Micro Commercial Components

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BD433/BD435/BD437

NPN Silicon Power Transistors

Features

- Lead Free Finish/RoHS Compliant (Note1) ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisure Sensitivity Level 1
- Intended for use in medium power near and switching applications
- With TO-126 package
- The complementary PNP type is BD434, BD436, BD438
- Halogen free available upon request by adding suffix "-HF"

Maximum Ratings

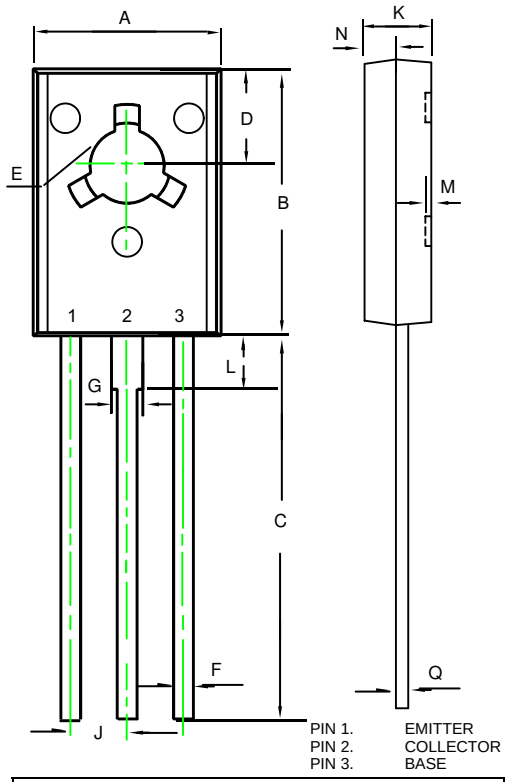
Symbol	Parameter		Rating	Unit
V_{CEO}	Collector-Emitter Voltage	BD433 BD435 BD437	22 32 45	V
V_{CBO}	Collector-Base Voltage	BD433 BD435 BD437	22 32 45	V
V_{EBO}	Emitter-Base Voltage	BD433 BD435 BD437	5.0	V
I_C	Collector Current		4.0	A
P_C	Collector power dissipation		1.25	W
T_J	Junction Temperature		-55 to +150	℃
T_{STG}	Storage Temperature		-55 to +150	℃

Electrical Characteristics @ 25ºC Unless Otherwise Specified

Symbol	Parameter		Min	Max	Units
OFF CHARACTERISTICS					
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage (I_C=100mAdc, I_B=0)	BD433 BD435 BD437	22 32 45	--- --- ---	Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage (I_C=100 μ Adc, I_E=0)	BD433 BD435 BD437	22 32 45	--- --- ---	Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage (I_E=100 μ Adc, I_C=0)		5	---	Vdc
I_{CBO}	Collector-Base Cutoff Current (V_{CB}=22Vdc,I_E=0) (V_{CB}=32Vdc,I_E=0) (V_{CB}=45Vdc,I_E=0)	BD433 BD435 BD437	---	1.0	uAdc
I_{CEO}	Collector-Base Cutoff Current (V_{CE}=22Vdc,I_E=0) (V_{CE}=32Vdc,I_E=0) (V_{CE}=45Vdc,I_E=0)	BD433 BD435 BD437	---	10	uAdc
I_{EBO}	Emitter-Base Cutoff Current (V_{EB}=5.0Vdc, I_C=0)		---	1.0	uAdc

Notes: 1. High Temperature Solder Exemption Applied, see EU Directive Annex Notes 7.

TO-126



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	0.291	0.307	7.40	7.80	
B	0.417	0.433	10.60	11.00	
C	0.602	0.618	15.30	15.70	
D	0.154	0.161	3.90	4.10	
E	0.118	0.126	3.00	3.20	
F	0.026	0.034	0.66	0.86	
G	0.046	0.054	1.17	1.37	
J	0.090TYP		2.290TYP		
K	0.098	0.114	2.50	2.90	
L	0.083	0.091	2.10	2.30	
M	0.000	0.012	0.00	0.30	
N	0.043	0.059	1.10	1.50	
Q	0.018	0.024	0.45	0.60	

ON CHARACTERISTICS

h_{FE-1}	DC Current Gain (I_C=500mAdc, V_{CE}=1.0Vdc)		85	---	---
h_{FE-2}	DC Current Gain (I_C=10mAdc, V_{CE}=5.0Vdc)	BD433/BD435 BD437	40 30	--- ---	---
h_{FE-3}	DC Current Gain (I_C=2Adc, V_{CE}=1.0Vdc)	BD433/BD435 BD437	50 40	--- ---	----
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage (I_C=2.0Adc, I_B=0.2Adc)	BD433/BD435 BD437	0.5 0.6	--- ---	Vdc
V_{BE}	Base-Emitter Voltage (V_{CE}=1.0Vdc,I_C=2.0Adc)	BD433/BD435 BD437	1.1 1.2	--- ---	Vdc
f_T	Transition Frequency (I_C=250mAdc, V_{CE}=1.0Vdc)		3.0	---	MHz

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Ordering Information :

Device	Packing
Part Number-BP	Bulk;1Kpcs/Box

Note : Adding "-HF" suffix for halogen free, eg. Part Number-BP-HF

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