

PNP General Purpose Transistor

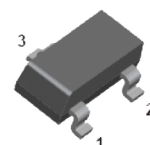
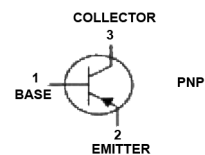


Features:

- Epitaxial planar die construction
- Complementary NPN type available (MMBT4401)
- Also available in lead free version
- Ideal for medium power amplification and switching

Applications:

- Ideal for medium power amplification and switching



SOT-23

Maximum Rating @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Parameter	Symbol	Value	Units
Collector-Base Voltage	V_{CBO}	-40	V
Collector-Emitter Voltage	V_{CEO}	40	
Emitter-Base Voltage	V_{EBO}	6	
Collector Current (DC)	I_C	600	A
Collector Dissipation	P_C	350	W
Junction and Storage Temperature	T_j, T_{stg}	-55 to +150	$^\circ\text{C}$

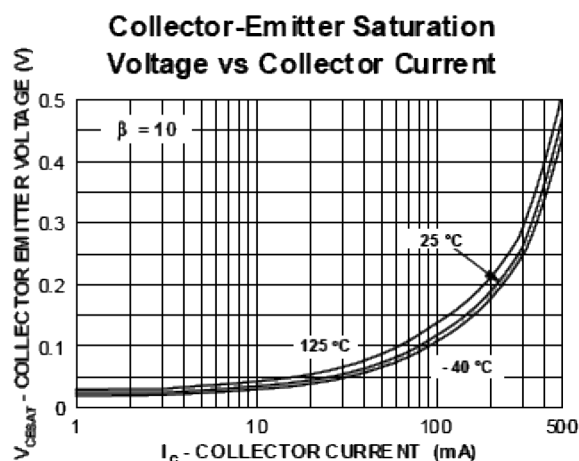
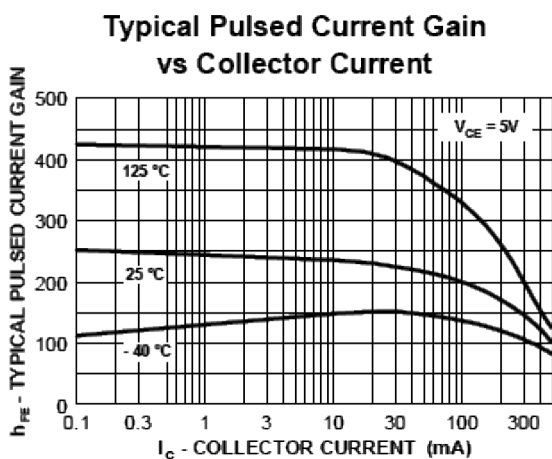
Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Parameter	Symbol	Test conditions	Min.	Max.	Unit
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -100\mu\text{A}, I_E = 0$	-40		
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -1\text{mA}, I_B = 0$	-40		
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -100\mu\text{A}, I_C = 0$	-5		

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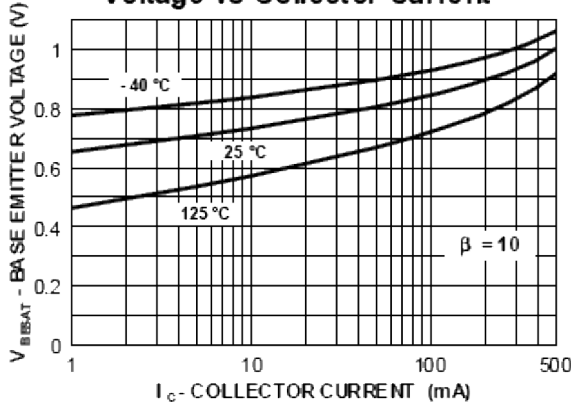
Parameter	Symbol	Test conditions	Min.	Max.	Unit
Collector Cut-Off Current	I_{CEX}	$V_{CE} = -35V, V_{EB} = -0.4V$		0.1	μA
Base Cut-Off Current	I_{BL}	$V_{CE} = -35V, V_{EB} = -0.4V$			
DC Current Gain	h_{FE}	$V_{CE} = -1V; I_C = -0.1mA$ $V_{CE} = -1V; I_C = -1mA$ $V_{CE} = -1V; I_C = -10mA$ $V_{CE} = -2V; I_C = -150mA$ $V_{CE} = -2V; I_C = -500mA$	30 60 100 100 20	300	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -150mA, I_B = -15mA$ $I_C = -500mA, I_B = 50mA$	-	-0.4 -0.75	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = -150mA; I_B = -15mA$ $I_C = -500mA; I_B = -50mA$	-0.75	-0.95 -1.3	
Transition Frequency	f_T	$I_C = -20mA; V_{CE} = -10V;$ $f = 100MHz$	200	-	MHz

