BC846BPN

DUAL SURFACE MOUNT NPN/PNP TRANSISTORS (COMPLIMENTARY)

This device contains two electrically-isolated complimentary pair (NPN and PNP)general-purpose transistors. This device is ideal for portable applications where board space is at a premium.

VOLTAGE	65 Volts	POWER	225 mWatts

FEATURES

- General purpose amplifier applications
- Collector current Ic = 100mA
- Lead free in comply with EU RoHS 2002/95/EC directives.
- Green molding compound as per IEC61249 Std. . (Halogen Free)

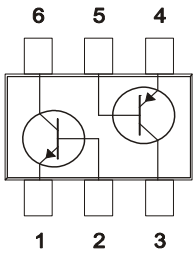
MECHANICAL DATA

Case: SOT-363, Plastic

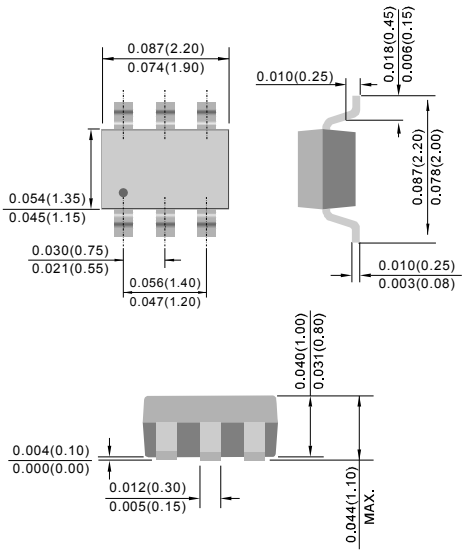
Terminals: Solderable per MIL-STD-750, Method 2026

Approx. Weight: 0.006 gram

Marking :46P



SOT-363 Unit : inch(mm)



ABSOLUTE RATINGS

NPN

Parameter	Symbol	Value	Units
Collector - Emitter Voltage	V_{CEO}	65	V
Collector - Base Voltage	V_{CBO}	80	V
Emitter - Base Voltage	V_{EBO}	6.0	V
Collector Current - Continuous	I_C	100	mA

PNP

Parameter	Symbol	Value	Units
Collector - Emitter Voltage	V_{CEO}	-65	V
Collector - Base Voltage	V_{CBO}	-80	V
Emitter - Base Voltage	V_{EBO}	-5.0	V
Collector Current - Continuous	I_C	-100	mA

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THERMAL CHARACTERISTICS

Parameter	Symbol	Value	Units
Max .Total Power Dissipation	P_{TOT}	225	mW
Junction Temperature range	T_J	-55 to 150	°C
Storage Temperature range	T_{STG}	-55 to 150	°C

ELECTRICAL CHARACTERISTICS

NPN

Parameter	Symbol	Test Condition	MIN.	TYP.	MAX.	Units
Collector - Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=10mA	65	-	-	V
Collector - Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=10uA,V_{EB}=0	80	-	-	V
Emitter - Base Breakdown Voltage	$V_{(BR)EBO}$	I_E=1.0uA	6.0	-	-	V
Collector-Base Cutoff Current	I_{CBO}	V_{CB}=30V, I_E=0	-	-	15	nA
DC Current Gain	h_{FE}	I_C=2.0mA, V_{CE}=5V	200	-	450	-
Collector - Emitter Saturation Voltage	$V_{CE(SAT)}$	I_C=10mA, I_B=0.5mA I_C=100mA, I_B=5.0mA	-	-	0.25 0.6	V
Base - Emitter Saturation Voltage	$V_{BE(SAT)}$	I_C=10mA, I_B=0.5mA	0.6	-	0.9	V
Gain-Bandwidth Product	f_T	V_{CE}=5V, I_C=10mA f=100MHz	100	-	-	MHz

