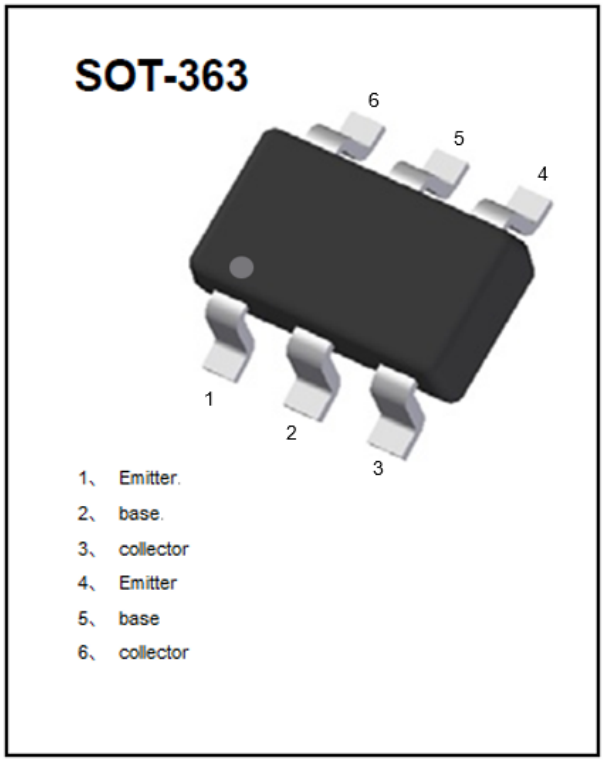
Dual NPN Small Signal Transistor



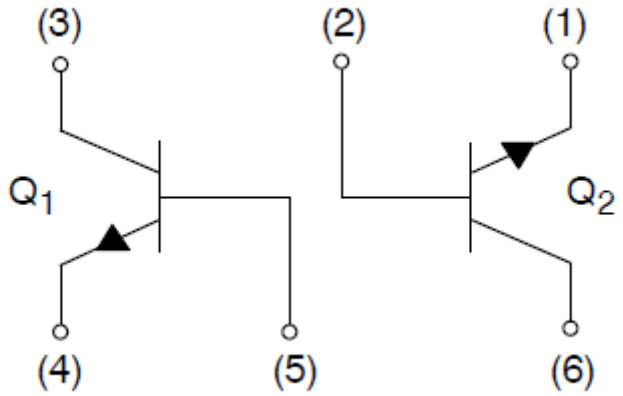
Features

- Epoxy meets UL-94 V-0 flammability rating
- Surface mount package ideally Suited for Automatic Insertion
- NPN

Mechanical Data

- **Package:** SOT-363
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Marking:**1C

■Equivalent circuit



■Maximum Ratings (Ta=25℃ Unless otherwise specified)

Q1&Q2-NPN

Item	Symbol	Unit	Conditions	Value
Collector-Base Voltage	VCBO	V	IC=10μA,IE=0	50
Collector-Emitter Voltage	VCEO	V	IC =10mA,IB=0	45
Emitter-Base Voltage	VEBO	V	IE=10μA,IC=0	6
Collector Current -Continuous	IC	mA		100
Total Device Dissipation	PC	mW		300
Junction Temperature	Tj	℃		150
Storage Temperature	TSTG	℃		-55 to +150

■Electrical Characteristics (Ta=25℃ unless otherwise specified)

