BC847CS / BC857CS

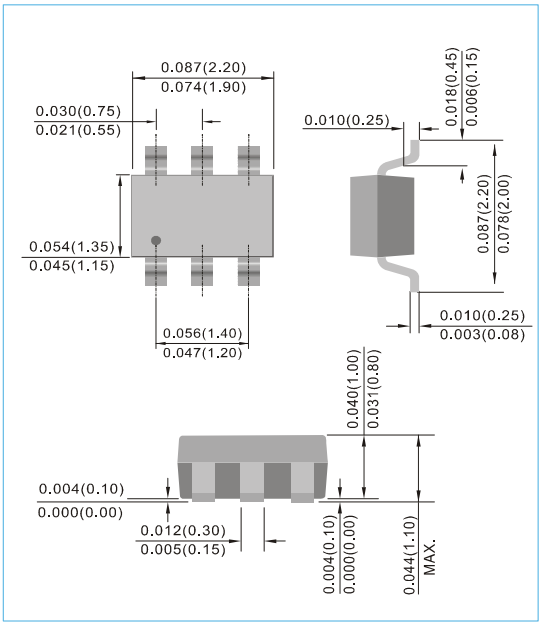
GENERAL PURPOSE TRANSISTORS

VOLTAGE 45 Volts **POWER** 150 mW

FEATURES

- General Purpose Amplifier Applications
- Collector Current IC = -100mA
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

SOT-363 Unit : inch(mm)



MECHANICAL DATA

Case : SOT-363

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

Approx Weight : 0.00021 ounce, 0.006 gram

Marking : BC847CS=47C

BC857CS=57C

ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	BC847CS	BC857CS	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
Circuit Figure		Fig.54	Fig.53	

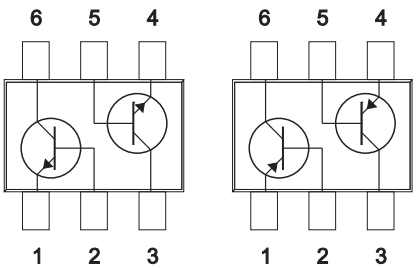


Fig.54

Fig.53

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THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	CALUE	UNITS
Thermal Resistance, Junction to Ambient	$R_{\Theta JA}$	556	°C/W

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

ELECTRICAL CHARACTERISTICS (T_J=25°C,unless otherwise noted)

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

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ELECTRICAL CHARACTERISTICS CURVES

