Micro Commercial Components
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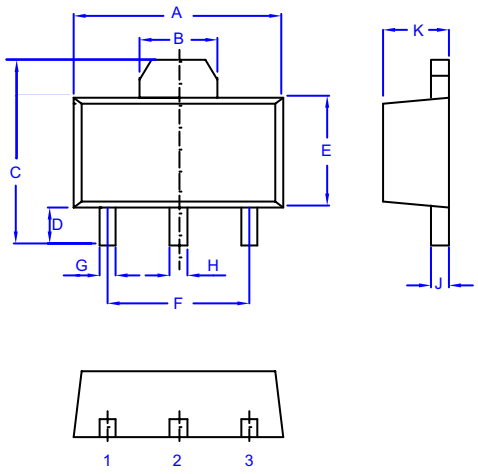
2SA1213-O
2SA1213-Y

PNP Silicon Epitaxial Transistors

Features

- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Low Saturation voltage: $V_{CE(sat)}$=0.5V(max.)(I_C=1.0A)
- Small flat package
- P_C=1.0 to 2.0W(mounted on ceramic substrate)
- High Speed Switching Time : t_{stg} =1.0μs(typ.)
- Epoxy meets UL 94 V-0 flammability rating
- Moisure Sensitivity Level 1
- Halogen free available upon request by adding suffix "-HF"

SOT-89



1. Base
2. Collector
3. Emitter

DIMENSINS					
DIM	INCHES		MM		NOTES
	MIN	MAX	MIN	MAX	
A	.173	.181	4.39	4.60	
B	.063	.071	1.60	1.80	
C	.154	.165	3.91	4.19	
D	.031	.039	0.80	1.00	
E	.092	.100	2.34	2.54	
F	.118	-----	3.00	-----	TYP
G	.013	.019	0.33	0.48	
H	.015	.021	0.38	0.53	
J	.015	.016	0.38	0.41	
K	.055	.063	1.40	1.60	

Maximum Ratings

Symbol	Rating	Rating	Unit
V_{CEO}	Collector-Emitter Voltage	-50	V
V_{CBO}	Collector-Base Voltage	-50	V
V_{EBO}	Emitter-Base Voltage	-5.0	V
I_C	Collector Current	-2.0	A
I_B	Base Current	-0.4	A
P_C	Collector power dissipation	0.5 1.0*	W
T_J	Junction Temperature	150	℃
T_{STG}	Storage Temperature	-55 to +150	℃

* Mounted on ceramic substrate (250mm^2 x 0.8t)

Electrical Characteristics @ 25℃ Unless Otherwise Specified

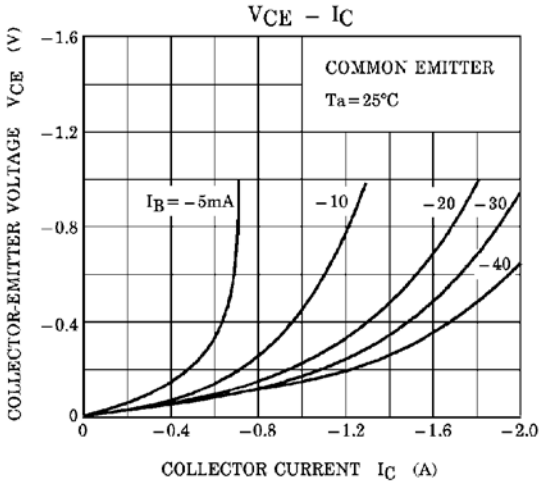
Symbol	Parameter	Min	Typ	Max	Units
OFF CHARACTERISTICS					
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage (I_C=10mAdc, I_B=0)	-50	---	---	Vdc
I_{CBO}	Collector-Base Cutoff Current (V_{CB}=50Vdc,I_E=0)	---	---	-0.1	uAdc
I_{EBO}	Emitter-Base Cutoff Current (V_{EB}=5.0Vdc, I_C=0)	---	---	-0.1	uAdc
ON CHARACTERISTIC					
$h_{FE(1)}$	DC Current Gain (I_C=0.5Adc, V_{CE}=2.0Vdc)	70	---	240	---
$h_{FE(2)}$	DC Current Gain * (I_C=2.0Adc, V_{CE}=2.0Vdc)	20	---	---	---
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage (I_C=1.0Adc, I_B=0.05Adc)	---	---	-0.5	Vdc
$V_{BE(sat)}$	Base-Emitter Saturation Voltage (I_C=1.0Adc,I_B=0.05Adc)	---	---	-1.2	Vdc
f_T	Transition Frequency (V_{CE}=2.0Vdc, I_C=0.5Adc)	100	120	---	MHz
C_{ob}	Collector output capacitance (V_{CB}=10Vdc, f=1.0MHz)	---	40	---	pF