Q1&Q2-NPN

Item	Symbol	Unit	Conditions	Min	TYP	Max
Collector-base breakdown voltage	$V_{(BR)CBO}$	V	IC=10μA,IE=0	50		
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	V	IC =10mA,IB=0	45		
Emitter-base breakdown voltage	$V_{(BR)EBO}$	V	IE=10μA,IC=0	6		
Collector cut-off current	I_{CBO}	nA	VCB=30V,IB=0			15
Collector cut-off current	I_{EBO}	nA	VEB=5V, IC=0			100
DC current gain	h_{FE}		VCE=5V,IC=2mA	200		450
Collector-emitter saturation voltage	$V_{CE(sat)}$	V	IC=10mA,IB=0.5mA			0.25
Collector-emitter saturation voltage	$V_{CE(sat)}$	V	IC=100mA,IB=5mA			0.65
Base-emitter saturation voltage	$V_{BE(sat)*}$	V	IC=10mA,IB=0.5mA		0.7	
Base-emitter saturation voltage	$V_{BE(sat)*}$	V	IC=100mA,IB=5mA		0.9	
Base-emitter Voltage	VBE	V	VCE=5V,IC=2mA	0.58	0.665	0.7
Transition frequency	Ft	MHz	VCE=5V,IC=10mA,f=100MHz		200	

■ Ordering Information (Example)

PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
BC847BS	F2	Approximate 0.009g	3000	30000	120000	7” reel

■ **Characteristics** (Typical)