Typical Characteristics @ $T_A = 25^\circ C$ unless otherwise specified

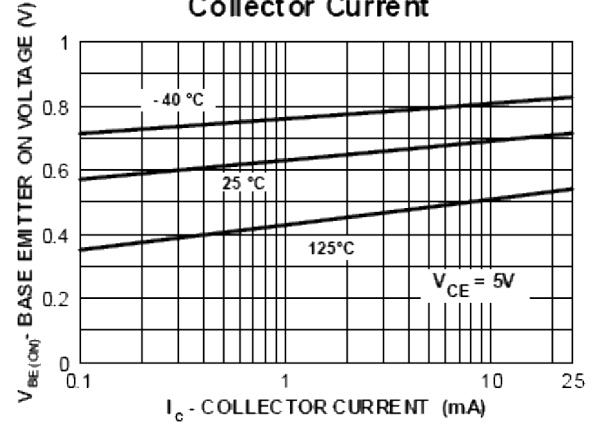


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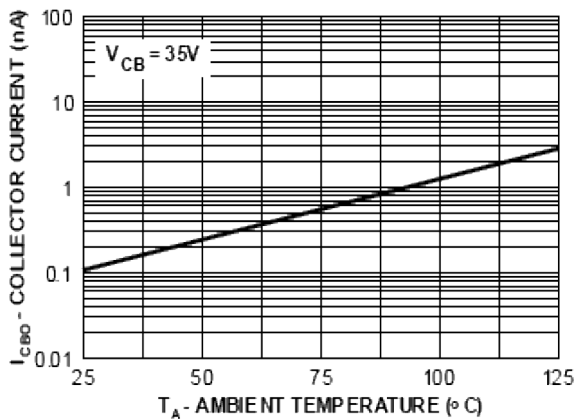
Base-Emitter Saturation Voltage vs Collector Current



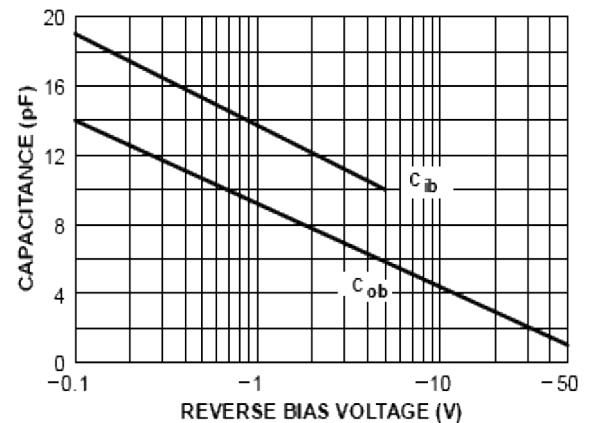
Base Emitter ON Voltage vs Collector Current



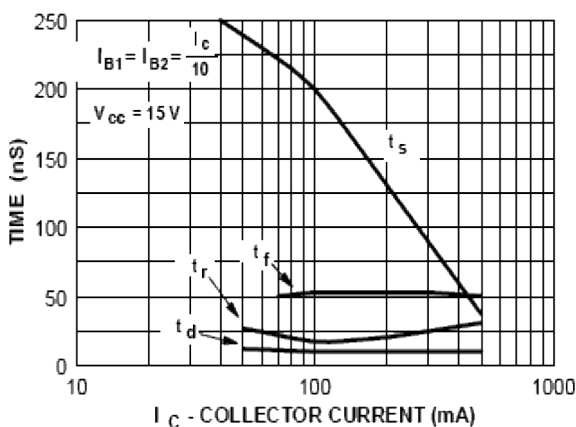
Collector-Cutoff Current vs Ambient Temperature



