

## PNP General Purpose Transistor

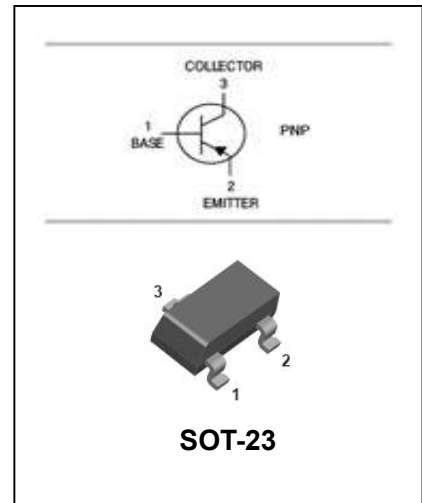
## MMBT4403

### FEATURES

- Epitaxial planar die construction.
- Complementary NPN type available (MMBT4401).
- Also available in lead free version.
- Ideal for medium power amplification and switching.
- MSL 1



HF



### APPLICATIONS

- Ideal for medium power amplification and switching.

### ORDERING INFORMATION

Type No.	Marking	Package Code
MMBT4403□	2T	SOT-23

□: none is for Lead Free package;  
“G” is for Halogen Free package.

### MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Value	UNIT
V <sub>CBO</sub>	collector-base voltage	-40	V
V <sub>CEO</sub>	collector-emitter voltage	-40	V
V <sub>EBO</sub>	emitter-base voltage	-5	V
I <sub>C</sub>	collector current (DC)	-0.6	A
P <sub>C</sub>	Collector dissipation	0.35	W
R <sub>θJA</sub>	Thermal Resistance, Junction to Ambient	357	°C/W
R <sub>θJC</sub>	Thermal Resistance, Junction to Case	250	°C/W
T <sub>J</sub> , T <sub>stg</sub>	junction and storage temperature	-55 to +150	°C

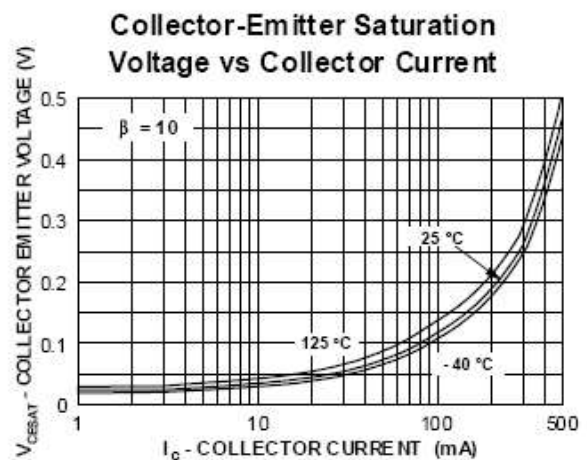
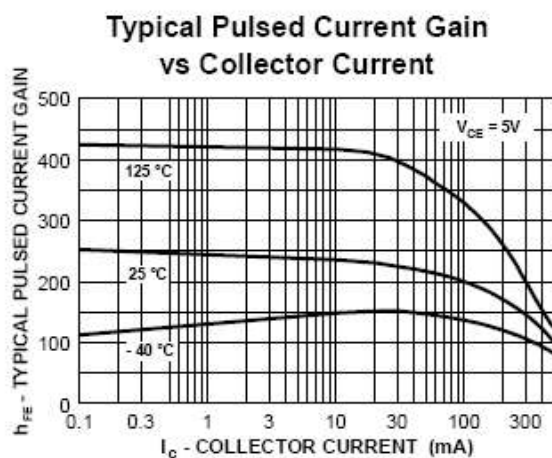
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### ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

