



BC846AS

NPN GENERAL PURPOSE TRANSISTORS

VOLTAGE 65 Volts **CURRENT** 150 mWatts

SOT-363 Unit: inch (mm)

FEATURES

- General purpose amplifier applications
- NPN epitaxial silicon, planar design
- Collector current IC = 100mA
- In compliance with EU RoHS 2002/95/EC directives

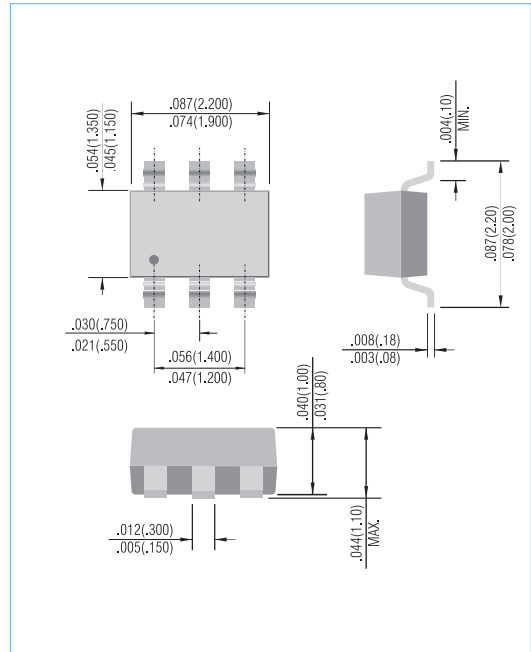
MECHANICAL DATA

Case : SOT-363, Plastic

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

Approx. Weight: 0.006 gram

Marking : 46A



ABSOLUTE RATINGS

PARAMETER	Symbol	Value	Units
Collector - Emitter Voltage	V _{CEO}	65	V
Collector - Base Voltage	V _{CB0}	80	V
Emitter - Base Voltage	V _{EBO}	6.0	V
Collector Current - Continuous	I _c	100	mA

THERMAL CHARACTERISTICS

PARAMETER	Symbol	Value	Units
Max Power Dissipation (Note 1)	P _{TOT}	150	mW
Thermal Resistance , Junction to Ambient	R _{θJA}	833	°C/W
Junction Temperature	T _J	-55 to 150	°C
Storage Temperature	T _{STG}	-55 to 150	°C

Note 1: Transistor mounted on FR-4 board 70 x 60 x 1mm.



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ELECTRICAL CHARACTERISTICS

PARAMETER	Symbol	Test Condition	MIN.	TYP.	MAX.	Units
Collector - Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=10mA, I_B=0$	65	-	-	V
Collector - Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=10\mu A, I_E=0$	80	-	-	V
Emitter - Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=1\mu A, I_C=0$	6.0	-	-	V
Collector-Base Cutoff Current	I_{CBO}	$V_{CB}=30V, I_E=0$	-	-	15	nA
DC Current Gain	h_{FE}	$I_C=10\mu A, V_{CE}=5V$	-	140	-	-
DC Current Gain	h_{FE}	$I_C=2.0mA, V_{CE}=5V$	110	180	220	-
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	$V_{BE(SAT)}$	$I_C=10mA, I_B=0.5mA$ $I_C=100mA, I_B=5.0mA$	-	0.7 0.9	-	V
Base - Emitter Voltage	$V_{BE(ON)}$	$I_C=2mA, V_{CE}=5.0V$ $I_C=10mA, V_{CE}=5.0V$	0.58 -	0.66 -	0.70 0.77	V
Collector - Base Capacitance	C_{CBO}	$V_{CB}=1V, I_E=0, f=1MH$	-	-	4.5	pF



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ELECTRICAL CHARACTERISTICS CURVE

