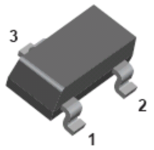
MMBT4403
PNP General Purpose Transistor

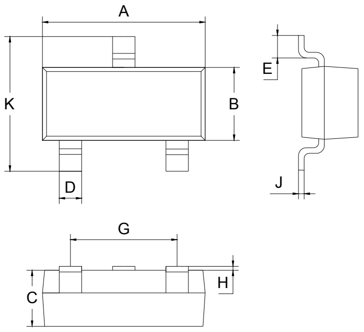
RoHS COMPLIANT



1. BASE
2. EMITTER
3. COLLECTOR

FEATURES

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



SOT-23		
Dim	Min	Max
A	2.70	3.10
B	1.10	1.50
C	1.0 Typical	
D	0.4 Typical	
E	0.35	0.48
G	1.80	2.00
H	0.02	0.1
J	0.1 Typical	
K	2.20	2.60
All Dimensions in mm		

APPLICATIONS

- Ideal for medium power amplification and switching.

ORDERING INFORMATION

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

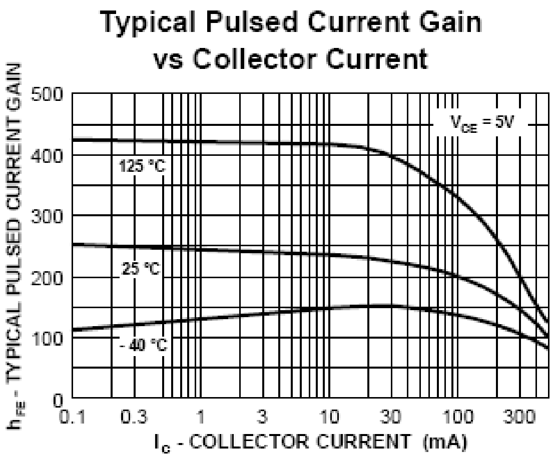
MAXIMUM RATING @ Ta=25℃ unless otherwise specified

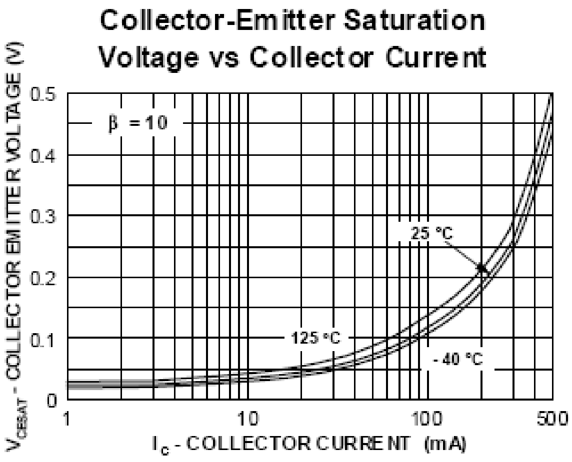
Symbol	**Parameter**	**Value**	**UNIT**
V_{CBO}	collector-base voltage	-40	V
V_{CEO}	collector-emitter voltage	-40	V
V_{EBO}	emitter-base voltage	-5	V
I_C	collector current (DC)	-0.6	A
P_C	Collector dissipation	0.35	W
$R_{\theta JA}$	Thermal Resistance,Junction to Ambient	357	℃/W
T_j ,T_{stg}	junction and storage temperature	-55 to +150	°C

ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

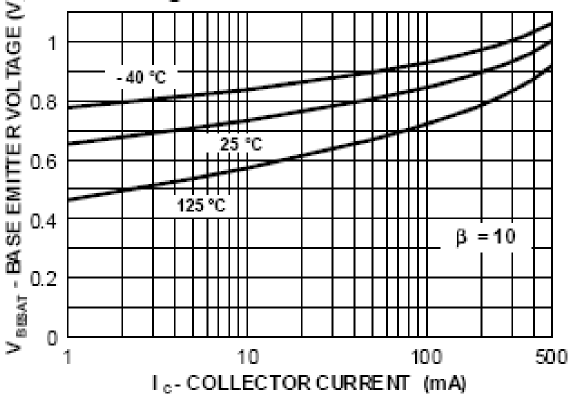
Symbol	**Parameter**	**Test conditions**	**MIN.**	**MAX.**	**UNIT**
$V_{(BR)CBO}$	Collector-base breakdown voltage	I_C=-100μA,I_E=0	-40		
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	I_C=-1mA,I_B=0	-40		
$V_{(BR)EBO}$	Emitter-base breakdown voltage	I_E=-100μA,I_C=0	-5		
I_{CEX}	collector cut-off current	V_{CE}=-35V,V_{BE}=0.4V		-0.1	μA
I_{BL}	Base cut-off current	V_{CE}=-35V,V_{BE}=-0.4V		-0.1	μA
h_{FE}	DC current gain	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	
$V_{CE(sat)}$	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℃ unless otherwise specified

