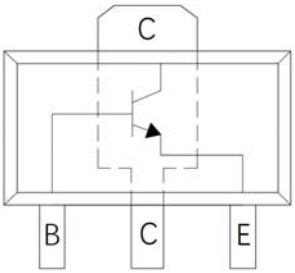
TKBCX56-16

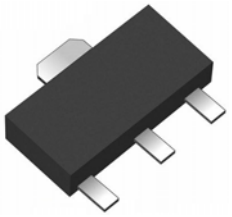
NPN General Purpose Amplifier

Features

- Epoxy meets UL-94 V-0 flammability rating
- Halogen free available upon request by adding suffix ”HF”
- Moitsure Sensitivity Level 1
- Low collector-emitter saturation voltage

SOT-89





Mechanical Data

●**Package**: SOT-89
Molding compound meets UL 94 V-0 flammability rating,
RoHS-compliant, halogen-free

●**Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102

● Marking: BL

■**Ordering Information** (Example)

PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
TKBCX56-16	F2	Approximate 0.055	1000	8000	32000	7” reel

Maximum Ratings (Ta=25℃ unless otherwise noted)

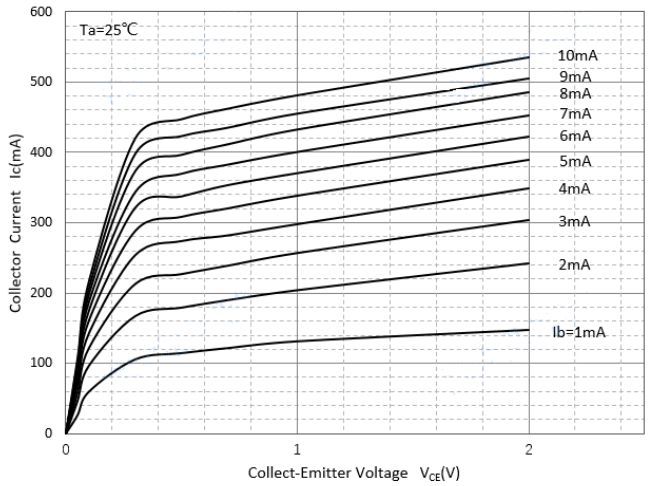
Item	Symbol	Unit	Conditions	Value
Minimum Collector-Emitter Voltage	V_{CEO}	V	I_C=10mA, I_B=0	80
Minimum Collector-Base Voltage	V_{CBO}	V	I_C=100uA, I_E=0	100
Minimum Emitter-Base Voltage	V_{EBO}	V	I_E=10uA, I_C=0	5
Collector Current	I_C	A		1
Collector Power Dissipation	P_C	mW		500
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	℃/W		250
Operation Junction Temperature	T_j	℃		-55 to +150
Storage Temperature	T_{stg}	℃		-55 to +150

Electrical Characteristics (Ta=25℃ unless otherwise noted)

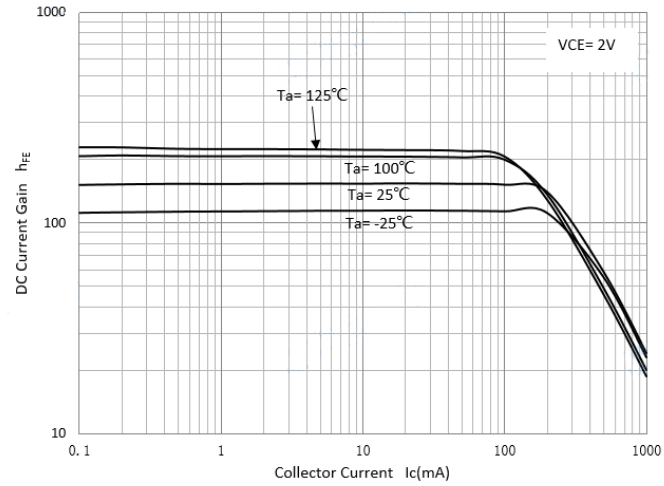
Item	Symbol	Unit	Conditions	Min	TYP	Max
Collector-Emitter Voltage	V_{CEO}	V	I_C=10mA, I_B=0	80		
Collector-Base Voltage	V_{CBO}	V	I_C=100uA, I_E=0	100		
Emitter-Base Voltage	V_{EBO}	V	I_E=10uA, I_C=0	5		
Collector-Base cut-off current	I_{CBO}	nA	V_{CB}=30V			100
Emitter-Base cut-off current	I_{EB0}	nA	V_{EB}=5V			100
DC Current Gain	$h_{FE(1)}$		V_{CE}=2V I_C=150mA	100		250
	$h_{FE(2)}$		V_{CE}=2V I_C=5mA	40		
	$h_{FE(3)}$		V_{CE}=2V I_C=500mA	25		
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	V	I_C=500mA I_B=50mA			0.5
Base-Emitter Voltage	V_{BE}	V	V_{CE}=2V I_C=500mA			1
Transition Frequency	f_T	MHz	I_C=10mA, V_{CE}=5V,f=100MHz		130	