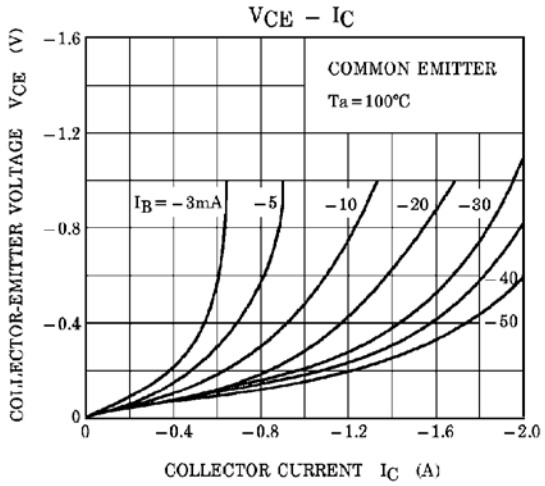
CLASSIFICATION OF $H_{FE(1)}$

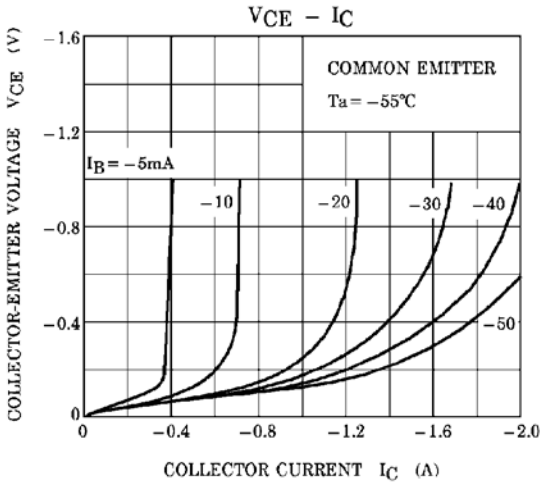
Rank	O	Y
Range	70-140	120-240
Marking	NO	NY

