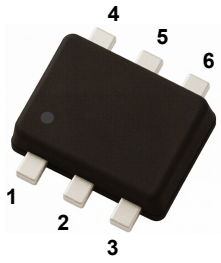
GOOD-ARK SEMICONDUCTOR

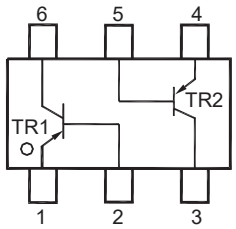
GSBC857xDE
Dual PNP Transistors

Features

- Dual PNP transistors in one single package
- Epitaxial die construction
- Ultra-small surface mount package



SOT-563



Schematic Diagram

Applications

For switching and amplifier applications

Absolute Maximum Ratings (T_A=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	-50	V
Collector Emitter Voltage	V_{CEO}	-45	V
Emitter Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-100	mA
Power Dissipation	P_{tot}	150	mW
Thermal Resistance from Junction Ambient[1]	$R_{\theta JA}$	833	℃/W
Operating and Storage Temperature Range	T_J, T_{stg}	-55 to +150	℃

Note:

1. Device mounted on FR-4 substrate PC board, with minimum recommended pad layout.

Electrical Characteristics (T_A=25°C unless otherwise noted)

Parameter		Symbol	Conditions	Min.	Max.	Unit
DC Current Gain	GSBC857ADE	h_{FE}	V_{CE}=-5V, I_C=-2mA	125	250	-
	GSBC857BDE			220	475	-
	GSBC857CDE			420	800	-
Collector Base Cutoff Current		I_{CBO}	V_{CB}=-30V	-	-15	nA
Emitter Base Cutoff Current		I_{EBO}	V_{EB}=-5V	-	-100	nA
Collector Base Breakdown Voltage		$V_{(BR)CBO}$	I_C=-10μA	-50	-	V
Collector Emitter Breakdown Voltage		$V_{(BR)CEO}$	I_C=-10mA	-45	-	V
Emitter Base Breakdown Voltage		$V_{(BR)EBO}$	I_E=-1μA	-5	-	V
Collector Emitter Saturation Voltage		$V_{CE(sat)}$	I_C=-10mA, I_B=-0.5mA	-	-100	mV
			I_C=-100mA, I_B=-5mA	-	-400	
Base Emitter On Voltage		$V_{BE(ON)}$	V_{CE}=-5V, I_C=-2mA	-600	-750	mV
			V_{CE}=-5V, I_C=-10mA	-	-820	
Gain Bandwidth Product		f_T	I_C=-10mA, V_{CE}=-5V, F=100MHz	100	-	MHz
Collector Output Capacitance		C_{ob}	V_{CB}=-10V, F=1MHz	-	4.5	pF