Characteristics (Typical)

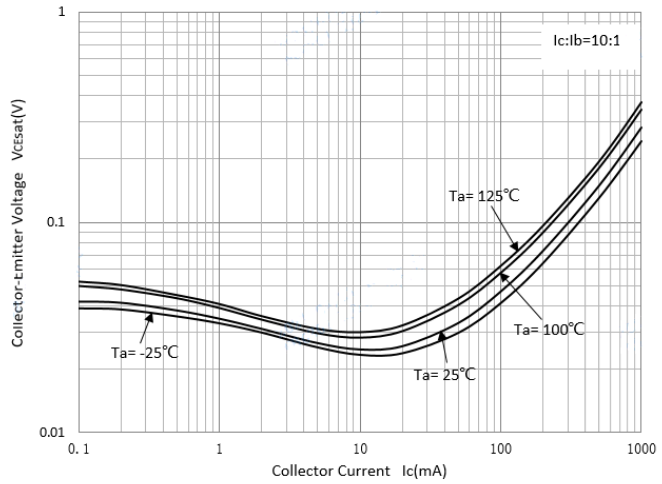
Static Characteristic



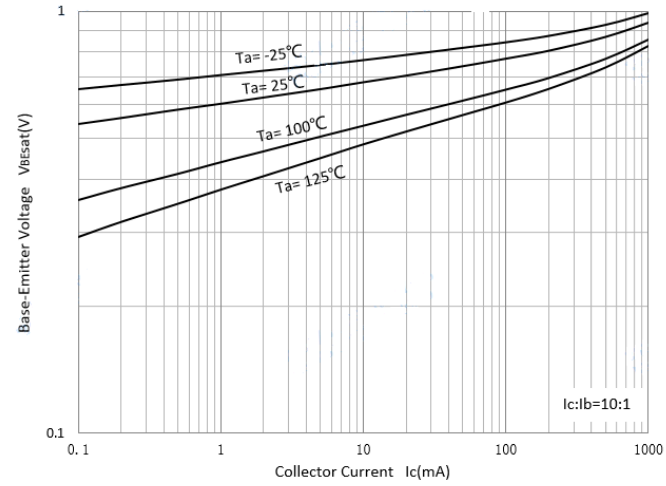
DC Current Gain



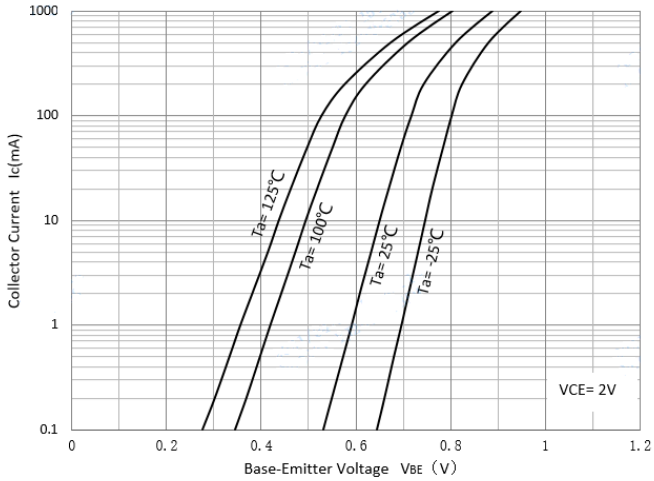
Collector-Emitter Saturation Voltage



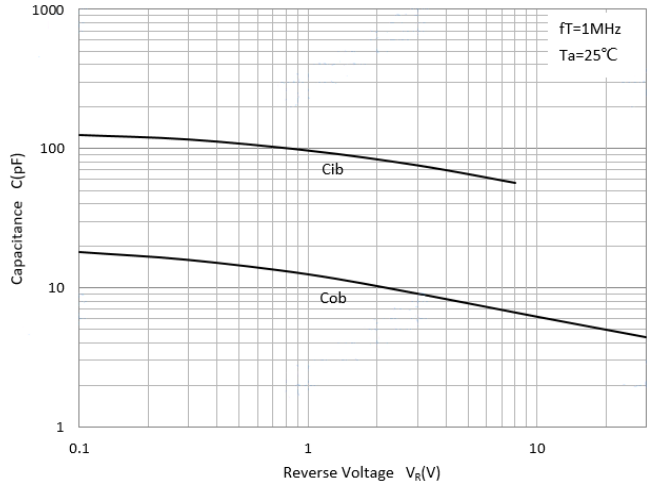
Base-Emitter Saturation Voltage



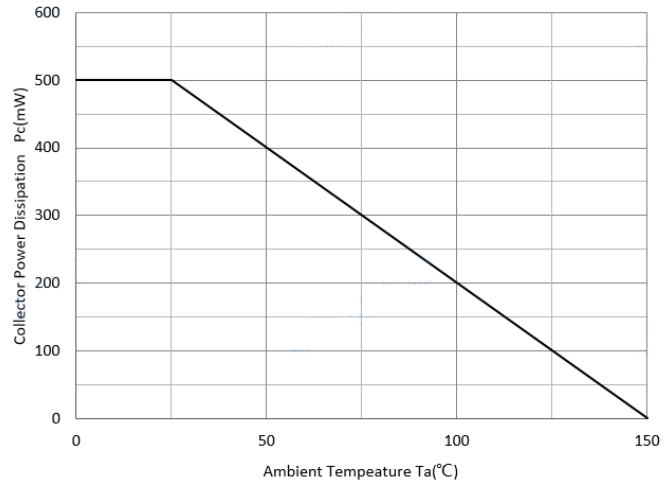
Base-Emitter On Voltage



