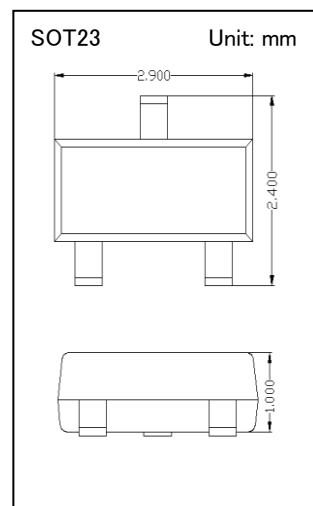
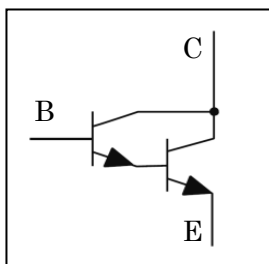


NPN General Purpose Amplifier

High Collector Current
High Current Gain
Epoxy Meets UL 94 V-0 Flammability Rating
Surface Mount SOT-23 Package
Rohs Compliant / Green EMC

Device Marking Code	
BCV47	FG

Equivalent Circuit



Maximum Ratings (Ta=25°C Unless Otherwise Noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	80	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	10	V
I_C	Continuous Collector Current	500	mA
I_{CM}	Peak Collector Current	800	mA
P_D	Collector Power Dissipation	300	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	417	°C/W
T_j	Junction Temperature	-55~+150	°C
T_{stg}	Storage Temperature	-55~+150	°C

