

**SEBC847BU/SEBC847CU**

**NPN General Purpose Transistor**

Revision:A

**Features**

- $BV_{CEO} < 45V$  ( $I_C=1mA$ )
- Complements the SEBC857BU.

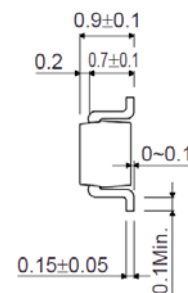
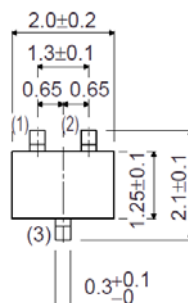
**Applications**

- Inverter, Interface, Driver

**Construction**

- NPN epitaxial planar silicon transistor

**External dimensions** (Units : mm)



(1) E  
(2) B  
(3) C

**Absolute maximum ratings (Ta=25°C)**

Parameter	Symbol	Limits	Unit
Collector-base voltage	$V_{CBO}$	50	V
Collector-emitter voltage	$V_{CEO}$	45	V
Emitter-base voltage	$V_{EBO}$	6	V
Collector current	$I_C$	0.1	A
Collector power dissipation	$P_C$	0.2	W*
		0.35	
Junction temperature	$T_J$	150	°C
Storage temperature	$T_{stg}$	-55 to +150	°C

\*When mounted on a 7×5×0.6mm ceramic board.

**Electrical characteristics (Ta=25°C)**

Parameter	Symbol	Conditions	Min..	Typ.	Max.	Unit
Collector-base breakdown voltage	$BV_{CBO}$	$I_C=50\mu A$	50	-		V
Collector-emitter breakdown voltage	$BV_{CEO}$	$I_C=1mA$	45	-	-	V
Emitter-base breakdown voltage	$BV_{EBO}$	$I_C=50\mu A$	6			V
Collector cutoff current	$I_{CBO}$	$V_{CB}=30V$	-	-	15	nA
		$V_{CB}=30V, T_a=150^\circ C$			5	uA
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C/I_B=10mA/0.5mA$	-	-	0.25	V
		$I_C/I_B=100mA/5mA$			0.6	V
DC current transfer ratio	$h_{fe}$	$V_{CE}/I_C=5V/2mA$ SEBC847BU	200	-	450	-
		$V_{CE}/I_C=5V/2mA$ SEBC847CU	420		800	
Base-emitter saturation voltage	$V_{BE(on)}$	$V_{CE}/I_C=5V/-20mA$	0.58		0.77	V

## **SEBC847BU/SEBC847CU**

Transition frequency	$f_T$	$V_{CB}=5, I_E=20mA,$ $f=100MHz$	-	200	-	MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=-10V, I_E=0,$ $f=1MHz$		3		pF
Emitter input capacitance	$C_{ib}$	$V_{EB}=0.5V, I_C=0,$ $f=1MHz$		8		pF

### **Electrical characteristic curves**

The electrical characteristic curves for these products are the same as those of UMT222A, SST222A, MMST222A and PN222A.

The SINO-IC logo is a registered trademark of ShangHai Sino-IC Microelectronics Co., Ltd.

© 2005 SINO-IC – Printed in China – All rights reserved.

#### **SHANGHAI SINO-IC MICROELECTRONICS CO., LTD**

**Add:** Building 3, Room 3401-03, No.200 Zhangheng Road, ZhangJiang Hi-Tech Park, Pudong, Shanghai 201203, China

**Phone:** +86-21-33932402 33932403 33932405 33933508 33933608

**Fax:** +86-21-33932401

**Email:** [webmaster@sino-ic.com](mailto:webmaster@sino-ic.com)

**Website:** <http://www.sino-ic.com>