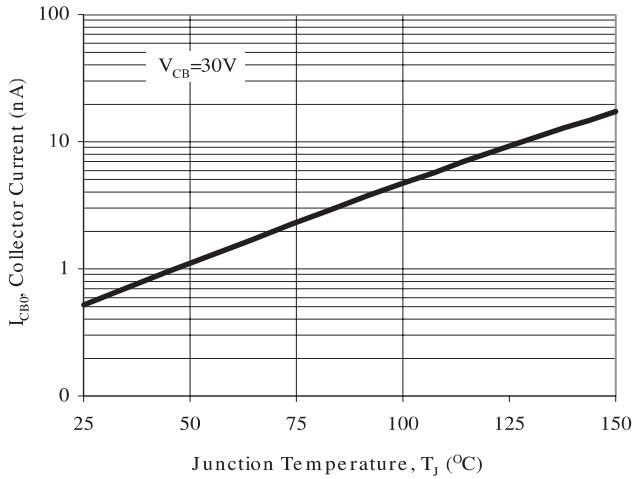


Fig. 1. Typical I_{CBO} vs. Junction Temperature

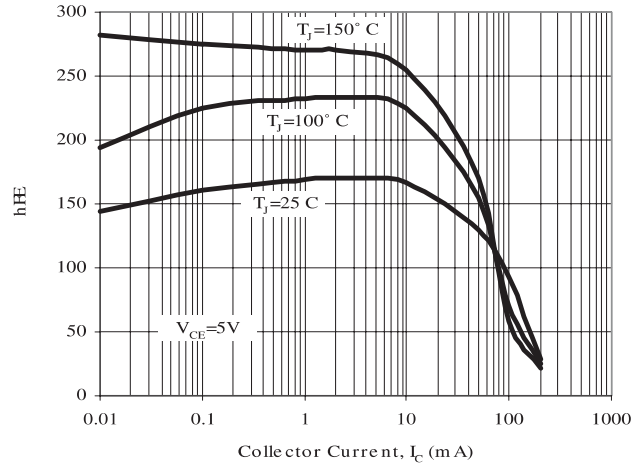


Fig. 2. Typical h_{FE} vs. Collector Current

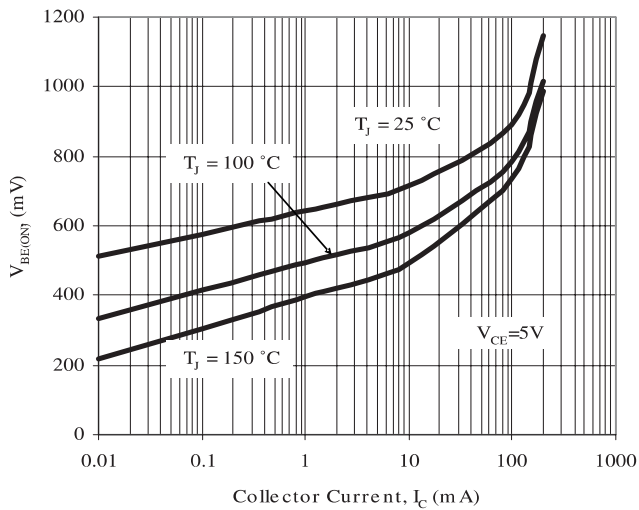


Fig. 3. Typical $V_{BE(ON)}$ vs. Collector Current

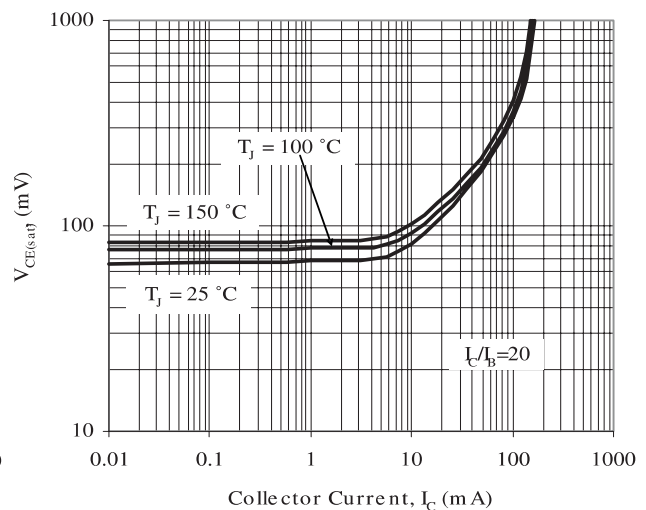


Fig. 4. Typical $V_{CE(SAT)}$ vs. Collector Current

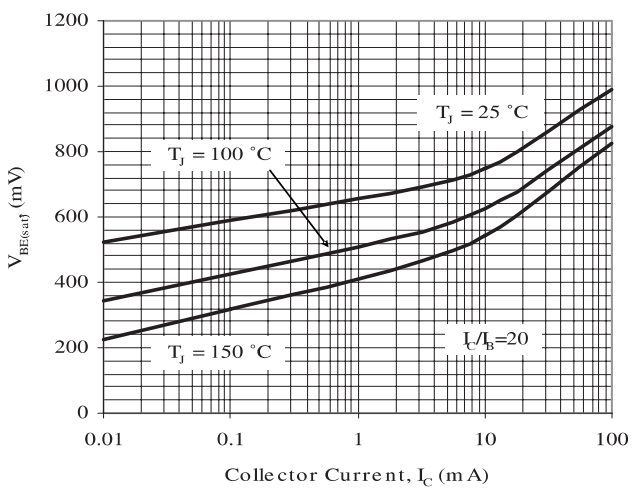