PNP

Parameter	Symbol	Test Condition	MIN.	TYP.	MAX.	Units
Collector - Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=-10mA	-65	-	-	V
Collector - Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=-10uA,V_{EB}=0	-80	-	-	V
Emitter - Base Breakdown Voltage	$V_{(BR)EBO}$	I_E=-1.0uA	-5.0	-	-	V
Collector-Base Cutoff Current	I_{CBO}	V_{CB}=-30V, I_E=0	-	-	-15	nA
DC Current Gain	h_{FE}	I_C=-2.0mA, V_{CE}=-5V	220	-	475	-
Collector - Emitter Saturation Voltage	$V_{CE(SAT)}$	I_C=-10mA, I_B=-0.5mA I_C=-100mA, I_B=-5.0mA	-	-	-0.3 -0.65	V
Base - Emitter Saturation Voltage	$V_{BE(SAT)}$	I_C=-10mA, I_B=-0.5mA	-0.6	-	-0.9	V
Gain-Bandwidth Product	f_T	V_{CE}=-5V, I_C=-10mA f=100MHz	100	-	-	MHz

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NPN ELECTRICAL CHARACTERISTICS CURVE

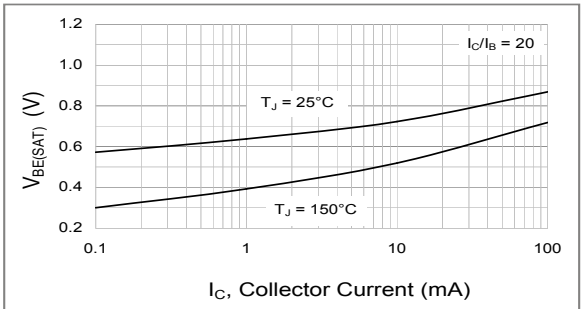

Fig.1 Base-Emitter Saturation Voltage

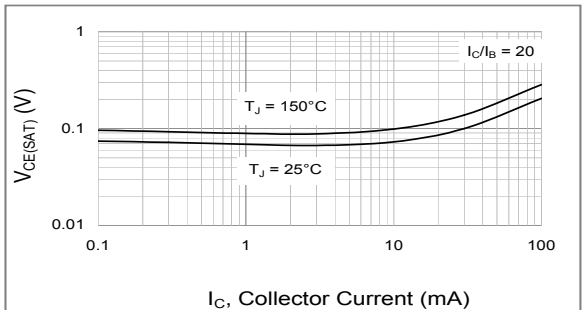

Fig.2 Collector-Emitter Saturation Voltage

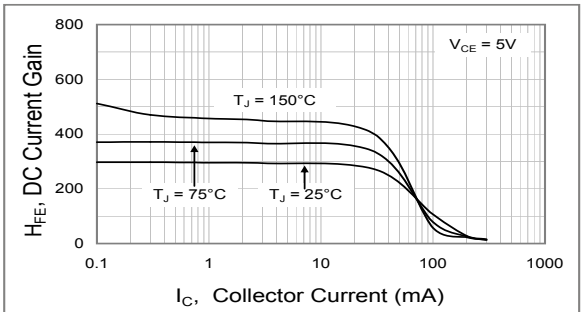

Fig.3 DC Current Gain

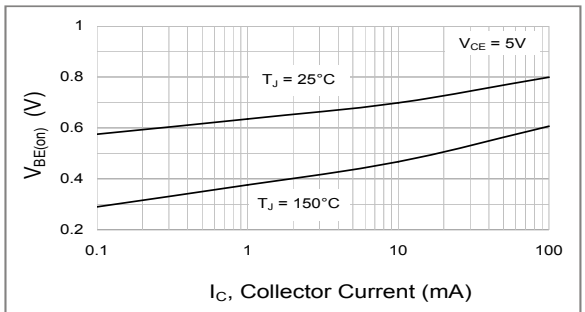

Fig.4 Base-Emitter Voltage

PNP ELECTRICAL CHARACTERISTICS CURVE

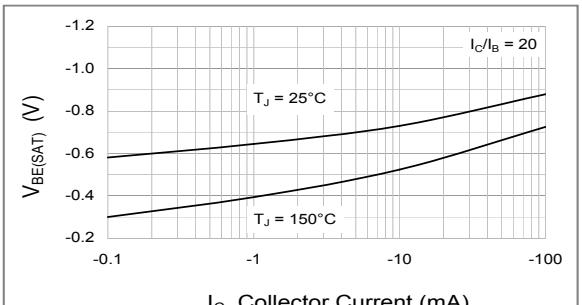

Fig.1 Base-Emitter Saturation Voltage