Q1&Q2-NPN

Fig. 1 - Static Characteristics

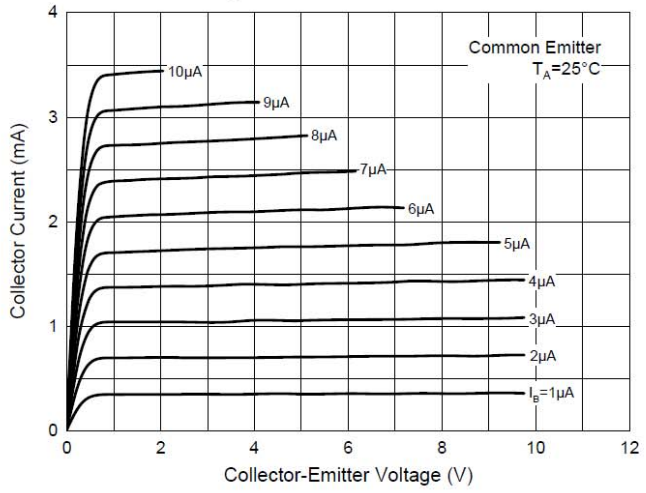


Fig. 2 - DC Current Gain Characteristics

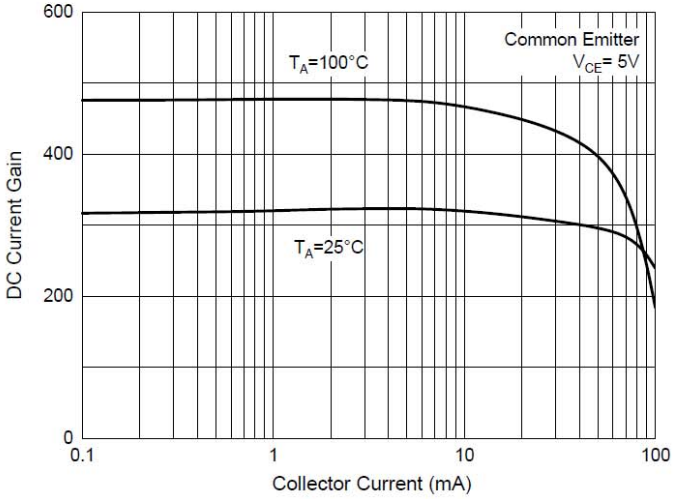


Fig. 3 - Collector-Emitter Saturation Voltage Characteristics

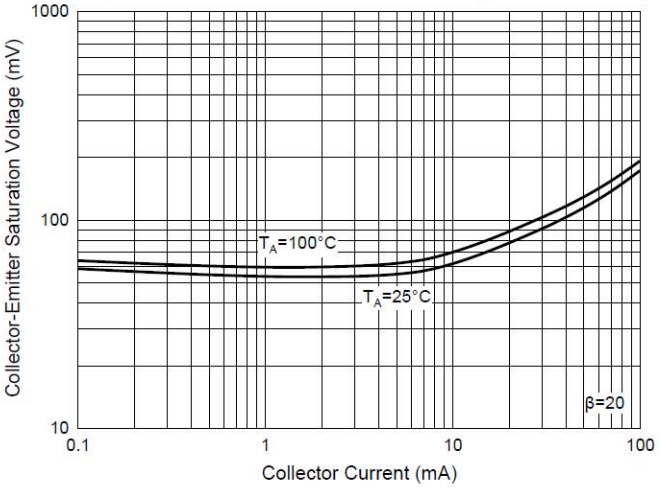


Fig. 4 - Base-Emitter Saturation Voltage Characteristics

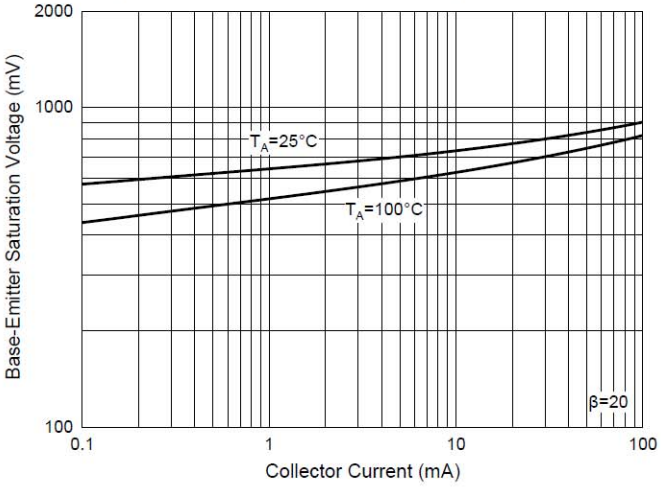


Fig. 5 - Base-Emitter Voltage Characteristics

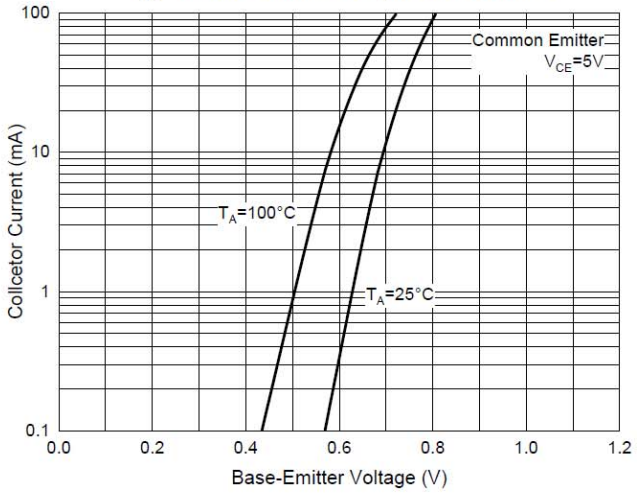
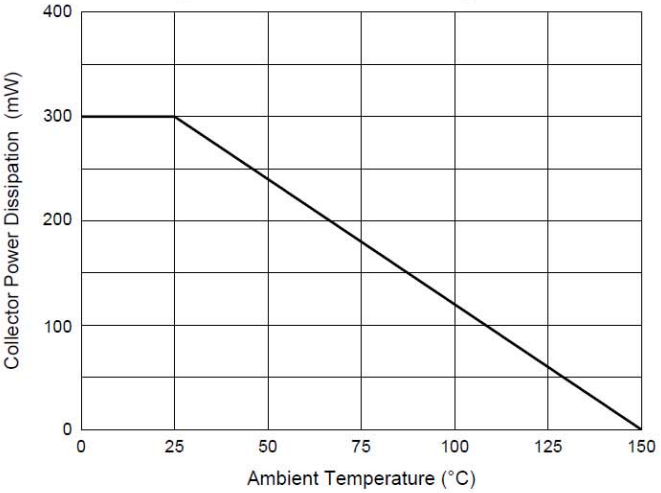
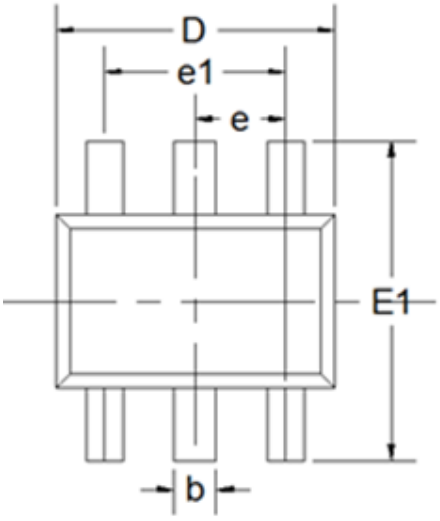


