

## BC807-40

### TRANSISTOR PNP BIPOLAR 45V

#### Features

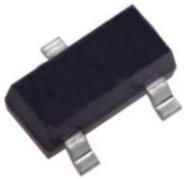
- High current
- Low voltage
- General-purpose switching and amplification
- RoHS compliant package

#### Mechanical Data

- Case: SOT-23 Molded plastic
- Epoxy: UL94V-O rate flame retardant

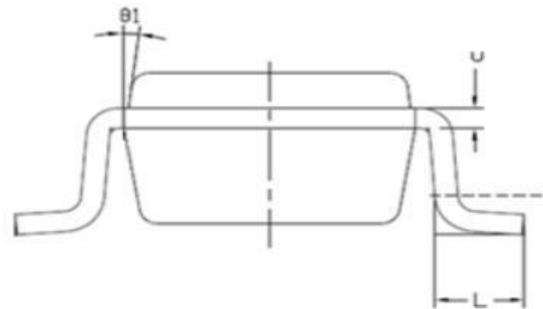
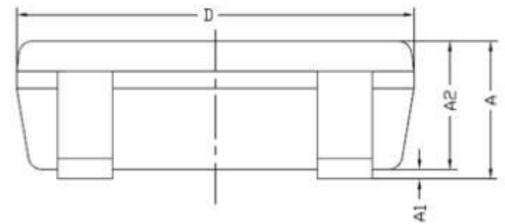
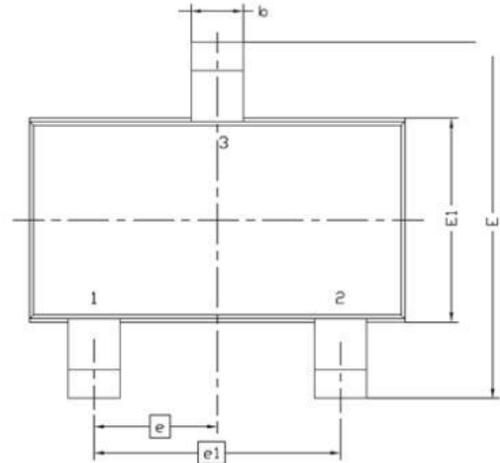
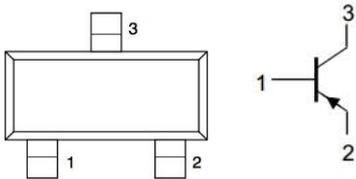
#### Packing & Order Information

3,000/Reel



**RoHS  
COMPLIANT**

Graphic symbol



Symbol	MILLIMETERS	
	MIN	MAX
A	0.8	1.2
A1	0	0.1
A2	0.7	1.1
b	0.3	0.5
c	0.1	0.2
D	2.7	3.1
E	2.6	3
E1	1.4	1.8
e	0.95 BSC	
e1	1.9 BSC	
L	0.3	0.6
theta1	7° NOM	

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#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Maximum Ratings (Tc=25°C unless otherwise noted)

Symbol	Parameter	BC807-40	Unit
VCEO	Collector-Emitter Voltage	-45	Vdc
VCBO	Collector-Base Voltage	-50	Vdc
VEBO	Emitter-Base Voltage	-5	Vdc
IC	Collector Current—Continuous	-500	mAdc
PD	Total Device Dissipation on FR-5 Board(1) TA=25°C derate above 25°C	225	mW
		1.8	mW/°C
PD	Total Device Dissipation on Alumina Substrate 300 mW derate above 25°C	300	mW
		2.4	mW/°C
RθJA	Thermal Resistance Junction to Ambient	417	°C/W
TJ, Tstg	Junction and Storage Temperature	-55 to +150	°C

#### OFF CHARACTERISTICS

Symbol	Parameter	MIN	TYP	MAX	UNIT
V(BR)CEO	Collector-Emitter Breakdown Voltage (Ic= -10mAdc, IB=0)	-45			Vdc
V(BR)CBS	Collector-Base Breakdown Voltage (Ic= -10μAdc, VEB=0)	-50			Vdc
V(BR)EBO	Emitter-Base Breakdown Voltage (IE= -1.0μAdc, Ic=0)	-5			Vdc
ICBO	Collector Cutoff Current (VCB= -20v) -100 nA (VCB= -20Vdc, TA=150°C)			-100	nA
				-5	uA

#### ON CHARACTERISTICS

Symbol	Parameter	MIN	TYP	MAX	UNIT
HFE	DC Current Gain				
	(Ic= -100mAdc, VCE= -1.0Vdc)	250		600	
	(Ic= -500mAdc, VCE= -1.0Vdc)	40			
VCE(sat)	Collector-Emitter Saturation Voltage (Ic= -500mAdc, IB= -50mAdc)			-0.7	Vdc
VBE(on)	Base-Emitter Voltage (Ic= -500mAdc, VCE= -1.0Vdc)			-1.2	V