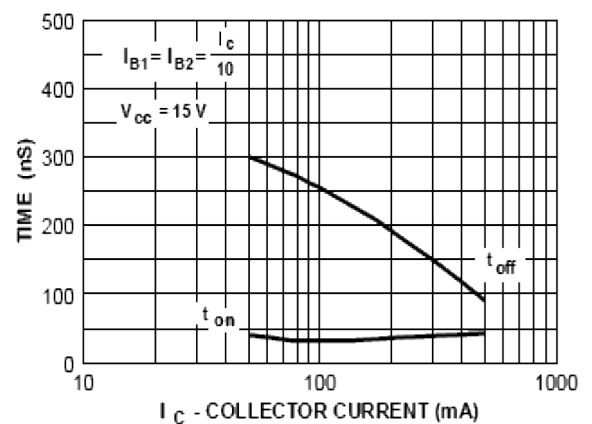
Input and Output Capacitance vs Reverse Bias Voltage



Switching Times vs Collector Current

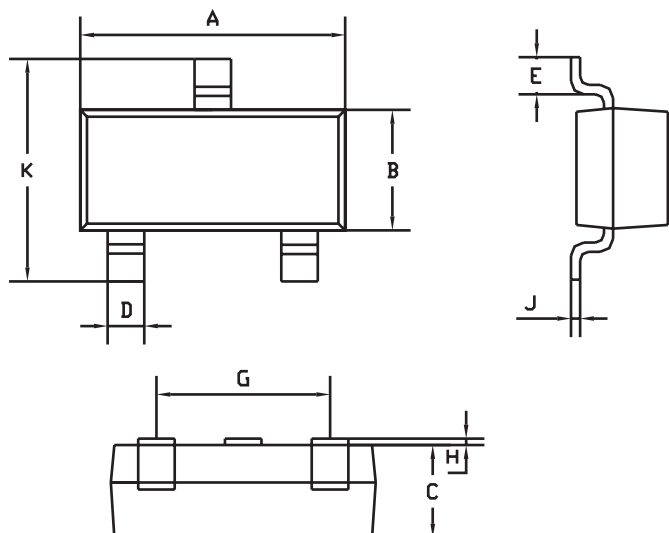


Turn On and Turn Off Times vs Collector Current



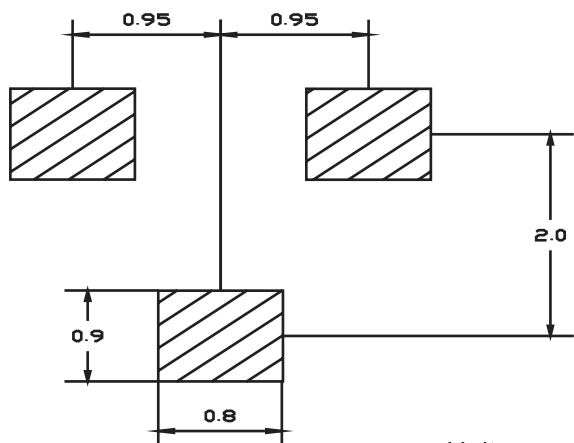
PNP General Purpose Transistor

Plastic Surface Mounted Package:



SOT-23		
Dim	Min	Max
A	2.85	2.95
B	1.25	1.35
C	1 Typical	
D	0.37	0.43
E	0.35	0.48
G	1.85	1.95
H	0.02	0.1
J	0.1 Typical	
K	2.35	2.45
All Dimensions in mm		

Soldering Footprint:



Unit : mm

Part Number Table

Description	Part Number
Transistor, Bipolar, PNP, -40V, -600mA, SOT-23	MMBT4403-7-F

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