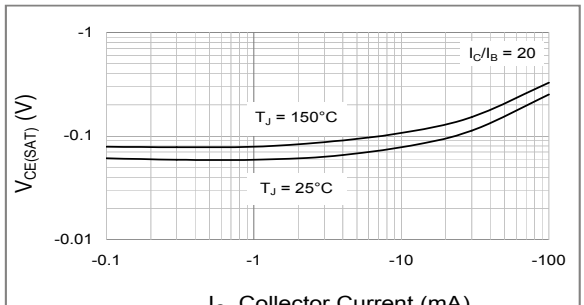

Fig.2 Collector-Emitter Saturation Voltage

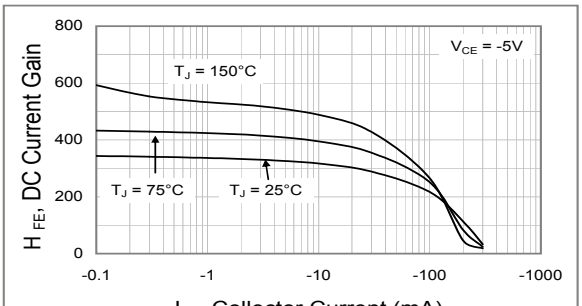

Fig.3 DC Current Gain

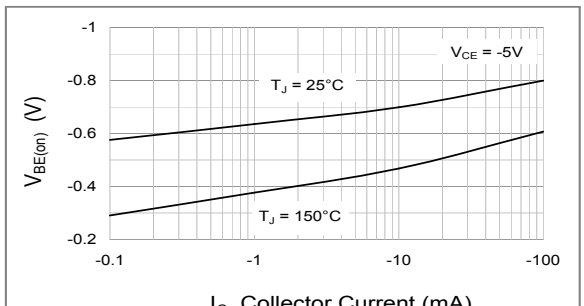

Fig.4 Base-Emitter Voltage

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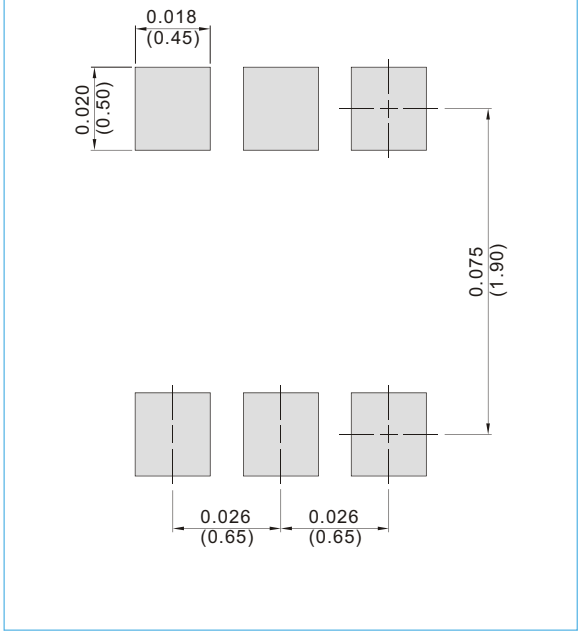
MOUNTING PAD LAYOUT

SOT-363 Unit : inch(mm)



ORDER INFORMATION

- Packing information

  T/R - 10K per 13" plastic Reel

  T/R - 3K per 7” plastic Reel

BC846BPN

Part No_packing code_Version

BC846BPN_R1_00001
BC846BPN_R2_00001

For example :

RB500V-40_R2_00001

- Part No.
- Serial number
- Version code means HF
- Packing size code means 13"
- Packing type means T/R

Packing Code XX				Version Code XXXXX		
Packing type	1st Code	Packing size code	2nd Code	HF or RoHS	1st Code	2nd~5th Code
Tape and Ammunition Box (T/B)	A	N/A	0	HF	0	serial number
Tape and Reel (T/R)	R	7"	1	RoHS	1	serial number
Bulk Packing (B/P)	B	13"	2			
Tube Packing (T/P)	T	26mm	X			
Tape and Reel (Right Oriented) (TRR)	S	52mm	Y			
Tape and Reel (Left Oriented) (TRL)	L	PANASERT T/B CATHODE UP (PBCU)	U			
FORMING	F	PANASERT T/B CATHODE DOWN (PBCD)	D			

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