Fig. 5. Typical $V_{BE(SAT)}$ vs. Collector Current

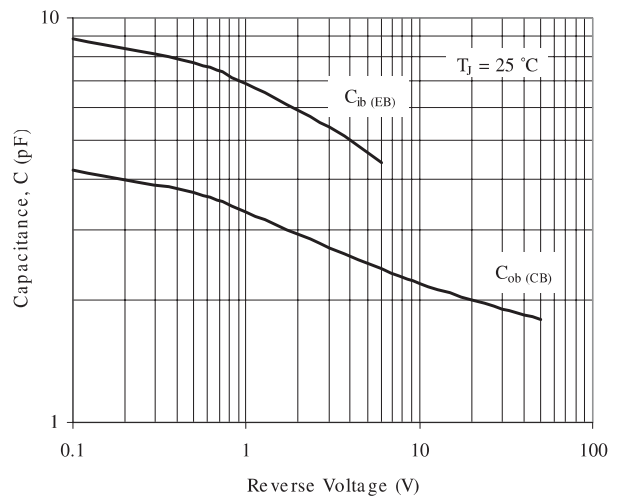
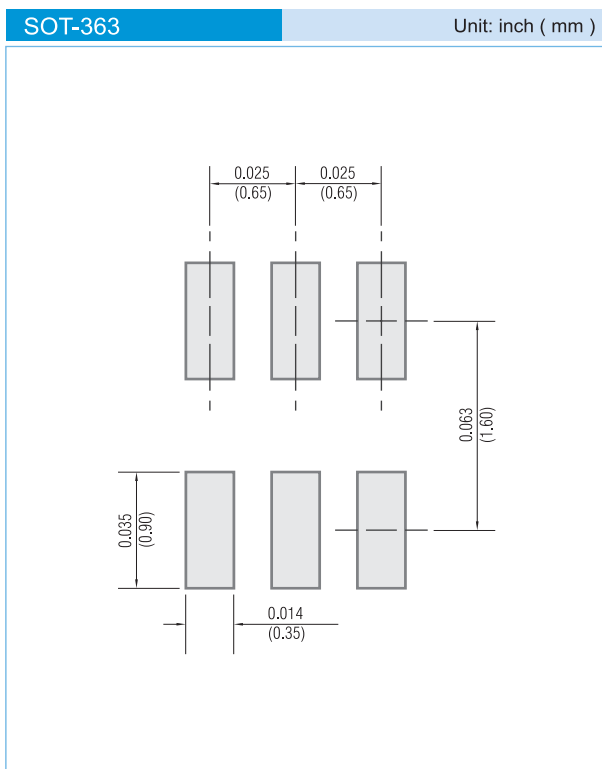


Fig. 6. Typical Capacitances vs. Reverse Voltage



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MOUNTING PAD LAYOUT



ORDER INFORMATION

- Packing information
 - T/R - 10K per 13" plastic Reel
 - T/R - 3K per 7" plastic Reel

LEGAL STATEMENT

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