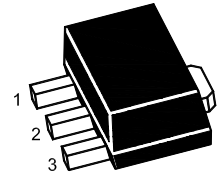


2SA1213U

PNP Silicon Epitaxial Planar Transistor

for power amplifier and power switching applications

The transistor is subdivided into two groups, O and Y, according to its DC current gain.



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

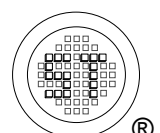
Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

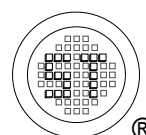
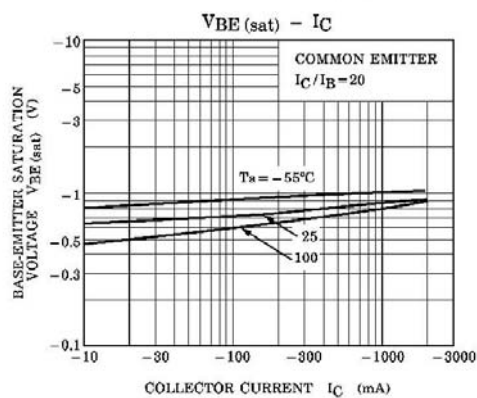
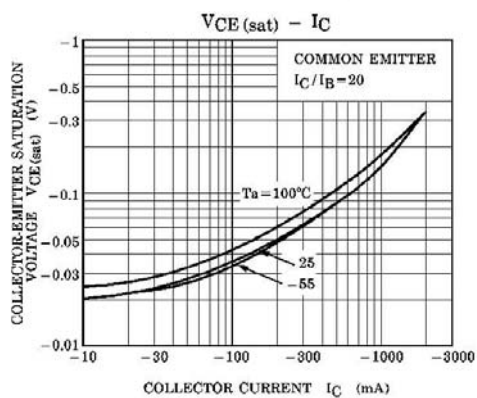
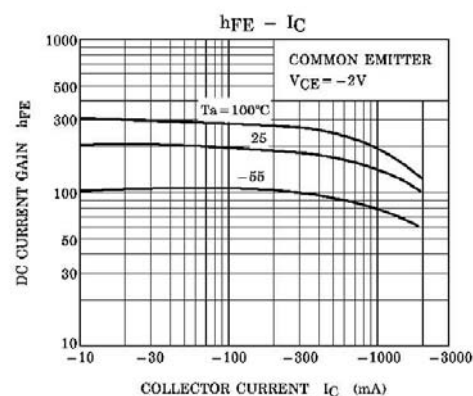
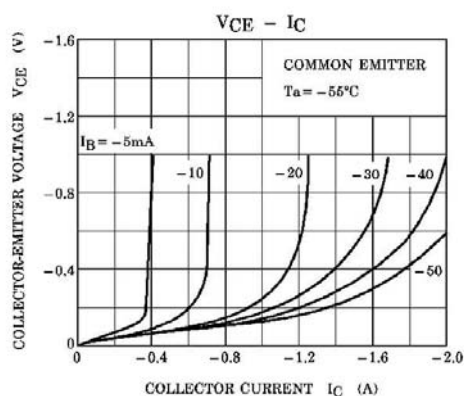
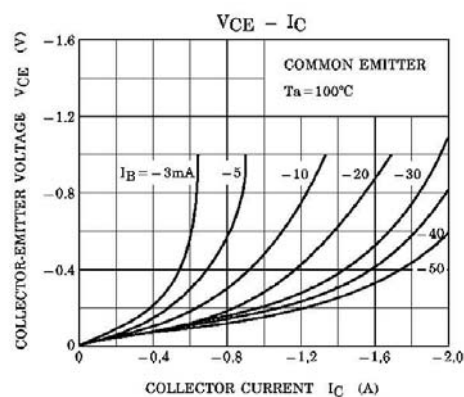
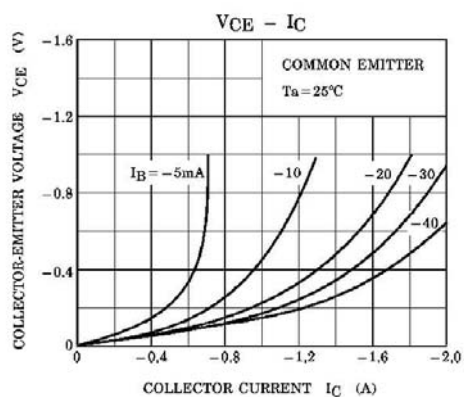
Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	50	V
Collector Emitter Voltage	$-V_{CEO}$	50	V
Emitter Base Voltage	$-V_{EBO}$	5	V
Collector Current	$-I_C$	2	A
Base Current	$-I_B$	0.4	A
Total Power Dissipation	P_{tot}	0.5 1 ¹⁾	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$

¹⁾ When mounted on a 250 mm² x 0.8 t ceramic substrate.