Electrical Characteristic Curves

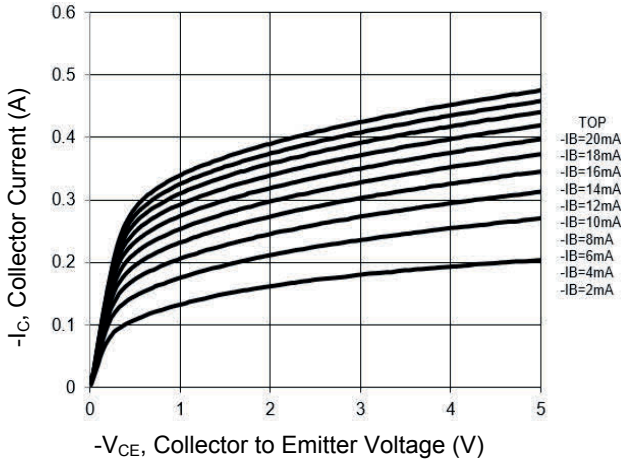


Figure 1. Output Characteristics Curve

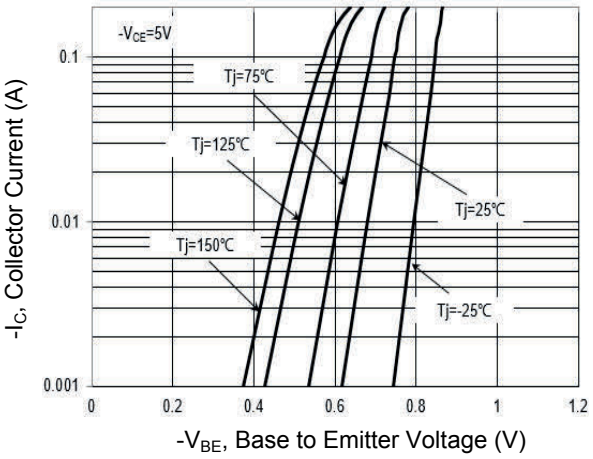


Figure 2. Collector Current vs. Base to Emitter Voltage

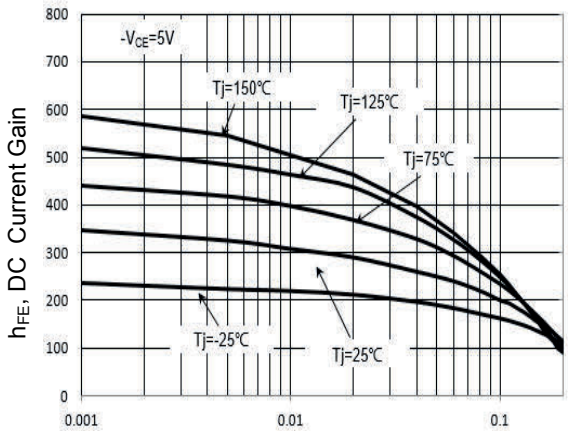


Figure 3. DC Current Gain vs. Collector Current

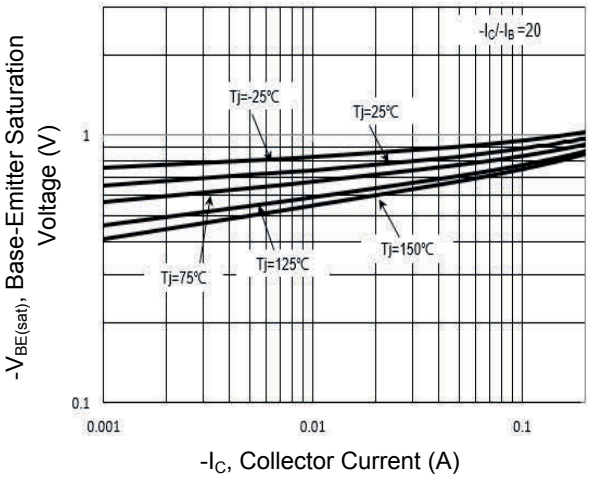


Figure 4. Base-Emitter Saturation Voltage vs. Collector Current

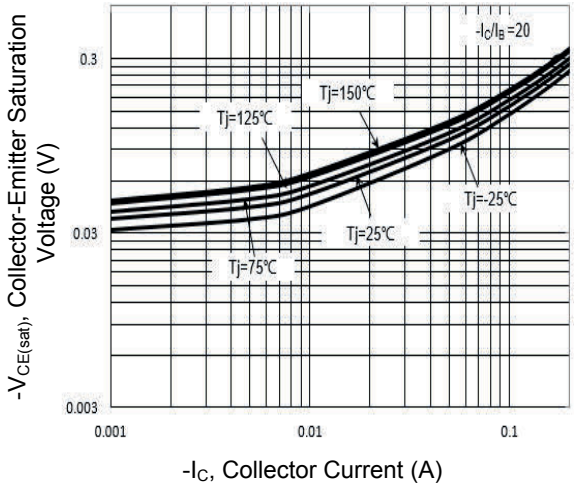


Figure 5. Collector-Emitter Saturation Voltage vs. Collector Current

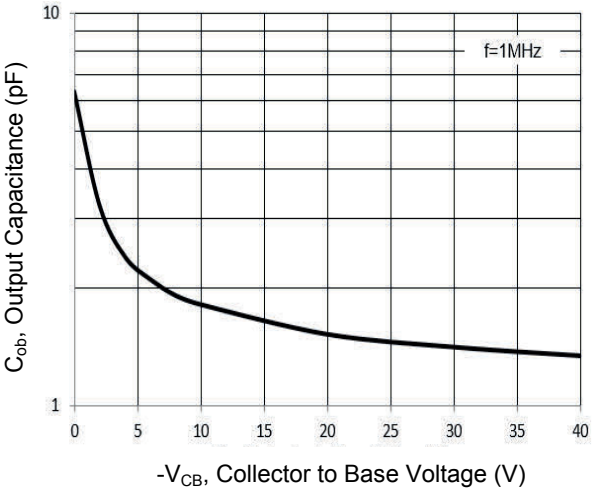


Figure 6. Output Capacitance

Electrical Characteristic Curves

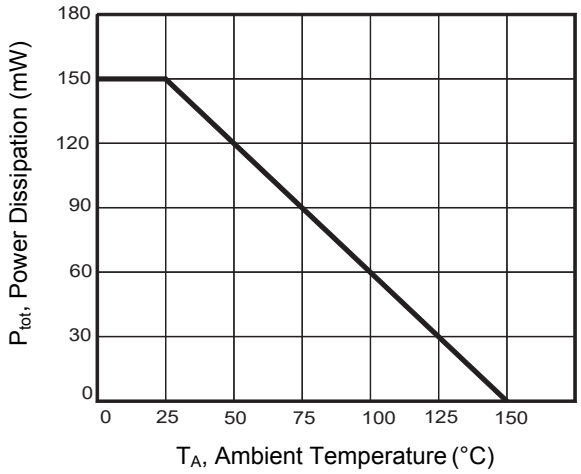
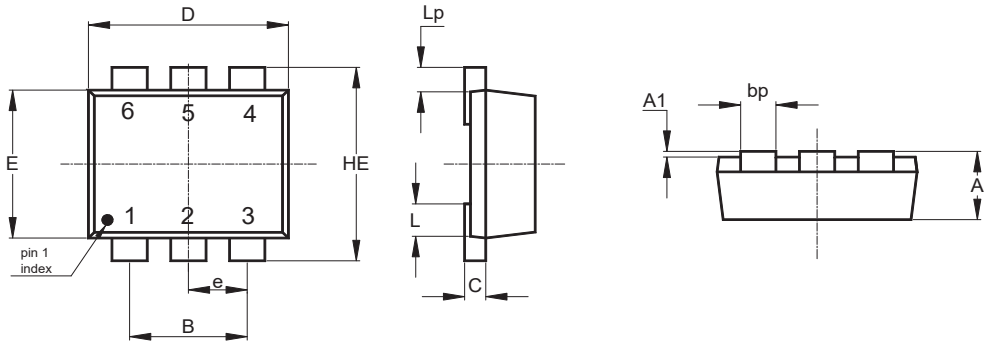