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### SMALL-SIGNAL CHARACTERISTICS

Symbol	Parameter	MIN	TYP	MAX	UNIT
$f_T$	Current-Gain-Bandwidth Product ( $I_c = -10\text{mA dc}$ , $V_{CE} = -5.0\text{V dc}$ , $f = 100\text{MHz}$ )	100			MHz
Cobo	Output Capacitance ( $V_{CB} = -10\text{V dc}$ , $f = 1.0\text{MHz}$ )		10		pF

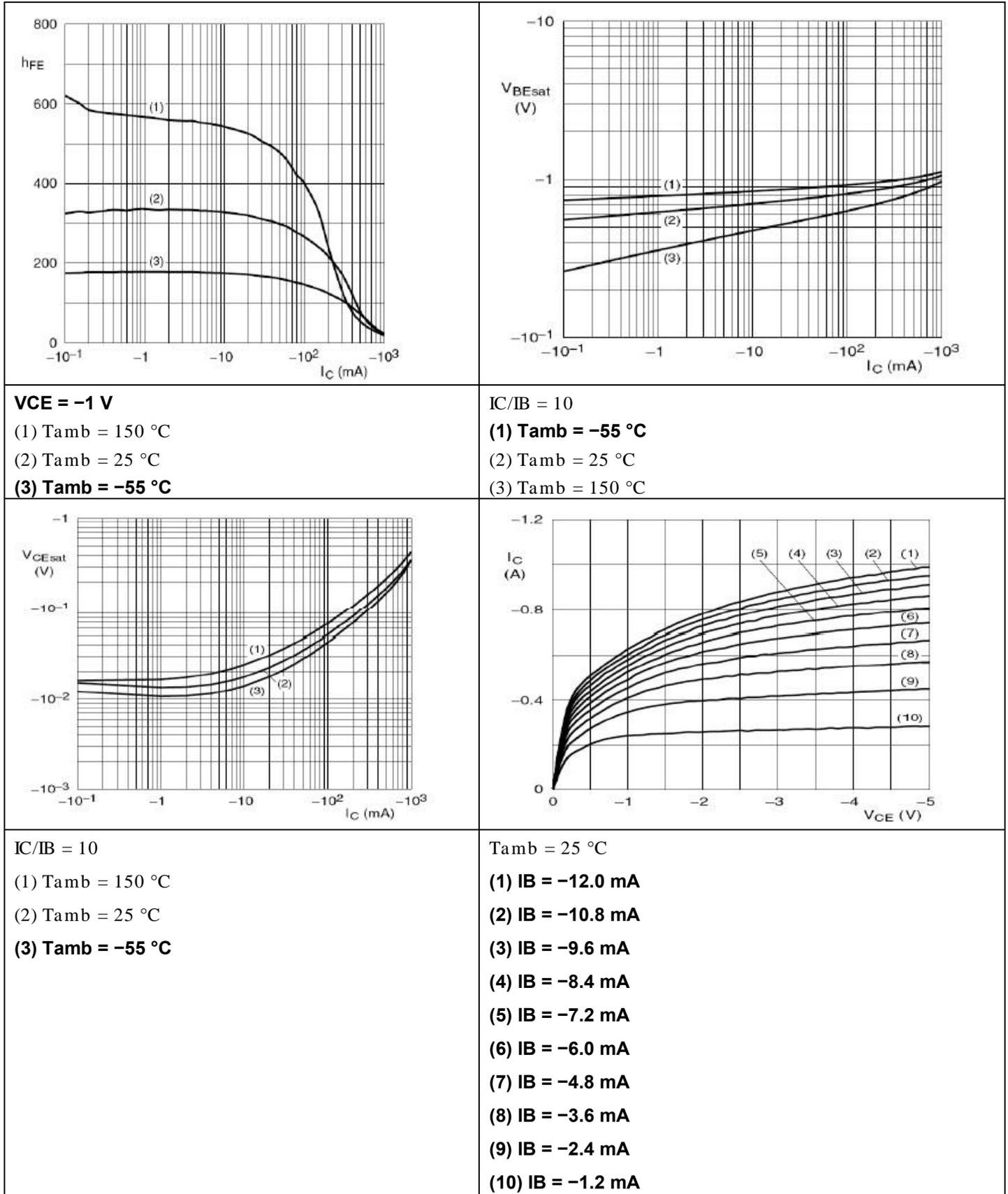
NOTE:

1. FR-5=1.0×0.75×0.062in.
2. Alumina=0.4×0.3×0.024in.99.5% alumina.

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#### ■ RATINGS AND CHARACTERISTIC CURVES



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#### Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE

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