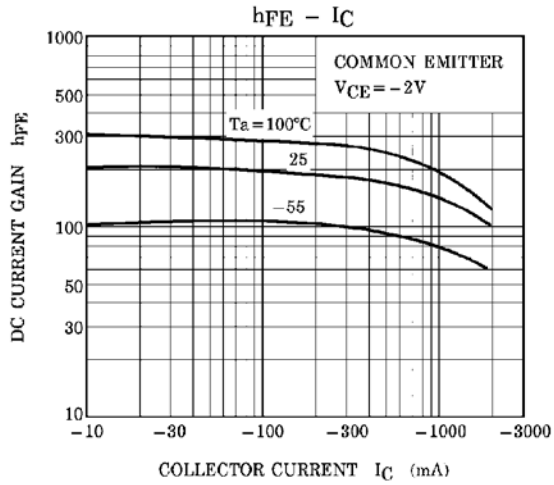
Typical Characteristic

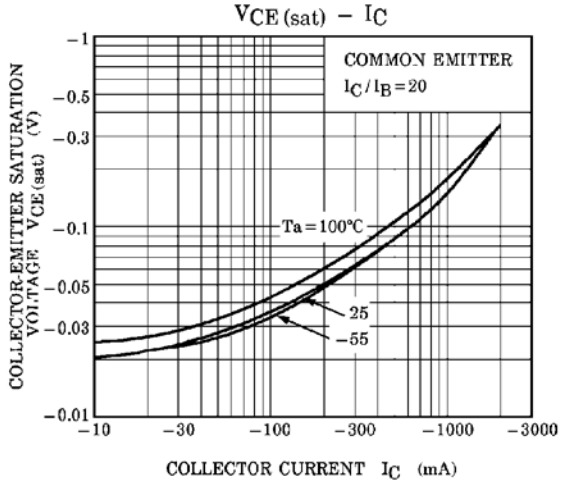
2SA1213

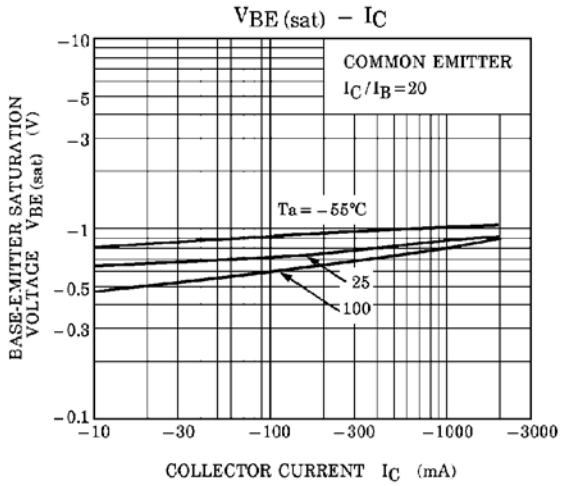






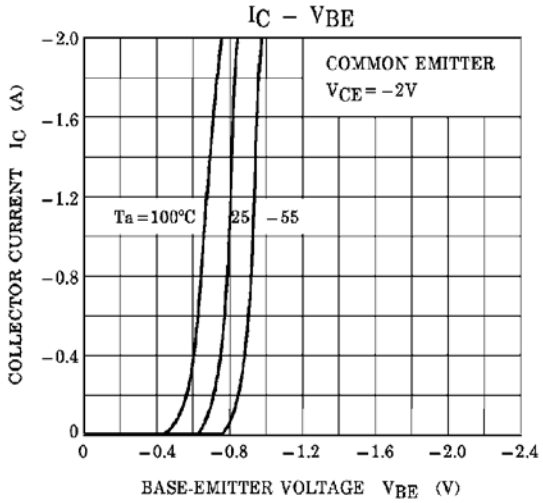


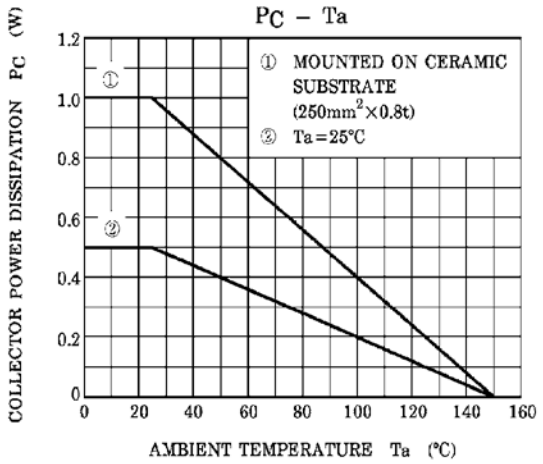


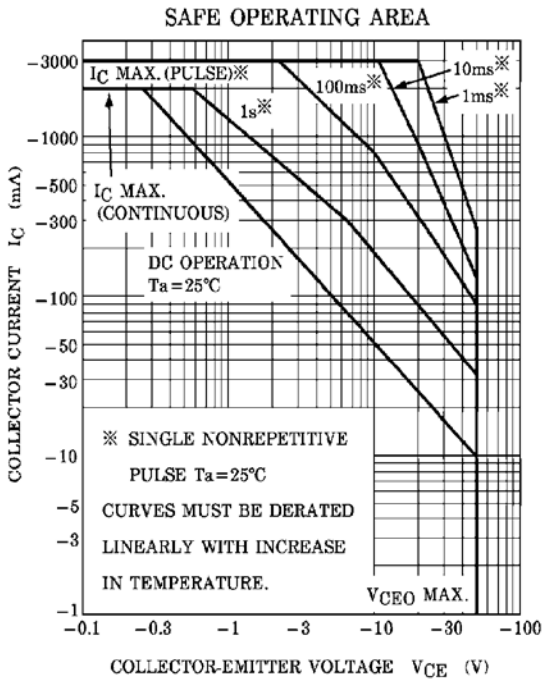


Typical Characteristics

2SA1213







Micro Commercial Components

Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel;1Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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