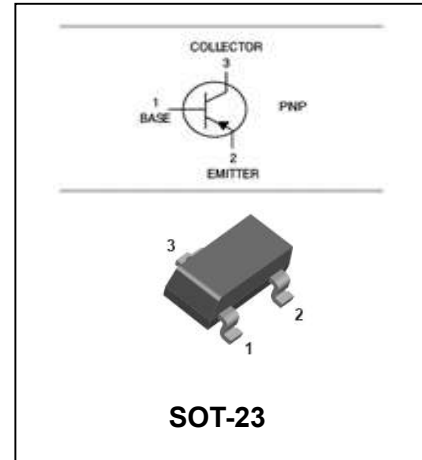


PNP General Purpose Amplifier

TBC807-16G/-25G/-40G

FEATURES

- For general AF applications
- Complementary NPN type available
TBC817G
- High collector current
- High current gain
- Low collector-emitter saturation voltage
- Qualified to AEC-Q101 Standards for High Reliability.



ORDERING INFORMATION

Type No.	Marking	Package Code
TBC807-16G	5A	SOT-23
TBC807-25G	5B	SOT-23
TBC807-40G	5C	SOT-23

MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-50	V
V_{CEO}	Collector-Emitter Voltage	-45	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current -Continuous	-500	mA
P_D	Total Device Dissipation	300	mW
$R_{\theta JA}$	Thermal Resistance Junction to Ambient	417	°C/W
T_J, T_{stg}	Junction and Storage Temperature	-55 to +150	°C

PNP General Purpose Amplifier

TBC807-16G/-25G/-40G

ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-10\mu A$ $I_E=0$	-50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=-10mA$ $I_B=0$	-45			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-10\mu A$ $I_C=0$	-5			μV
Collector cut-off current	I_{CBO}	$V_{CB}=-25V$ $I_E=0$			-0.1	μA
Emitter cut-off current	I_{EBO}	$V_{CE}=-4V$ $I_C=0$			-0.1	μA
DC current gain	TBC807-16G TBC807-25G TBC807-40G	h_{FE} $V_{CE}=-1V$ $I_C=-100mA$	100 160 250	160 250 350	250 400 600	
DC current gain	TBC807-16G TBC807-25G TBC807-40G	h_{FE} $V_{CE}=-1V$ $I_C=-300mA$	60 100 170			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-500mA$ $I_B=-50mA$			-0.7	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=-500mA$ $I_B=-50mA$			-1.2	V
Output capacitance	C_{obo}	$V_{CB}=-10V, f=1.0MHz$			10	pF
Transition frequency	f_T	$V_{CE}=-5V, I_C=-10mA$ $f=100MHz$		200		MHz

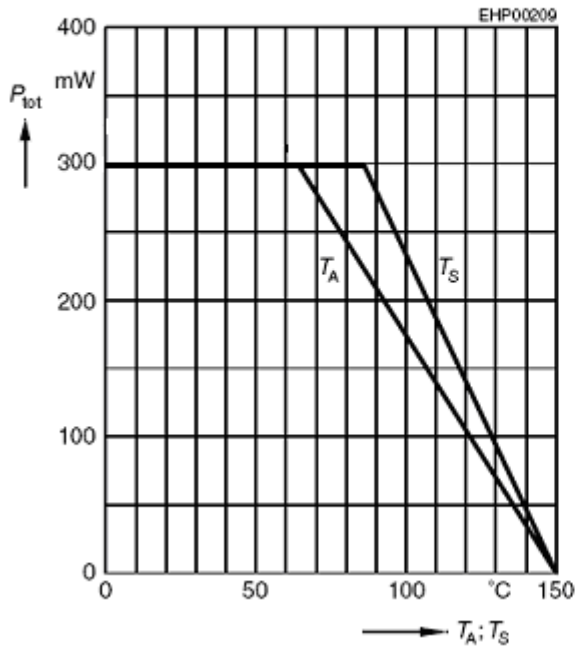
PNP General Purpose Amplifier

TBC807-16G/-25G/-40G

TYPICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified

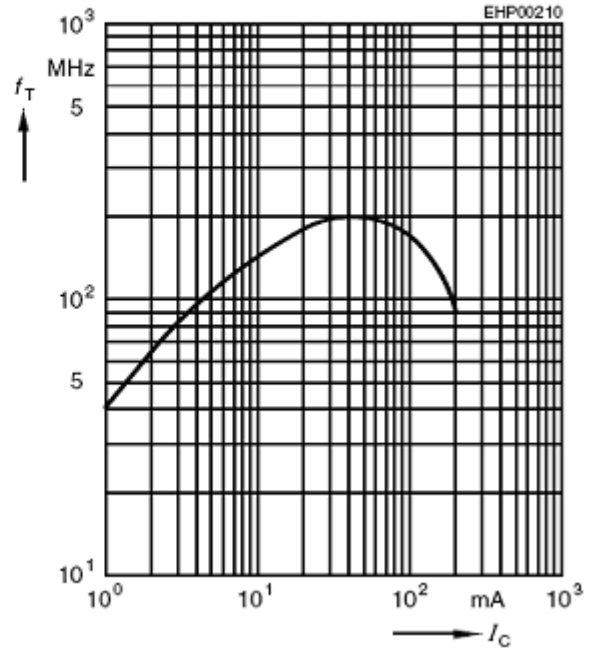
Total power dissipation $P_{\text{tot}} = f(T_A^*; T_S)$