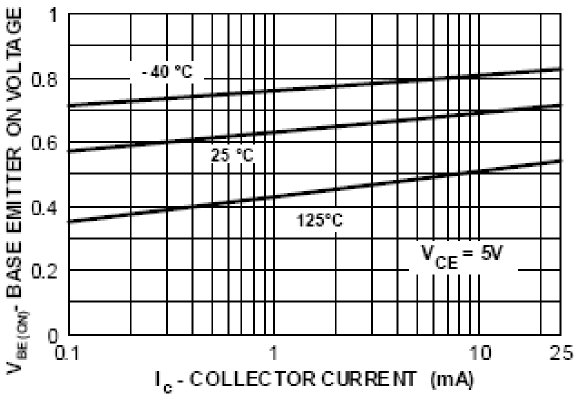

Typical Pulsed Current Gain vs Collector Current


Collector-Emitter Saturation Voltage vs Collector Current

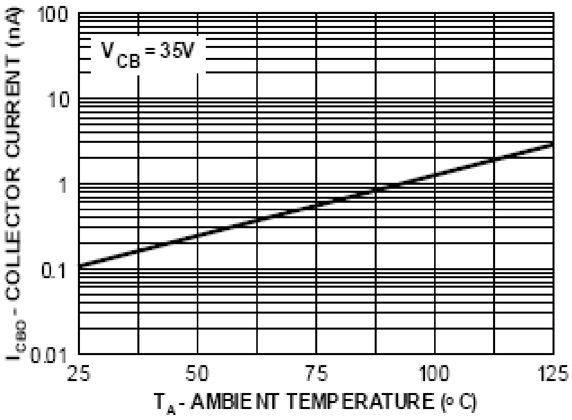
Base-Emitter Saturation Voltage vs Collector Current



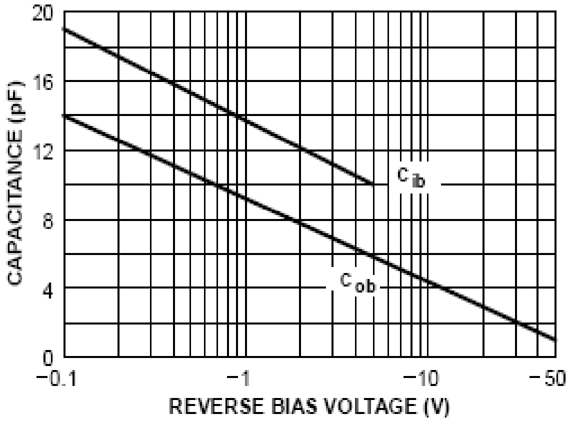
Base Emitter ON Voltage vs Collector Current



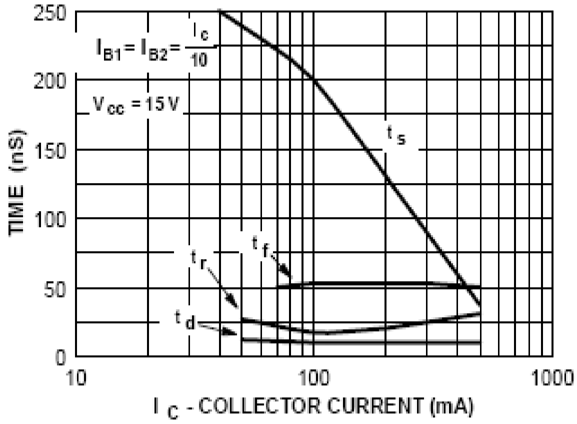
Collector-Cutoff Current vs Ambient Temperature



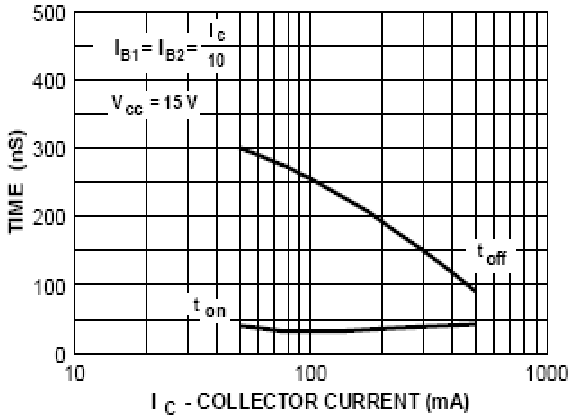
Input and Output Capacitance vs Reverse Bias Voltage



Switching Times vs Collector Current



Turn On and Turn Off Times vs Collector Current



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