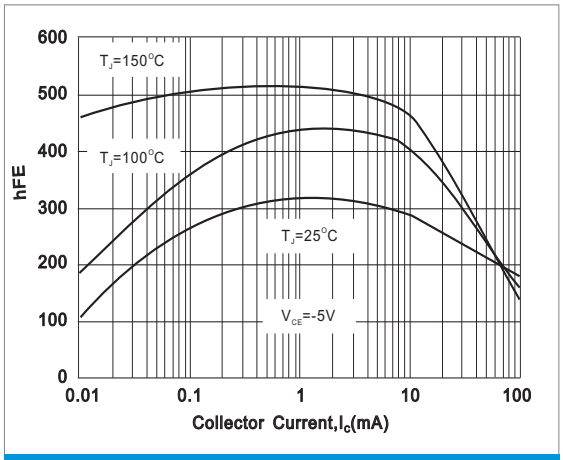

Fig.1- TYPICAL h_{FE} vs. Collector Current

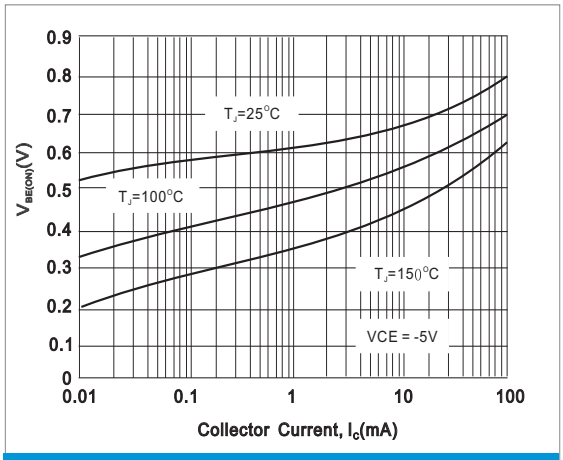

Fig.2- TYPICAL $V_{BE(ON)}$ vs. Collector Current

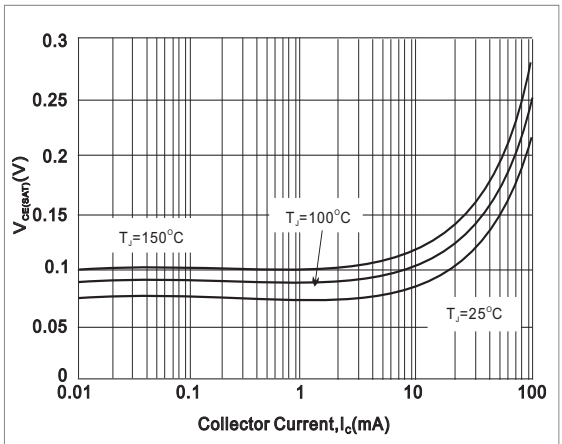

Fig.3- TYPICAL $V_{CE(SAT)}$ vs. Collector Current

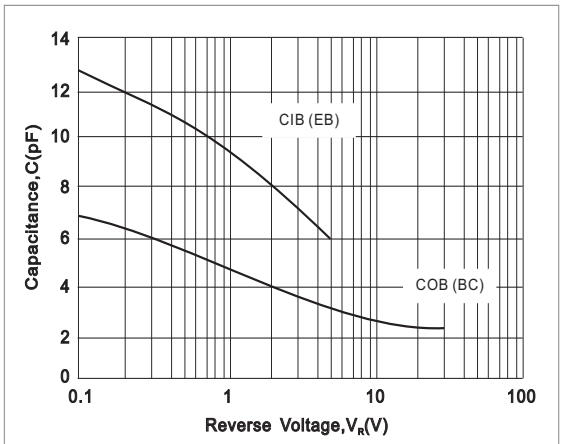

Fig.4- TYPICAL CAPACITANCES vs. REVERSE VOLTAGE

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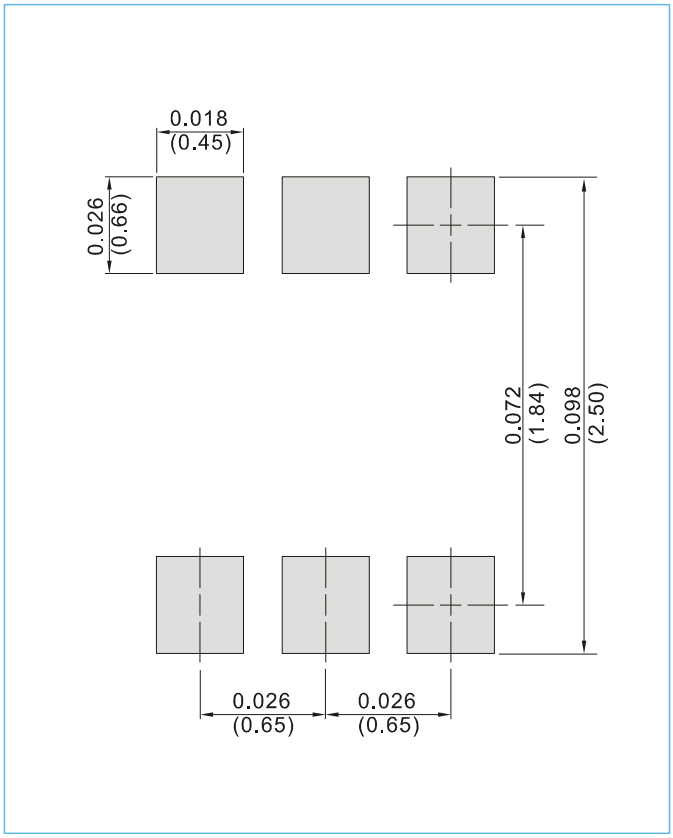
MOUNTING PAD LAYOUT

SOT-363 Unit : inch(mm)



ORDER INFORMATION

- Packing information

  T/R - 10K per 13" plastic Reel

  T/R - 3K per 7" plastic Reel

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Part No_packing code_Version

BC847CS_R1_00001

BC847CS_R2_00001

For example :

RB500V-40_R2_00001

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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