GSBC847BLP
NPN Transistor

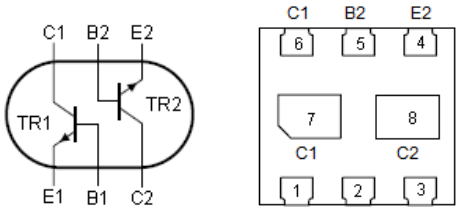
Features

- Reduces component count
- Reduces pick and place costs

DFN1010-6L

Mechanical Data

- Case: DFN1010-6L
- Molding compound: UL flammability classification rating 94V-0
- Terminals: Tin-plated; solderability per MIL-STD-202, Method 208



Schematic Diagram

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

Parameter	Symbol	Max.	Unit
Collector-Base Voltage	V_{CBO}	50	V
Collector-Emitter Voltage	V_{CEO}	45	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current - Continuous	I_C	200	mA
Power Dissipation (Collector)[1]	P_C	350	mW
Thermal Resistance Junction to Ambient[1]	$R_{\theta JA}$	357	°C/W
Operating junction Temperature	T_J	150	°C
Storage Temperature Range	T_{STG}	-55 To +150	°C

Note 1: Device mounted on an FR4 Printed-Circuit Board (PCB), single-sided copper, tin-plated and standard footprint

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

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=10μA, I_B=0	50	-	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=10mA, I_B=0	45	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E=10μA, I_C=0	6	-	-	V
Collector Cut-Off Current	I_{CBO}	V_{CB}=30V, I_E=0	-	-	15	nA
Collector-Emitter Cut-Off Current	I_{CEO}	V_{CB}=30V, I_B=0	-	-	1	mA
Emitter-Base Cut-Off Current	I_{EBO}	V_{EB}=5V, I_C =0A	-	-	100	nA
DC Current Gain	h_{FE}	V_{CE}=5V, I_C=2mA	200	-	450	-
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=10mA, I_B=0.5mA	-	0.09	0.25	V
		I_C=100mA, I_B=5mA	-	0.2	0.6	
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=10mA, I_B=0.5mA	-	0.7	0.9	V
		I_C=100mA, I_B=5mA	-	0.9	1.1	
Base-Emitter Voltage	$V_{BE(ON)}$	V_{CE}=5V, I_C=2mA	0.58	0.66	0.7	V
		V_{CE}=5V, I_C=10mA	-	-	0.77	
Transition Frequency	f_T	V_{CE}=5V, I_C=10mA, f=100MHz	100	-	-	MHz
Collector-BASE Capacitance	C_{CB}	V_{CB}=10V, I_E=0, f=1MHz	-	2.5	-	pF

