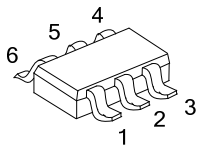
BC847BS

NPN SILICON TRANSISTOR

NPN GENERAL PURPOSE AMPLIFIER



SOT-363

■ DESCRIPTION

The UTC **BC847BS** is a dual NPN transistors; it uses UTC's advanced technology to provide customers high DC current gain, low power dissipation and low collector-emitter saturation voltage.

The UTC **BC847BS** is suitable for a high gain, low noise and general purpose amplifier.

■ FEATURES

* Low saturation voltage
* High DC current gain

■ ORDERING INFORMATION

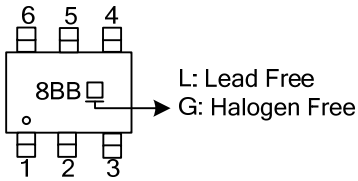
Ordering Number		Package	Pin Assignment						Packing
Lead Free	Halogen Free		1	2	3	4	5	6	
BC847BSL-AL6-R	BC847BSG-AL6-R	SOT-363	E1	B1	C2	E2	B2	C1	Tape Reel

Note: Pin Assignment: G: Gate D: Drain S: Source

BC847BSG-AL6-R

(1)Packing Type	(1) R: Tape Reel
(2)Package Type	(2) AL6: SOT-363
(3)Green Package	(3) G: Halogen Free and Lead Free, L: Lead Free

■ MARKING



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■ ABSOLUTE MAXIMUM RATINGS (T_A=25°C, unless otherwise noted)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V_{CES}	50	V
Collector-Emitter Voltage	V_{CEO}	45	V
Emitter-Base Voltage	V_{EBO}	6.0	V
Continuous Collector Current	I_C	100	mA
Power Dissipation	P_D	325	mW
Derate above 25°C		2.8	mW/°C
Junction Temperature	T_J	-55~+150	°C
Storage Temperature Range	T_{STG}	-55~+150	°C

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ THERMAL DATA

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient	θ_{JA}	357	°C/W

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV_{CES}	I_C=10μA, I_E=0	50			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	I_C=10mA, I_B=0	45			V
Emitter-Base Breakdown Voltage	BV_{EBO}	I_E=10μA, I_C=0	6.0			V
Collector Cut-Off Current	I_{CBO}	V_{CB}=30V			15	nA
		V_{CB}=30V, T_A=150°C			5.0	μA
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=10mA, I_B=0.5mA			0.25	V
		I_C=100mA, I_B=5.0mA			0.6	V
Base-Emitter Turn-On Voltage	$V_{BE(on)}$	I_C=2.0mA, V_{CE}=5.0V	0.58		0.70	V
		I_C=10mA, V_{CE}=5.0V			0.77	V
DC Current Gain	h_{FE}	I_C=2.0mA, V_{CE}=5.0V	200		450	
Transition Frequency	f_T	I_C=10mA, V_{CE}=5.0V, f=100MHz	100			MHz
Output Capacitance	C_{obo}	V_{CB}=10V, f=1.0MHz			4.5	pF
Noise Figure	NF	I_C=0.2mA, V_{CE}=5.0V, R_S=2.0kΩ, f=1.0kHz, BW=200Hz			10	dB