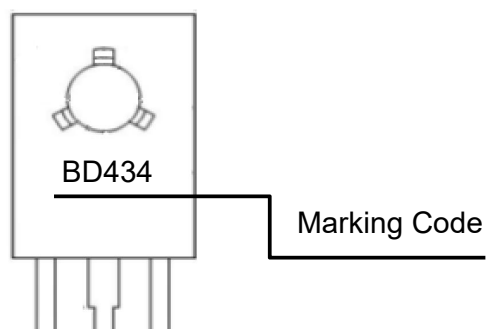


7. Dimensions



Dimensions	Inches		Millimeters	
	Min	Max	Min	Max
A	0.094	0.110	2.40	2.80
A1	0.039	0.055	1.00	1.40
b	0.026	0.034	0.66	0.86
b1	0.046	0.054	1.17	1.37
c	0.016	0.024	0.40	0.60
D	0.287	0.303	7.30	7.70
E	0.417	0.433	10.60	11.00
e	0.089	0.092	2.25	2.33
e1	0.177	0.183	4.50	4.66
L	0.551	0.591	14.00	15.00
L1	0.075	0.098	1.90	2.50
Ø	0.122	0.130	3.10	3.30

8. Part Marking System



9. Package Information

Part Number	Package	Quantity(pcs)
BD434/436/438	TO126	4000



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