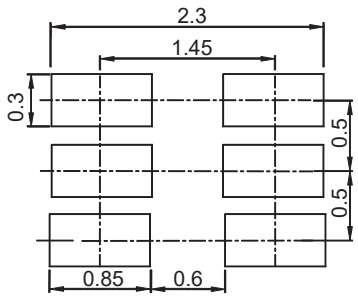
Figure 7. Power Derating Curve

Package Outline Dimensions (SOT-563)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.50	0.60	0.002	0.024
A1	0.00	0.05	0.000	0.002
B	1.00 Typ.		0.039 Typ.	
C	0.10	0.18	0.004	0.007
D	1.50	1.70	0.059	0.067
E	1.10	1.25	0.043	0.049
HE	1.55	1.70	0.061	0.067
e	0.50 Typ.		0.02 Typ.	
L	0.02	0.15	0.001	0.006
Lp	0.10	0.30	0.004	0.012
bp	0.15	0.30	0.006	0.012

Recommended Pad Layout



unit: mm

Order Information

Device	Package	Marking	Quantity	HSF Status
GSBC857ADE	SOT-563	3A	4,000pcs / Reel	RoHS Compliant
GSBC857BDE	SOT-563	3E	4,000pcs / Reel	RoHS Compliant
GSBC857CDE	SOT-563	3G	4,000pcs / Reel	RoHS Compliant