* Package mounted on epoxy



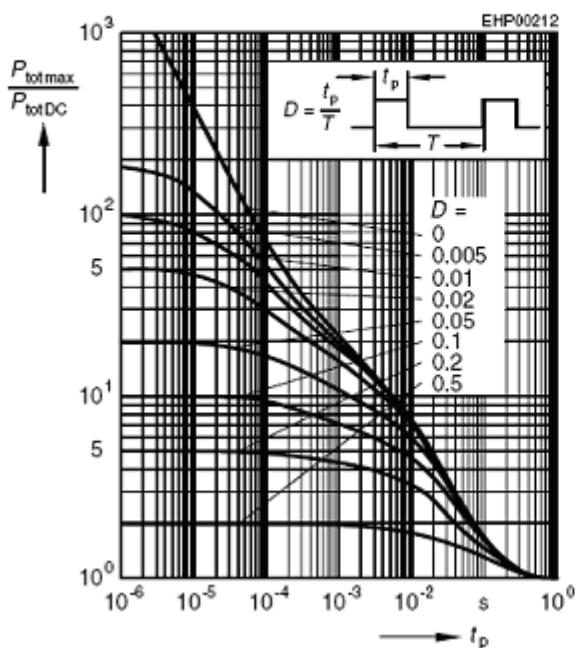
Transition frequency $f_T = f(I_C)$

$V_{\text{CE}} = 5\text{V}$



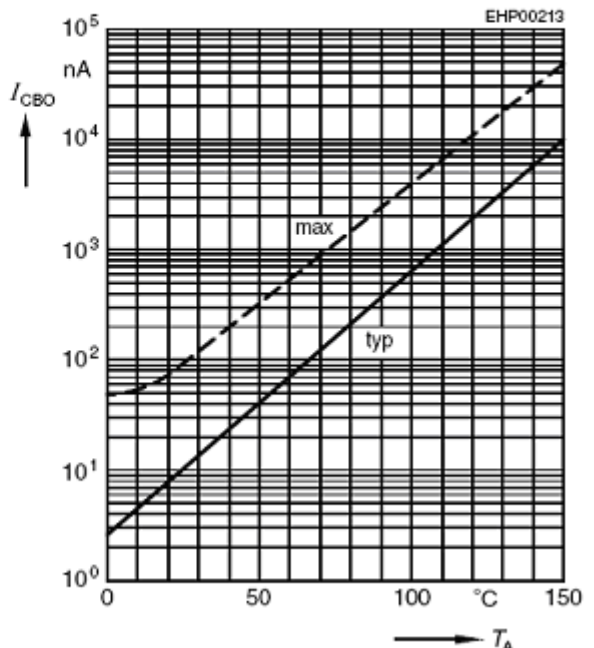
Permissible pulse load

$P_{\text{totmax}} / P_{\text{totDC}} = f(t_p)$



Collector cutoff current $I_{\text{CBO}} = f(T_A)$

$V_{\text{CBO}} = 25\text{V}$

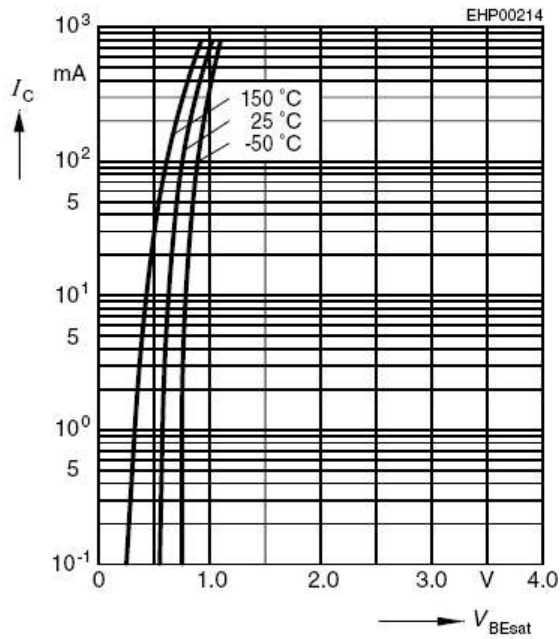


PNP General Purpose Amplifier

TBC807-16G/-25G/-40G