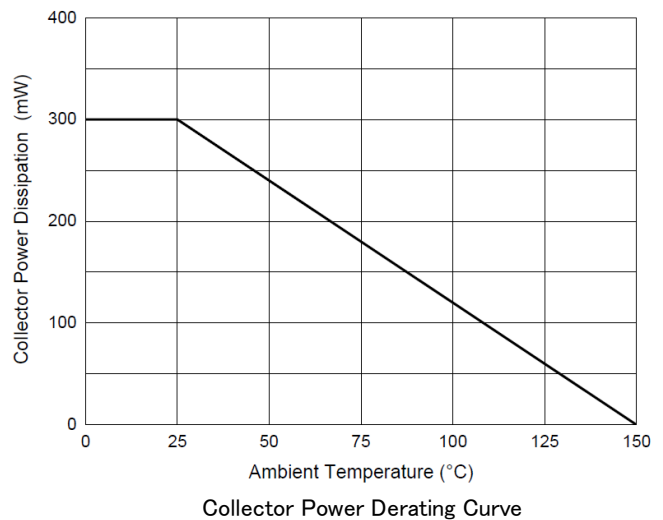
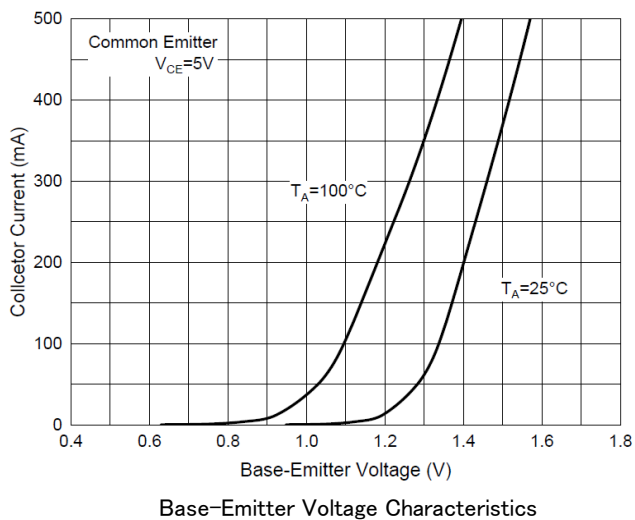
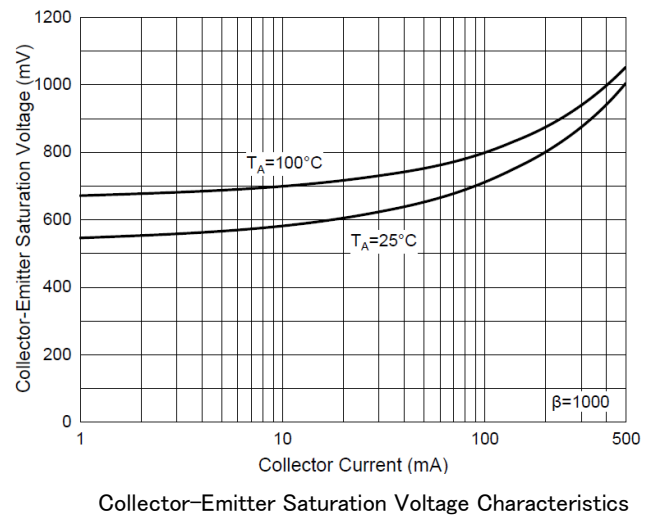
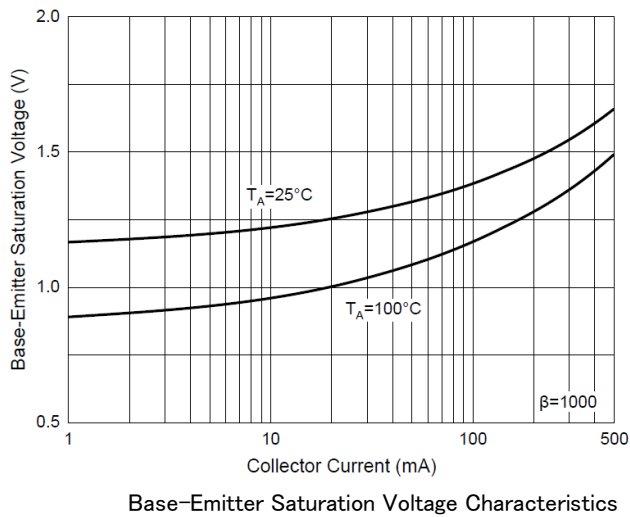
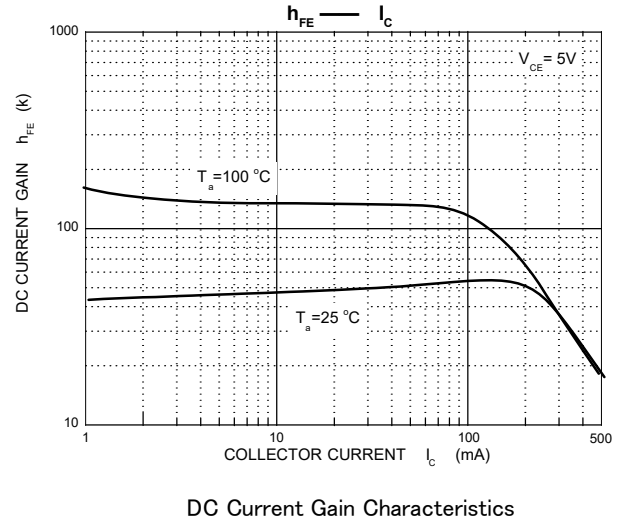
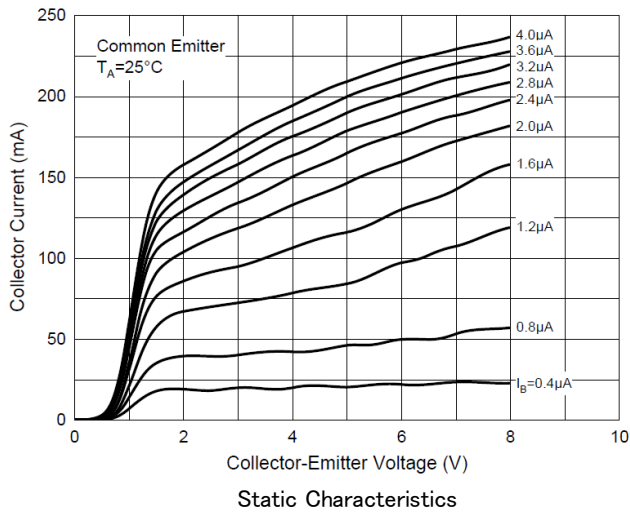
NPN General Purpose Amplifier

Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Test Conditions	Min	Typ	Max	Units
$V_{(BR)CEO}$	Collector–Emitter Breakdown Voltage	$I_C=10mA, I_B=0$	60			V
$V_{(BR)CBO}$	Collector–Base Breakdown Voltage	$I_C=100\mu A, I_E=0$	80			V
$V_{(BR)EBO}$	Emitter–Base Breakdown Voltage	$I_E=10\mu A, I_C=0$	10			V
I_{CBO}	Collector–Base Cutoff Current	$V_{CB}=60V, I_E=0$			0.1	μA
I_{EBO}	Emitter–Base Cutoff Current	$V_{EB}=4V, I_C=0$			0.1	μA
h_{FE}	DC Current Gain	$I_C=100\mu A, V_{CE}=1.0V$	2000			
		$I_C=10mA, V_{CE}=5.0V$	4000			
		$I_C=100mA, V_{CE}=5.0V$	10000			
		$I_C=500mA, V_{CE}=5.0V$	2000			
$V_{CE(sat)}$	Collector–Emitter Saturation Voltage	$I_C=100mA, I_B=100\mu A$			1.0	V
$V_{BE(sat)}$	Base–Emitter Saturation Voltage	$I_C=100mA, I_B=100\mu A$			1.5	V
f_T	Transition Frequency	$I_C=50mA, V_{CE}=5V, f=100MHz$		170		MHz
C_{ob}	Output Capacitance	$V_{CB}=10V, I_E=0, f=1.0MHz$		3.5		PF

NPN General Purpose Amplifier

Curve Characteristics



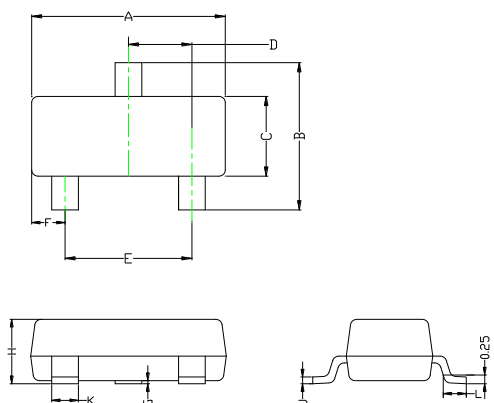
NPN General Purpose Amplifier

Ordering Information

Device	Package	Shipping	Tape wide	Emboss pitch	Tape specification	Notes
BCV47	SOT23	Tape & Reel 3000pcs /7" Reel	8mm	4mm	Conductive	

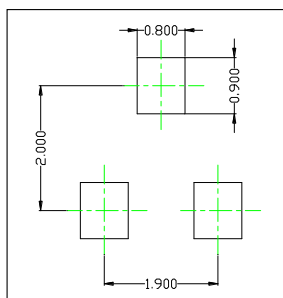
Package Dimensions

Package outline : SOT23



Symbol	Dimensions in mm	
	Min.	Max.
A	2.800	3.040
B	2.100	2.640
C	1.200	1.400
D	0.890	1.030
E	1.780	2.050
F	0.450	0.600
G	0.013	0.100
H	0.900	1.110
J	0.085	0.180
K	0.370	0.510
L	0.300	0.500

SOT23 Package Outline



Land Pattern Recommendation

Notice:

1. Lead plating: Pb free solder
2. Lead thickness includes solder plating
3. Lead frame: CAC-5
4. Other Tolerance: ± 0.05