



BC857CS-AU

GENERAL PURPOSE TRANSISTORS

VOLTAGE	45 Volts	POWER	150 mW
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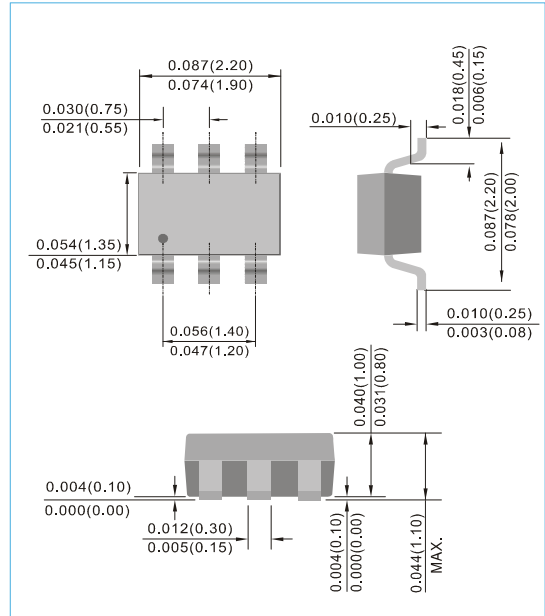
SOT-363 Unit : inch(mm)

FEATURES

- General Purpose Amplifier Applications
- Collector Current IC = -100mA
- Acquire quality system certificate : TS16949
- AEC-Q101 qualified
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

MECHANICAL DATA

Case : SOT-363
 Terminals : Solderable per MIL-STD-750,Method 2026
 Approx Weight : 0.00021 ounce, 0.006 gram
 Marking : 57C



ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	VALUE	UNITS
Collector-Emitter Voltage	V _{CEO}	45	V
Collector-Base Voltage	V _{CBO}	50	V
Emitter-Base Voltage	V _{EBO}	5	V
Collector Current-Continuous	I _C	100	mA
Max Power Dissipation (Note 1)	P _{TOT}	225	mW
Operating Junction and Storage Temperature Range	T _J , T _{STG}	-55 to +150	°C

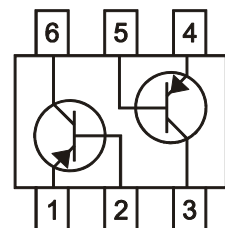


Fig.53(TOP VIEW)



BC857CS-AU

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	VALUE	UNITS
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556	$^{\circ}\text{C}/\text{W}$

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

ELECTRICAL CHARACTERISTICS ($T_J=25^{\circ}\text{C}$, unless otherwise noted)

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT
Collector-Emitter Breakdown Voltage ($I_C=10\text{mA}, I_B=0$)	$V_{(BR)CEO}$	45	-	-	V
Collector-Base Breakdown Voltage ($I_C=10\mu\text{A}, I_B=0$)	$V_{(BR)CBO}$	50	-	-	V
Emitter-Base Breakdown Voltage ($I_E=1\mu\text{A}, I_C=0$)	$V_{(BR)EBO}$	5.0	-	-	V
Emitter-Base Cutoff Current ($V_{EB}=5\text{V}$)	I_{EBO}	-	-	100	nA
Collector-Base Cutoff Current ($V_{CE}=30\text{V}, I_E=0$) $T_J=150^{\circ}\text{C}$	I_{CBO}	-	-	15 4.0	nA μA
DC Current Gain ($I_C=10\mu\text{A}, V_{CE}=5\text{V}$) ($I_C=2.0\text{mA}, V_{CE}=5\text{V}$)	h_{FE}	- 420	270 520	- 800	-
Collector-Emitter Saturation Voltage ($I_C=10\text{mA}, I_B=0.5\text{mA}$) ($I_C=100\text{mA}, I_B=5.0\text{mA}$)	$V_{CE(SAT)}$	- -	- -	0.3 0.65	V
Base-Emitter Saturation Voltage ($I_C=10\text{mA}, I_B=0.5\text{mA}$) ($I_C=100\text{mA}, I_B=5.0\text{mA}$)	$V_{BE(SAT)}$	- -	0.7 0.9	- -	V
Base-Emitter On Voltage ($I_C=2.0\text{mA}, V_{CE}=5.0\text{V}$) ($I_C=10\text{mA}, V_{CE}=5.0\text{V}$)	$V_{BE(ON)}$	0.6 -	- -	0.75 0.82	V
Collector-Base Capacitance ($V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$)	C_{CB}	-	-	4.5	pF
Current-Gain-Bandwidth Product ($I_C=10\text{mA}, V_{CE}=5.0\text{V}, f=100\text{MHz}$)	F_T	-	200	-	MHz