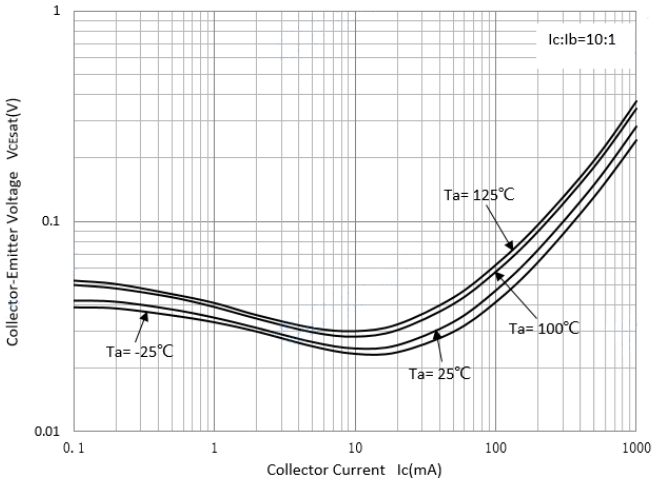
Cob/Cib-V_{CB}/V_{EB}



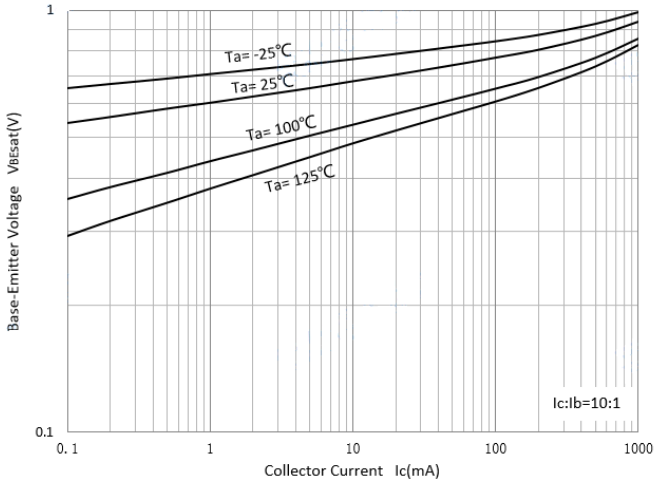
Collector Power Derating Curve



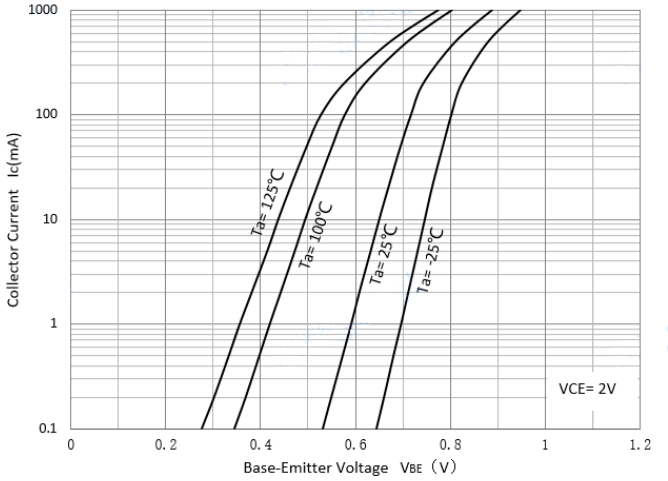
Collector-Emitter Saturation Voltage



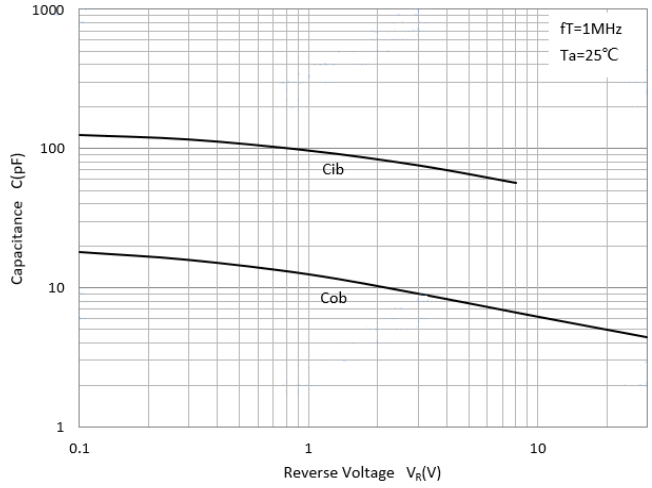
Base-Emitter Saturation Voltage



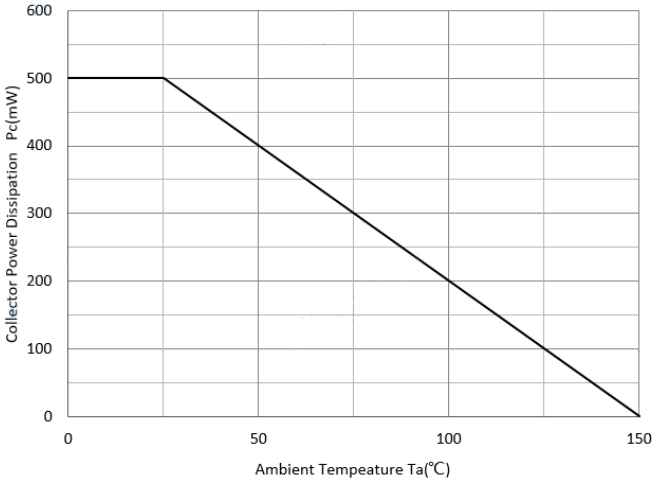
Base-Emitter On Voltage

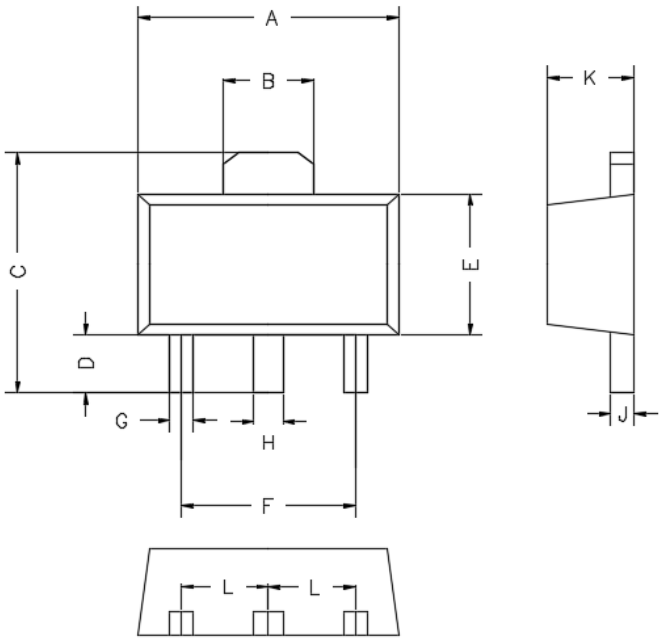


Cob/Cib-V_{CB}/V_{EB}



Collector Power Derating Curve





DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.169	0.185	4.30	4.70	
B	0.061		1.55		TYP
C	0.154	0.171	3.91	4.35	
D	0.031	0.047	0.80	1.20	
E	0.089	0.104	2.25	2.65	
F	0.118		3.00		TYP
G	0.013	0.020	0.33	0.52	
H	0.016	0.023	0.40	0.58	
J	0.014	0.017	0.35	0.44	
K	0.055	0.063	1.40	1.60	
L	0.059		1.50		TYP

SOT-89 Suggested Pad Layout