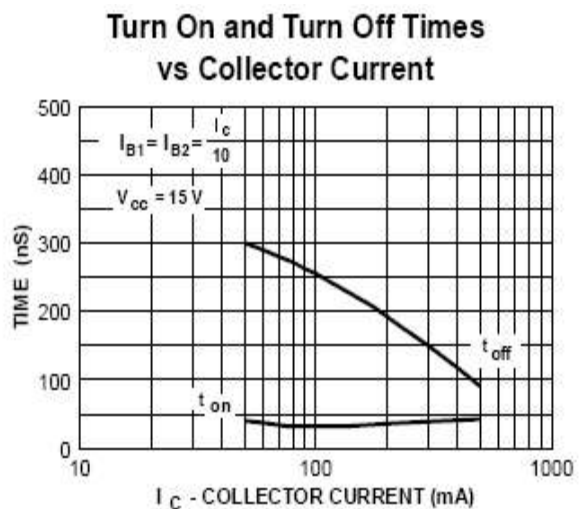
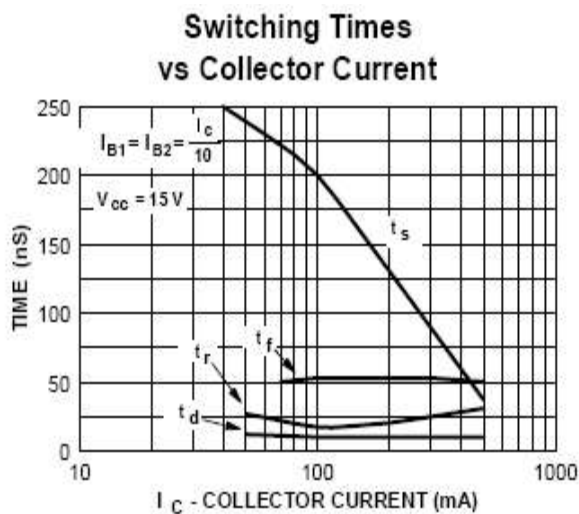
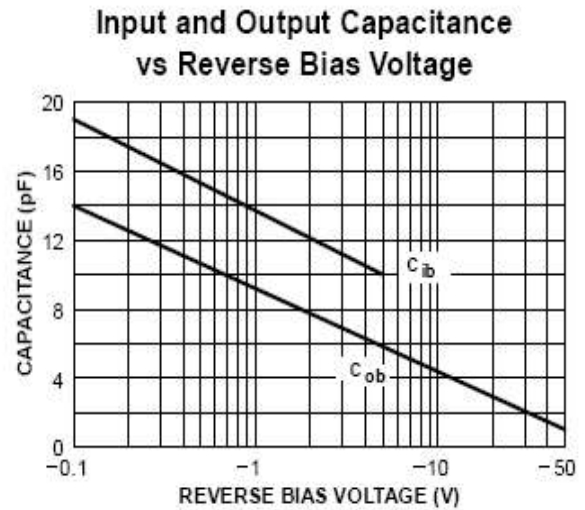
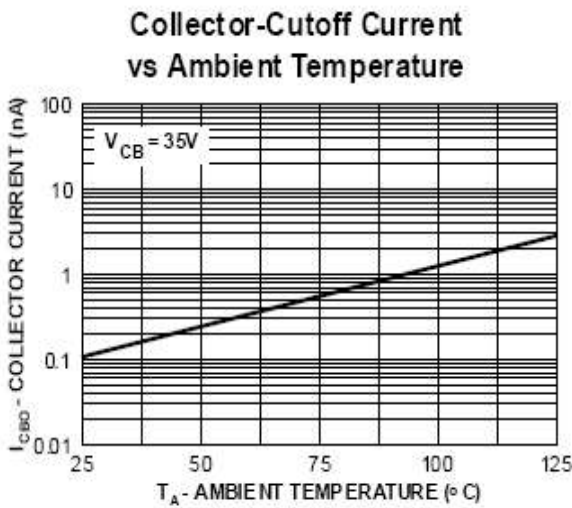
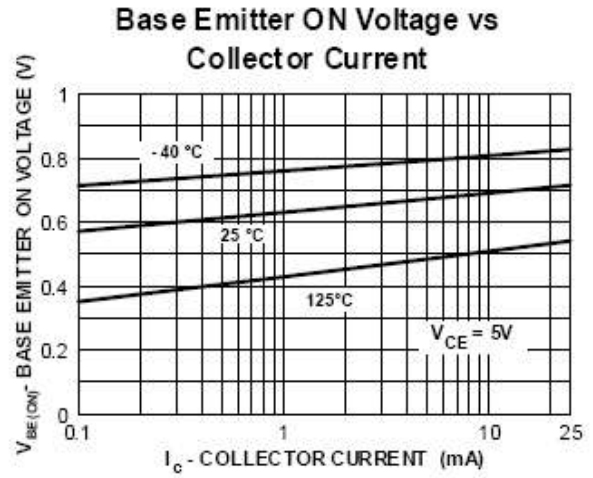
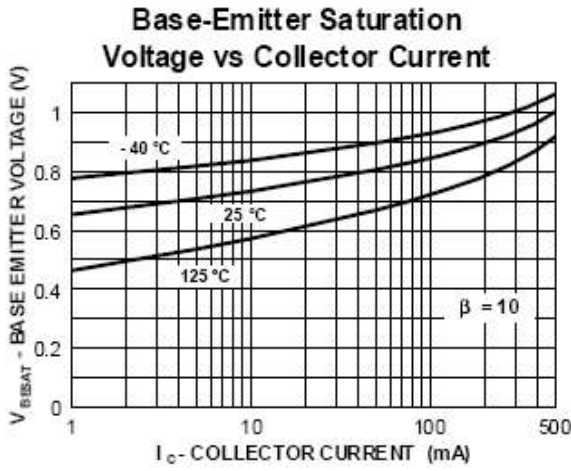
Symbol	Parameter	Test conditions	MIN.	MAX.	UNIT
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C = -100\mu A, I_E = 0$	-40	-	-
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C = -1mA, I_B = 0$	-40	-	-
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E = -100\mu A, I_C = 0$	-5	-	-
$I_{CEX}$	collector cut-off current	$V_{CE} = -35V, V_{BE} = 0.4V$	-	-0.1	$\mu A$
$I_{BL}$	Base cut-off current	$V_{CE} = -35V, V_{BE} = -0.4V$	-	-0.1	$\mu A$
$h_{FE}$	DC current gain	$V_{CE} = -1V; I_C = -0.1mA$	30	-	-
		$V_{CE} = -1V; I_C = -1mA$	60	-	
		$V_{CE} = -1V; I_C = -10mA$	100	-	
		$V_{CE} = -2V; I_C = -150mA$	100	300	
		$V_{CE} = -2V; I_C = -500mA$	20	-	
$V_{CE(sat)}$	collector-emitter saturation voltage	$I_C = -150mA, I_B = -15mA$ $I_C = -500mA, I_B = -50mA$	-	-0.4 -0.75	V
$V_{BE(sat)}$	base-emitter saturation voltage	$I_C = -150mA; I_B = -15mA$ $I_C = -500mA; I_B = -50mA$	-0.75 -	-0.95 -1.3	V
$f_T$	transition frequency	$I_C = -20mA; V_{CE} = -10V;$ $f = 100MHz$	200	-	MHz

### TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified



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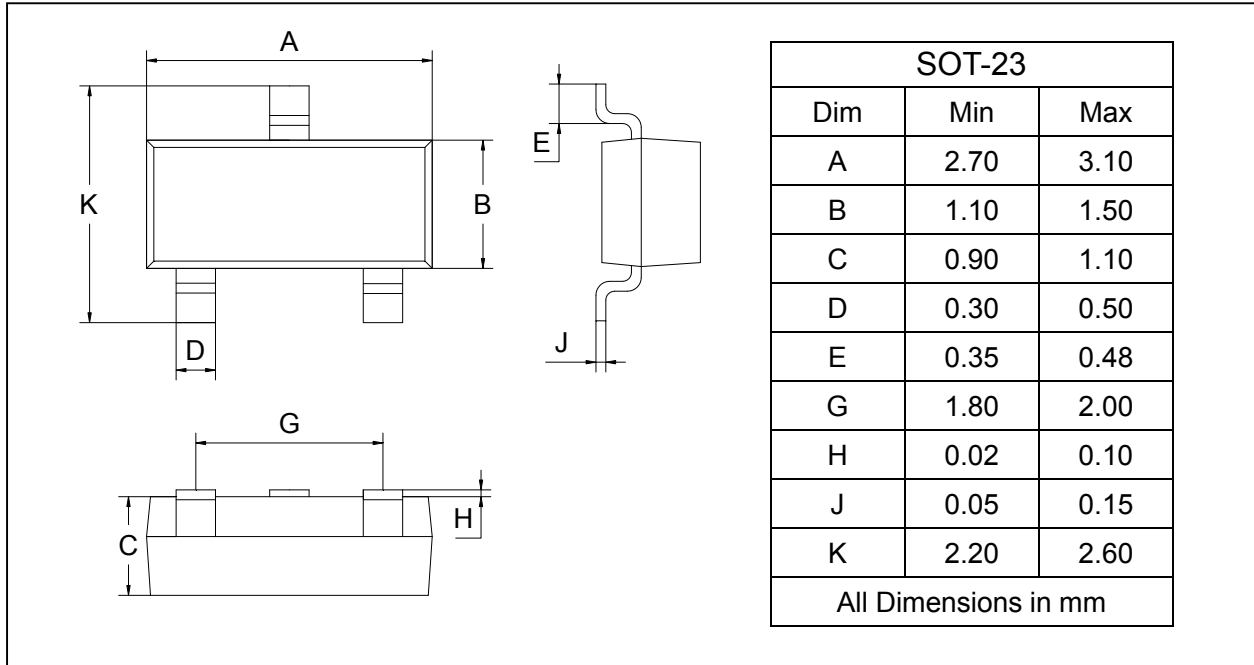
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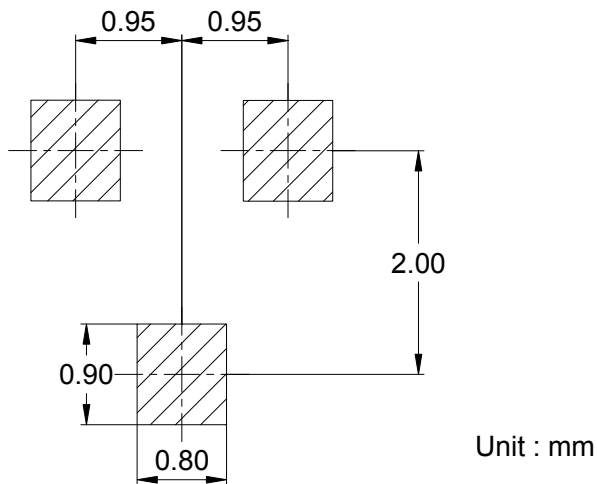
### PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



### SOLDERING FOOTPRINT



### PACKAGE INFORMATION

Device	Package	Shipping
MMBT4403	SOT-23	3000/Tape&Reel