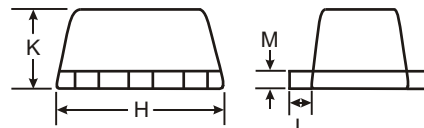
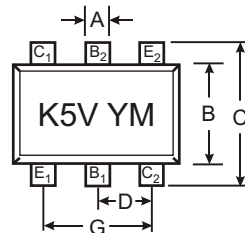


Features

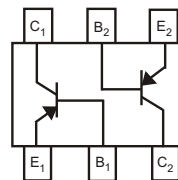
Epitaxial Die Construction
 Complementary NPN Types Available
 (BC847BV)
 Ultra-Small Surface Mount Package
Lead Free By Design/RoHS Compliant (Note 3)

Mechanical Data

Case: SOT-563
 Case Material: Molded Plastic. UL Flammability
 Classification Rating 94V-0
 Moisture sensitivity: Level 1 per J-STD-020C
 Terminal Connections: See Diagram
 Terminals: Finish - Matte Tin annealed over Alloy 42
 leadframe. Solderable per MIL-STD-202, Method 208
 Marking (See Page 2): K5V
 Ordering & Date Code Information: See Page 2
 Weight: 0.003 grams (approximate)



SEE NOTE 1



SOT-563			
Dim	Min	Max	Typ
A	0.15	0.30	0.25
B	1.10	1.25	1.20
C	1.55	1.70	1.60
D	0.50		
G	0.90	1.10	1.00
H	1.50	1.70	1.60
K	0.56	0.60	0.60
L	0.10	0.30	0.20
M	0.10	0.18	0.11
All Dimensions in mm			

Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	-50	V
Collector-Emitter Voltage	V_{CEO}	-45	V
Emitter-Base Voltage	V_{EBO}	-5.0	V
Collector Current	I_C	-100	mA
Power Dissipation (Note 2)	P_d	150	mW
Thermal Resistance, Junction to Ambient (Note 2)	R_{JA}	833	$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_j, T_{STG}	-55 to +150	$^\circ\text{C}$

- Notes:
- Package is non-polarized. Parts may be on reel in orientation illustrated, 180° rotated, or mixed (both ways).
 - Device mounted on FR-4 PCB, 1 inch x 0.85 inch x 0.062 inch; pad layout as shown on Diodes Inc. suggested pad layout document AP02001, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.
 - No purposefully added lead.

Electrical Characteristics @ T_A = 25°C unless otherwise specified

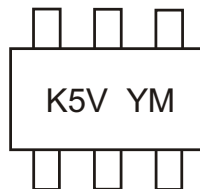
Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Collector-Base Breakdown Voltage (Note 4)	V _{(BR)CBO}	-50	—	—	V	I _C = 10 A, I _B = 0
Collector-Emitter Breakdown Voltage (Note 4)	V _{(BR)CEO}	-45	—	—	V	I _C = 10mA, I _B = 0
Emitter-Base Breakdown Voltage (Note 4)	V _{(BR)EBO}	-5	—	—	V	I _E = 1 A, I _C = 0
DC Current Gain (Note 4)	h _{FE}	220	290	475	—	V _{CE} = -5.0V, I _C = -2.0mA
Collector-Emitter Saturation Voltage (Note 4)	V _{CE(SAT)}	—	—	-100 -400	mV	I _C = -10mA, I _B = -0.5mA I _C = -100mA, I _B = -5.0mA
Base-Emitter Saturation Voltage (Note 4)	V _{BE(SAT)}	—	-700 -900	—	mV	I _C = -10mA, I _B = -0.5mA I _C = -100mA, I _B = -5.0mA
Base-Emitter Voltage (Note 4)	V _{BE(ON)}	-600 —	—	-750 -820	mV	V _{CE} = -5.0V, I _C = -2.0mA V _{CE} = -5.0V, I _C = -10mA
Collector-Cutoff Current (Note 4)	I _{CBO}	— —	— —	-15 -4.0	nA μA	V _{CB} = -30V V _{CB} = -30V, T _A = 150°C
Gain Bandwidth Product	f _T	100	—	—	MHz	V _{CE} = -5.0V, I _C = -10mA, f = 100MHz
Output Capacitance	C _{OB}	—	—	4.5	pF	V _{CB} = -10V, f = 1.0MHz
Noise Figure	NF	—	—	10	dB	I _C = -0.2mA, V _{CE} = -5.0Vdc, R _S = 2.0K, f = 1.0KHz, BW = 200Hz

Ordering Information (Note 5)

Device	Packaging	Shipping
BC857BV-7	SOT-563	3000/Tape & Reel

- Notes:
4. Short duration pulse test used to minimize self-heating effect.
 5. For Packaging Details: go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