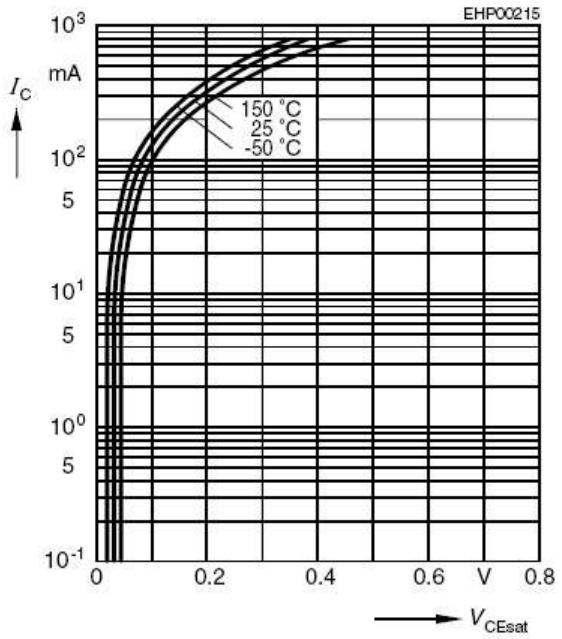
Base-emitter saturation voltage

$I_C = f(V_{BEsat}), h_{FE} = 10$



Collector-emitter saturation voltage

$I_C = f(V_{CEsat}), h_{FE} = 10$



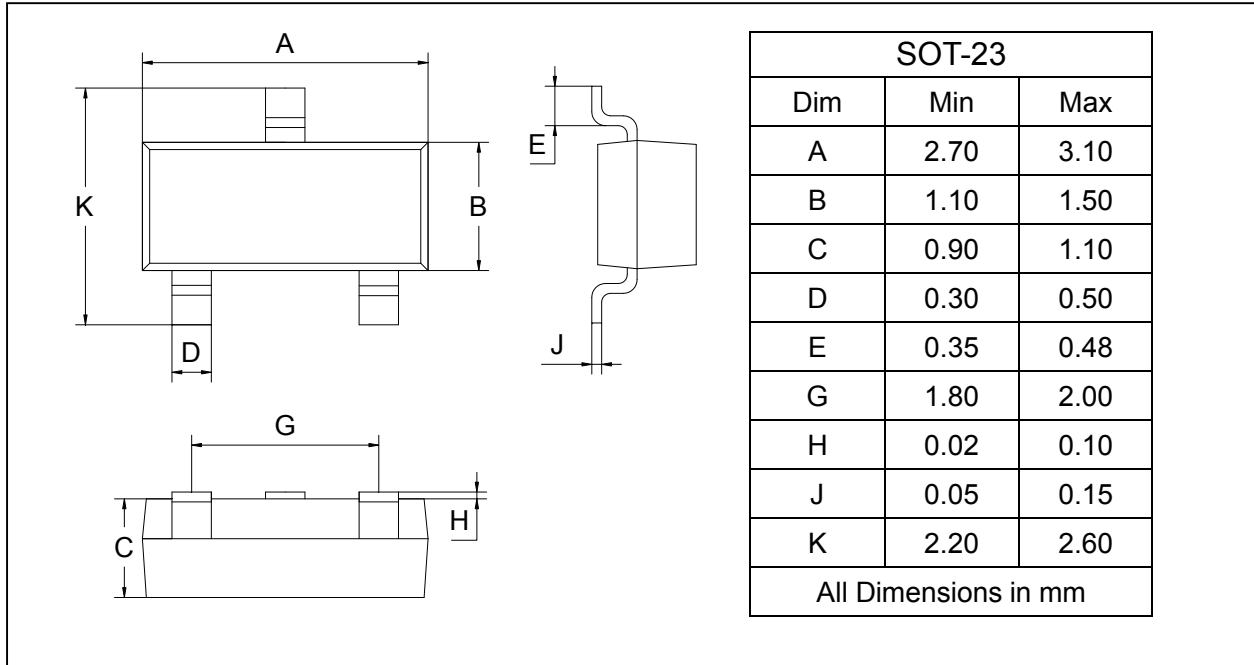
PNP General Purpose Amplifier

TBC807-16G/-25G/-40G

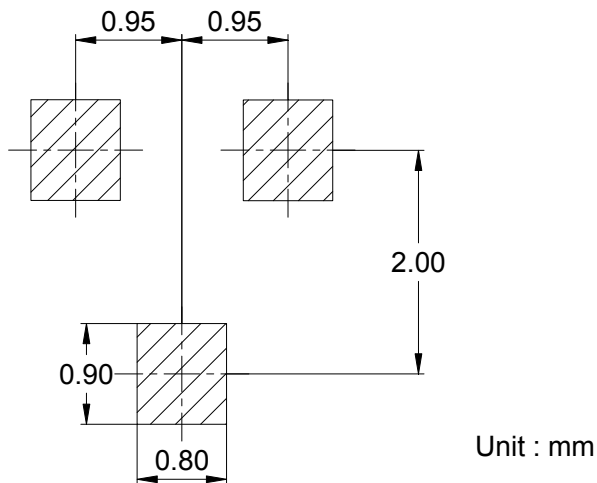
PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
TBC807-16G/-25G/-40G	SOT-23	3000/Tape&Reel