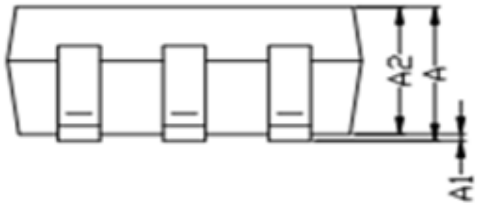
Fig. 6 - Collector Power Derating Curve

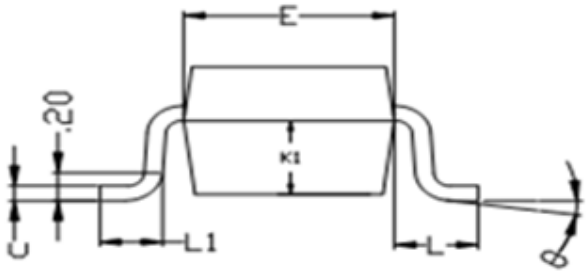


■SOT-363 Package Outline Dimensions

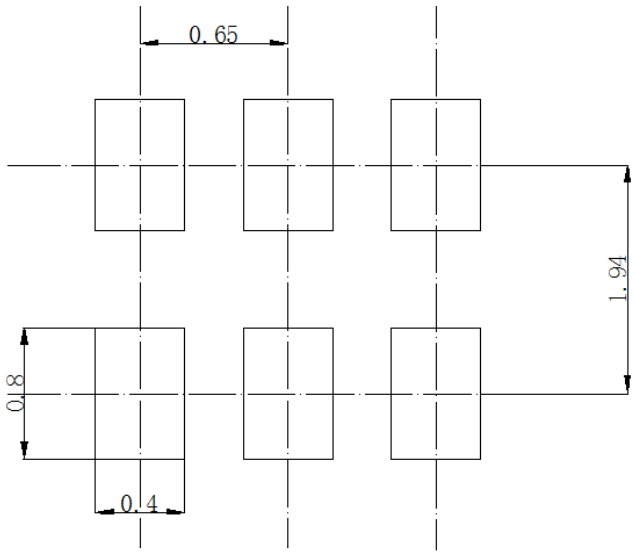


DIMENSIONS				
DIM	INCHES		MM	
	MIN	MAX	MIN	MAX
A	0.035	0.043	0.9	1.1
A1	0	0.004	0	0.1
A2	0.035	0.039	0.9	1
b	0.006	0.014	0.15	0.35
c	0.002	0.01	0.05	0.25
D	0.071	0.087	1.8	2.2
E	0.045	0.053	1.15	1.35
E1	0.085	0.096	2.15	2.45
e	0.026Typ		0.65Typ	
e1	0.047	0.055	1.2	1.4
L	0.021Typ		0.525Typ	
L1	0.01	0.018	0.26	0.46
θ	0°	8°	0°	8°





■SOT-363 Suggested Pad Layout



Unit：mm

Notice

All products, product specifications and data are subject to change without notice to improve reliability, function or design or otherwise. Information contained herein is intended to provide a product description only. No license, express or implied, to any intellectual property rights is granted by this document. Except as provided in STARSEA's terms and conditions of sale for such products, STARSEA assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of STARSEA products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.