Marking Information

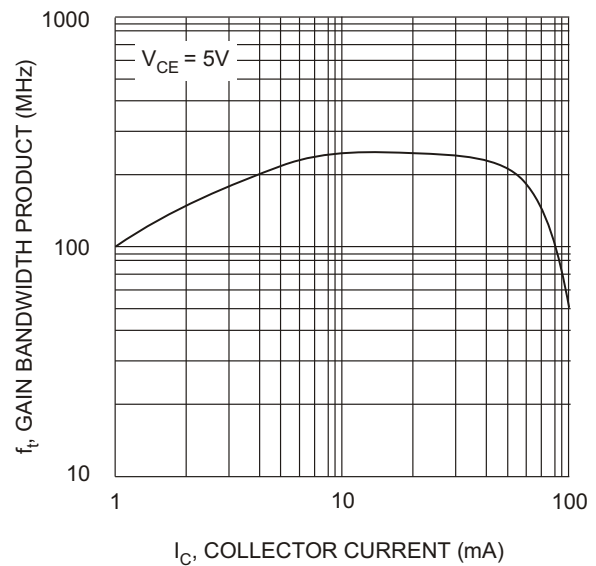
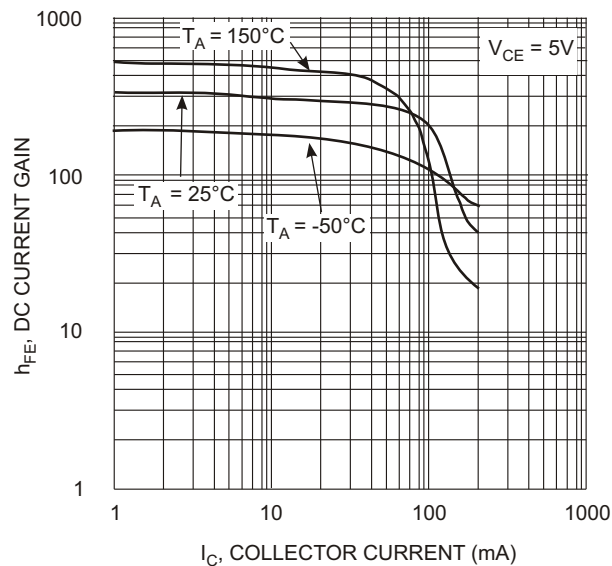
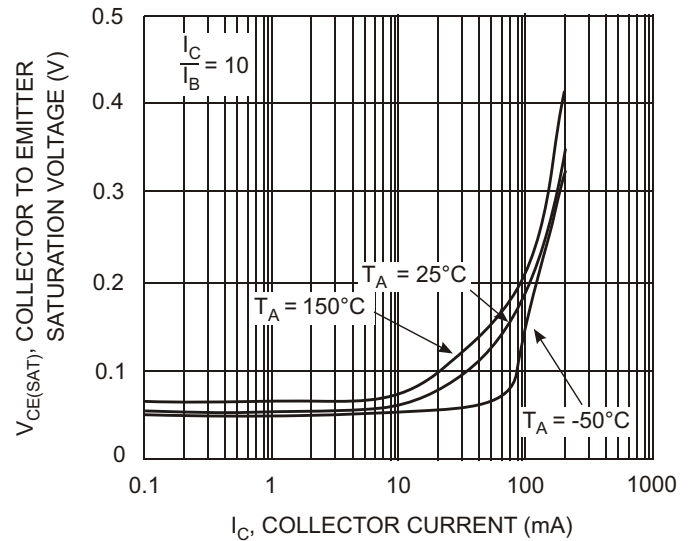
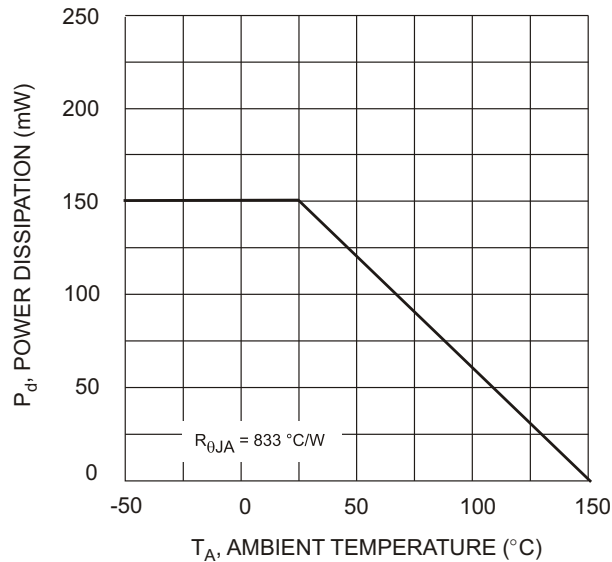


K5V = Product Type Marking Code
 YM = Date Code Marking
 Y = Year (ex: T = 2006)
 M = Month (ex: 9 = September)

Date Code Key

Year	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Code	P	R	S	T	U	V	W	X	Y	Z

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D



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