

BD434/436/438**PNP EPITAXIAL SILICON TRANSISTOR****MEDIUM POWER LINEAR AND SWITCHING APPLICATIONS**

- Complement to BD433, BD435 and BD437 respectively

ABSOLUTE MAXIMUM RATINGS

Characteristic	Symbol	Rating	Unit
Collector Base Voltage : BD434	V_{CBO}	- 22	V
: BD436		- 32	V
: BD438		- 45	V
Collector Emitter Voltage : BD434	V_{CES}	- 22	V
: BD436		- 32	V
: BD438		- 45	V
Collector Emitter Voltage : BD434	V_{CEO}	- 22	V
: BD436		- 32	V
: BD438		- 45	V
Emitter Base Voltage	V_{EBO}	- 5	V
Collector Current (DC)	I_C	- 4	A
Collector Current (Pulse)	I_C	- 7	A
Base Current	I_B	- 1	A
Collector Dissipation ($T_C=25^\circ\text{C}$)	P_C	36	W
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-65 ~ 150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_C=25^\circ\text{C}$)

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Collector Emitter Sustaining Voltage : BD434	$V_{CEO(sus)}$	$I_C = - 100\text{mA}, I_B = 0$	- 22			V
: BD436			- 32			V
: BD438			- 45			V
Collector Cutoff Current : BD434	I_{CBO}	$V_{CB} = - 22\text{V}, I_E = 0$			- 100	μA
: BD436		$V_{CB} = - 32\text{V}, I_E = 0$			- 100	μA
: BD438		$V_{CB} = - 45\text{V}, I_E = 0$			- 100	μA
Collector Cutoff Current : BD434	I_{CEO}	$V_{CE} = - 22\text{V}, V_{BE} = 0$			- 100	μA
: BD436		$V_{CE} = - 32\text{V}, V_{BE} = 0$			- 100	μA
: BD438		$V_{CE} = - 45\text{V}, V_{BE} = 0$			- 100	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = - 5\text{V}, I_C = 0$			- 1	mA
*DC Current Gain : BD434/436	h_{FE}	$V_{CE} = - 5\text{V}, I_C = - 10\text{mA}$	40	140		
: BD438			30	140		
: ALL DEVICE		$V_{CE} = - 1\text{V}, I_C = - 500\text{mA}$	85	140		
: BD434/436		$V_{CE} = - 1\text{V}, I_C = - 2\text{A}$	50			
: BD438			40			
* Collector Emitter Saturation Voltage : BD434	$V_{CE(sat)}$	$I_C = - 2\text{A}, I_B = - 0.2\text{A}$		- 0.2	- 0.5	V
: BD436				- 0.2	- 0.5	V
: BD438				- 0.2	- 0.6	V
*Base Emitter On Voltage : BD434	$V_{BE(on)}$	$V_{CE} = - 1\text{V}, I_C = - 2\text{A}$			- 1.1	V
: BD436					- 1.1	V
: BD438					- 1.2	V
Transition Frequency	f_T	$V_{CE} = - 1\text{V}, I_C = - 250\text{mA}$	3			MHz

* Pulse Test : PW=300 μs , duty Cycle=1.5% Pulsed





