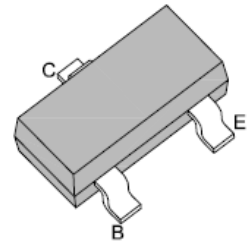


SMD General Purpose Low Noise Transistor (PNP)

Features

- PNP Silicon Epitaxial Planar Transistor for Switching and Amplifier Applications
- RoHS compliance



Mechanical Data

SOT-23



Case:	SOT-23, Plastic Package
Terminals:	Solderable per MIL-STD-202G, Method 208
Weight:	0.008 gram

Maximum Ratings *(T_{Ambient}=25°C unless noted otherwise)*

Symbol	Description	MMBT5087	Unit
	Marking Code	2Q	
V_{CB0}	Collector-Base Voltage	50	V
V_{CEO}	Collector-Emitter Voltage	50	V
V_{EB0}	Emitter-Base Voltage	3	V
I_C	Collector Current	50	mA
P_{tot}*	Power Dissipation above 25°C	225	mW
R_{θJA}	Thermal Resistance from Junction to Ambient	417	°C / W
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature Range	-55 to +150	°C

Note: * FR-5 Board=1.0x0.75x0.62"

SMD General Purpose Low Noise Transistor (PNP)

MMBT5087

Electrical Characteristics ($T_{Ambient}=25^{\circ}C$ unless noted otherwise)

Symbol	Description	MMBT5087		Unit	Conditions
		Min.	Max.		
hFE	D.C. Current Gain	250	800		VCE=5V, IC=0.1mA
		250	-		VCE=5V, IC=1mA
		250	-		VCE=5V, IC=10mA
V(BR)CBO	Collector-Base Breakdown Voltage	50	-	V	IC=100μA, IE=0
V(BR)CEO	Collector-Emitter Breakdown Voltage	50	-	V	IC=1mA, IB=0
VCE(sat)	Collector-Emitter Saturation Voltage	-	0.3	V	IC=10mA, IB=1mA
VBE(sat)	Base-Emitter Saturation Voltage	-	0.85	V	IC=10mA, IB=1mA
ICBO	Collector-Emitter Cut-off Current	-	10	nA	VCB=10V, IE=0
		-	50	nA	VCB=35V, IE=0
fT	Current Gain-Bandwidth Product	40	-	MHz	VCE=5V, IC=0.5mA, f=20MHz
Cob	Collector-Base Capacitance	-	4.0	pF	VCB=5V, IE=0, f=100KHz
NF	Noise Figure	-	2.0	dB	VCE=5V, IC=20μA, RS=10KΩ, f=10Hz to 15.7KHz
		-	2.0	dB	VCE=5V, IC=100μA, RS=3KΩ, f=1KHz
hfe	Small Signal Current Gain	250	900		VCE=5V, IC=1mA f=1KHz

SMD General Purpose Low Noise Transistor (PNP)

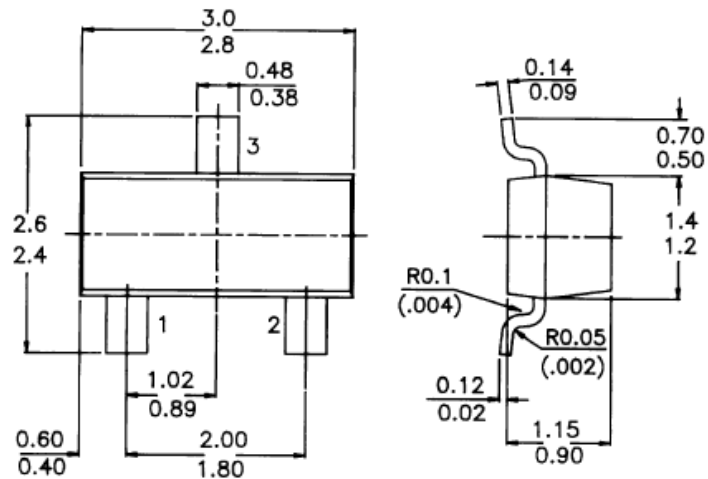
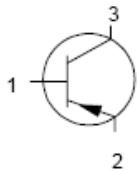
MMBT5087

Dimensions in mm

SOT-23

Pin configuration

- 1 = BASE
- 2 = EMITTER
- 3 = COLLECTOR



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