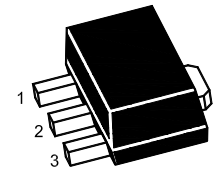


BCX53U

PNP Silicon Epitaxial Planar Transistor

Medium Power Transistor



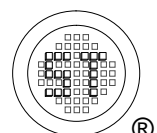
1.Base 2.Collector 3.Emitter
SOT-89 Plastic Package

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{\text{CBO}}$	100	V
Collector Emitter Voltage	$-V_{\text{CEO}}$	80	V
Emitter Base Voltage	$-V_{\text{EBO}}$	5	V
Collector Current	$-I_{\text{C}}$	1	A
Peak Collector Current	$-I_{\text{CM}}$	2	A
Total Power Dissipation	P_{tot}	0.5 ¹⁾ 1.3 ²⁾	W
Junction Temperature	T_{j}	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 65 to + 150	$^\circ\text{C}$

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

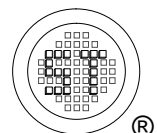
²⁾ Device mounted on an FR4 PCB, single-sided copper, tin-plated, mounting pad for collector 6 cm²



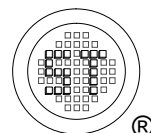
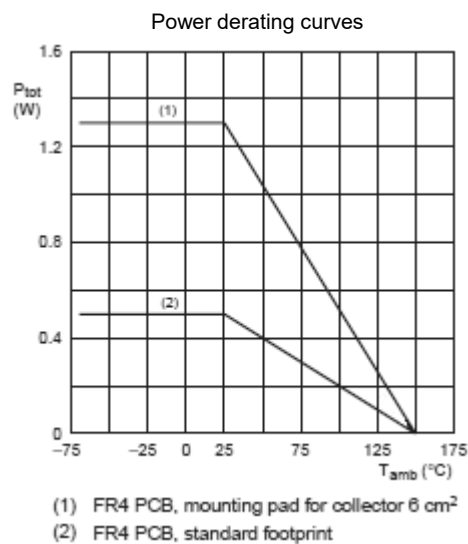
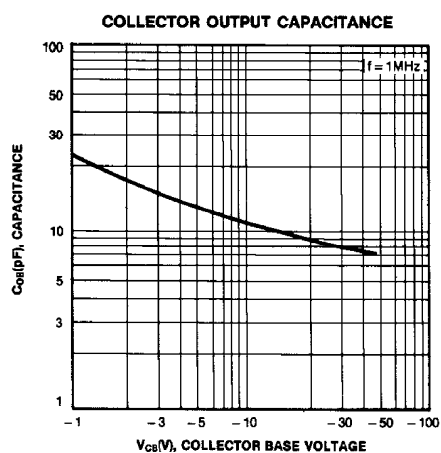
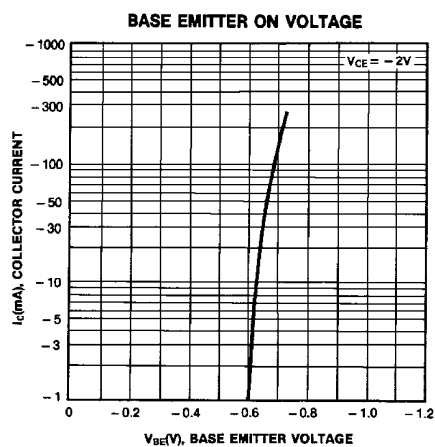
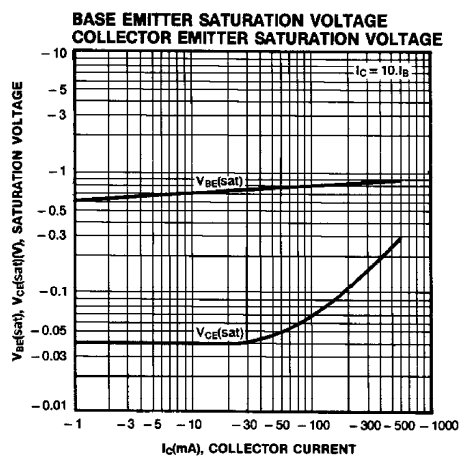
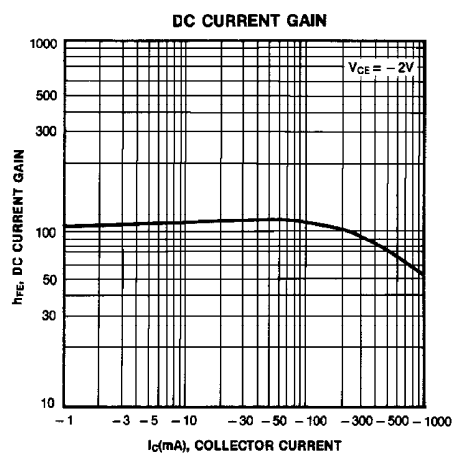
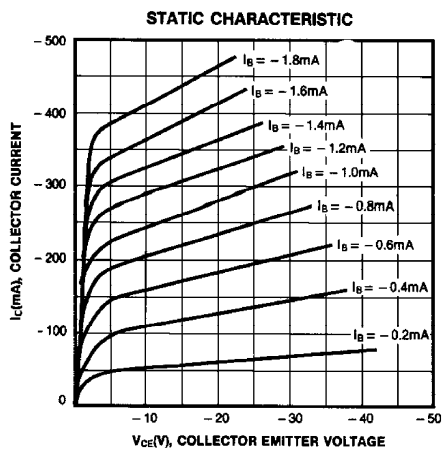
BCX53U

Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain					
at $-V_{CE} = 2\text{ V}$, $-I_C = 5\text{ mA}$	h_{FE}	40	-	-	-
at $-V_{CE} = 2\text{ V}$, $-I_C = 150\text{ mA}$	h_{FE}	63	-	160	-
	h_{FE}	100	-	250	-
at $-V_{CE} = 2\text{ V}$, $-I_C = 500\text{ mA}$	h_{FE}	25	-	-	-
Collector Base Cutoff Current at $-V_{CB} = 30\text{ V}$	$-I_{CBO}$	-	-	100	nA
Emitter Base Cutoff Current at $-V_{EB} = 5\text{ V}$	$-I_{EBO}$	-	-	100	nA
Collector Base Breakdown Voltage at $-I_C = 100\text{ }\mu\text{A}$	$-V_{(BR)CBO}$	100	-	-	V
Collector Emitter Breakdown Voltage at $-I_C = 1\text{ mA}$	$-V_{(BR)CEO}$	80	-	-	V
Emitter Base Breakdown Voltage at $-I_E = 100\text{ }\mu\text{A}$	$-V_{(BR)EBO}$	5	-	-	V
Collector Emitter Saturation Voltage at $-I_C = 500\text{ mA}$, $-I_B = 50\text{ mA}$	$-V_{CE(sat)}$	-	-	0.5	V
Base Emitter Voltage at $-V_{CE} = 2\text{ V}$, $-I_C = 500\text{ mA}$	$-V_{BE}$	-	-	1	V
Transition Frequency at $-V_{CE} = 5\text{ V}$, $-I_C = 50\text{ mA}$, $f = 100\text{ MHz}$	f_T	-	145	-	MHz
Collector Capacitance at $-V_{CB} = 15\text{ V}$, $f = 1\text{ MHz}$	C_c	-	15	-	pF



Electrical Characteristics Curves



BCX53U

Package Outline (Dimensions in mm)

SOT-89