BC857CS-AU

ELECTRICAL CHARACTERISTICS CURVES

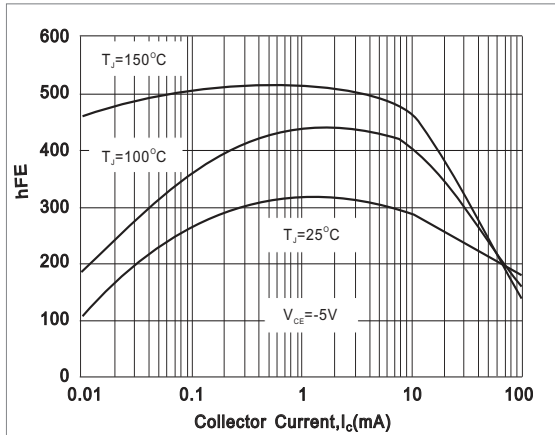


Fig.1-TYPICAL h_{FE} vs. Collector Current

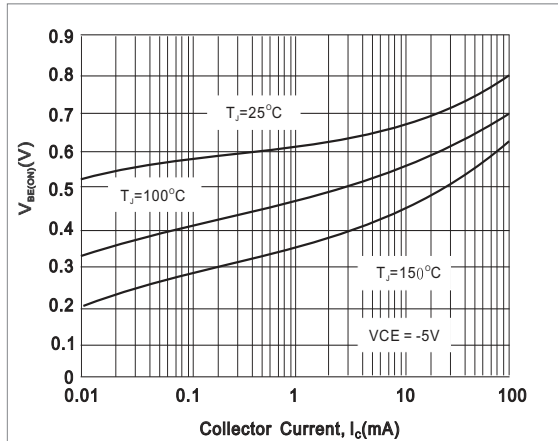


Fig.2-TYPICAL $V_{BE(ON)}$ vs. Collector Current

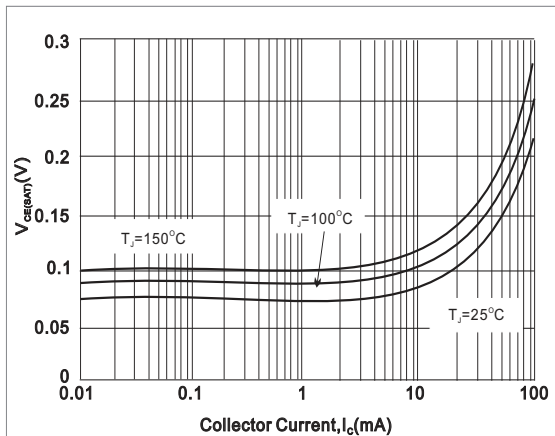


Fig.3-TYPICAL $V_{CE(SAT)}$ vs. Collector Current

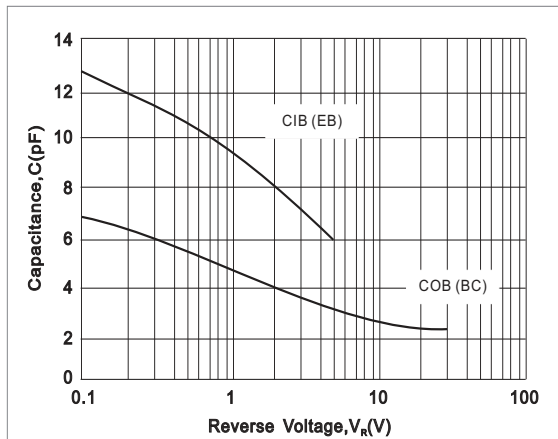


Fig.4-TYPICAL CAPACITANCES vs. REVERSE VOLTAGE

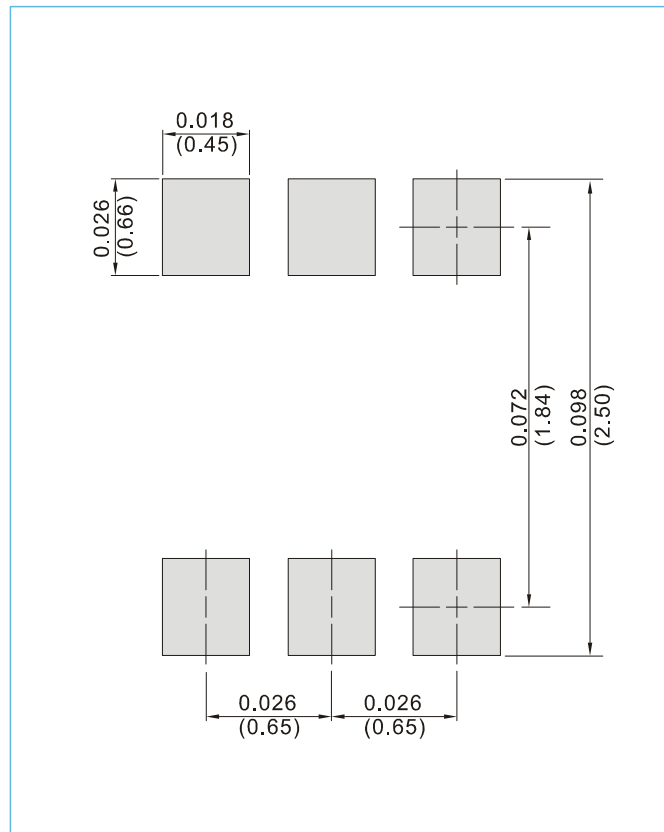


BC857CS-AU

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



BC857CS-AU

Part No_packing code_Version

BC857CS-AU_R1_000A1

BC857CS-AU_R2_000A1

For example :

RB500V-40_R2_00001



Packing Code XX				Version Code XXXXX		
Packing type	1 st Code	Packing size code	2 nd Code	HF or RoHS	1 st Code	2 nd ~5 th 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			



BC857CS-AU

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