Typical Characteristic Curves

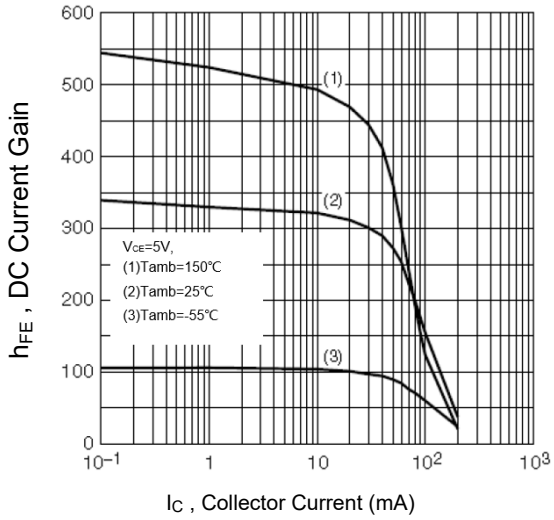


Fig.1 DC Current Gain vs. I_C

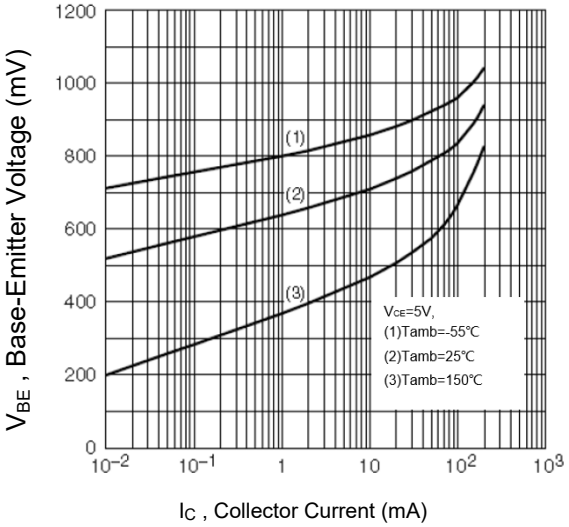


Fig.2 Base-Emitter Voltage vs. I_C

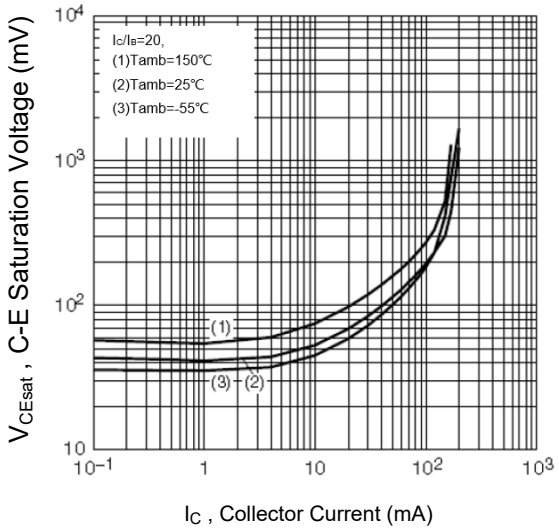


Fig.3 C-E Saturation Voltage vs. I_C

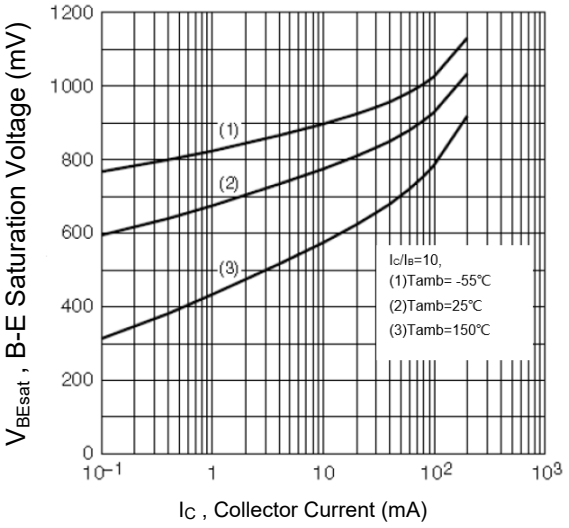
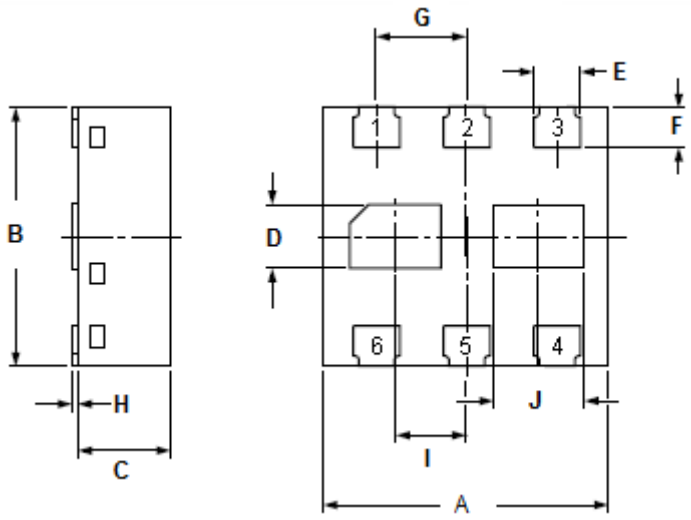


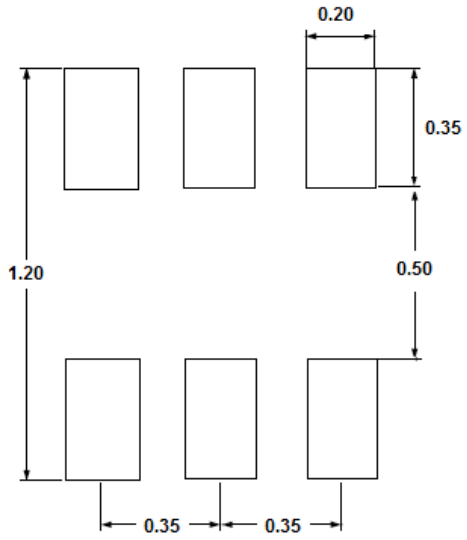
Fig.4 B-E Saturation Voltage vs. I_C

Package Outline Dimensions(DFN1010-6L)



DFN1010-6L		
Dimension	**Min.**	**Max.**
A	1.050	1.150
B	0.950	1.050
C	0.320	0.420
D	0.220	0.300
E	0.150	0.230
F	0.125	0.205
G	0.250	0.450
H	0.000	0.040
I	0.175	0.375
J	0.320	0.400

Recommended Pad Layout



Unit : mm

Ordering Information

Device	Package	Marking	Quantity	HSF Status
GSBC847BLP	DFN1010-6L	1F	5,000pcs / Reel	RoHS Compliant