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

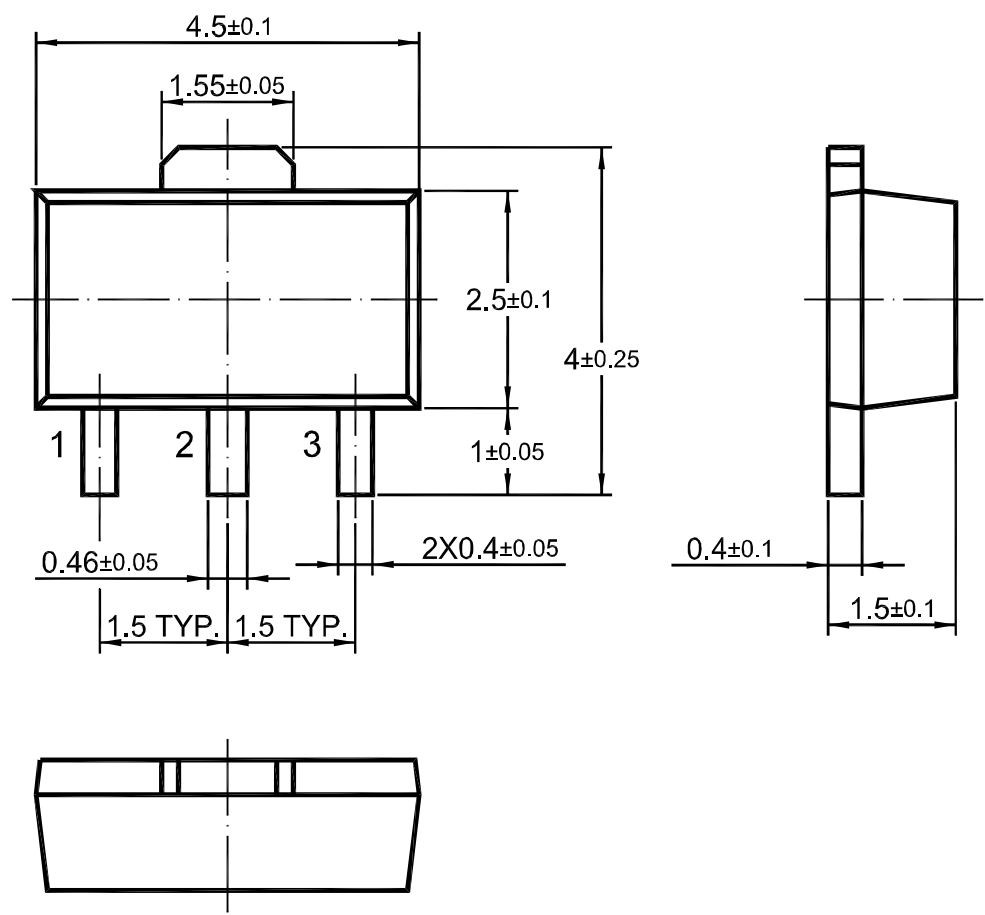
Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $-V_{CE} = 2\text{ V}$, $-I_C = 500\text{ mA}$ at $-V_{CE} = 2\text{ V}$, $-I_C = 2\text{ A}$ Current Gain Group O Y	h_{FE}	70	-	140	-
	h_{FE}	120	-	240	-
	h_{FE}	20	-	-	-
	h_{FE}	-	-	-	-
Collector Base Cutoff Current at $-V_{CB} = 50\text{ V}$	$-I_{CBO}$	-	-	100	nA
Emitter Base Cutoff Current at $-V_{EB} = 5\text{ V}$	$-I_{EBO}$	-	-	100	nA
Collector Emitter Breakdown Voltage at $-I_C = 10\text{ mA}$	$-V_{(BR)CEO}$	50	-	-	V
Collector Emitter Saturation Voltage at $-I_C = 1\text{ A}$, $-I_B = 50\text{ mA}$	$-V_{CE(sat)}$	-	-	0.5	V
Base Emitter Saturation Voltage at $-I_C = 1\text{ A}$, $-I_B = 50\text{ mA}$	$-V_{BE(sat)}$	-	-	1.2	V
Transition Frequency at $-V_{CE} = 2\text{ V}$, $-I_C = 500\text{ mA}$	f_T	-	120	-	MHz
Collector Output Capacitance at $-V_{CB} = 10\text{ V}$, $f = 1\text{ MHz}$	C_{ob}	-	40	-	pF
Turn-on Time at $-V_{CC} = 30\text{ V}$, $-I_{B1} = I_{B2} = 50\text{ mA}$	t_{on}	-	0.1	-	μs
Storage Time at $-V_{CC} = 30\text{ V}$, $-I_{B1} = I_{B2} = 50\text{ mA}$	t_{stg}	-	1	-	μs
Fall Time at $-V_{CC} = 30\text{ V}$, $-I_{B1} = I_{B2} = 50\text{ mA}$	t_f	-	0.1	-	μs





2SA1213U

SOT-89 PACKAGE OUTLINE



Dimensions in mm

