Elektronische Bauelemente

MMBT4403-C

-600mA, -40V

PNP Plastic Encapsulated Transistor

RoHS Compliant Product

A suffix of "-C" specifies halogen and lead free

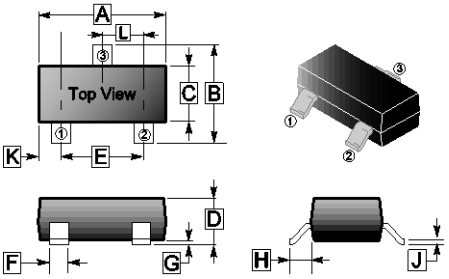
FEATURES

- Switching Transistor

MARKING

2T

SOT-23



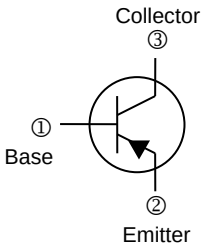
REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.65	3.10	G	0	0.18
B	2.10	3.00	H	0.55 REF.	
C	1.10	1.80	J	0.05	0.26
D	0	1.40	K	0.60 REF.	
E	1.70	2.30	L	0.95 TYP.	
F	0.28	0.55			

PACKAGE INFORMATION

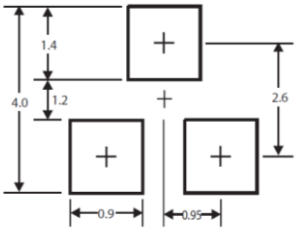
Package	MPQ	Leader Size
SOT-23	3K	7 inch

ORDER INFORMATION

Part Number	Type
MMBT4403-C	Lead (Pb)-free and Halogen-free



Mounting Pad Layout



*Dimensions in millimeters

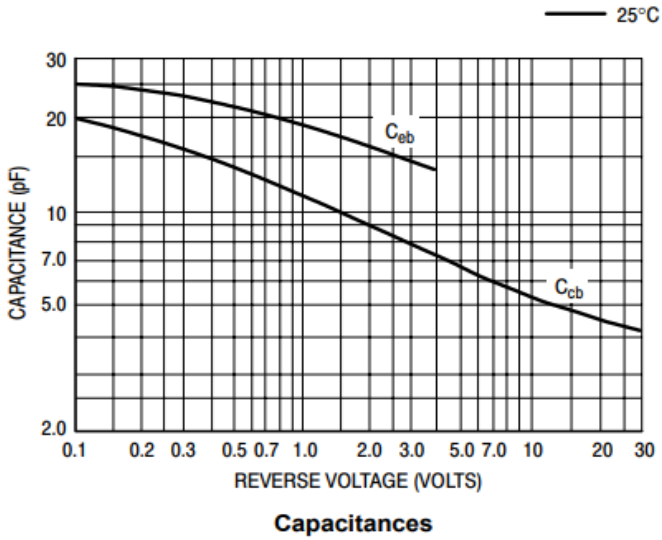
ABSOLUTE MAXIMUM RATINGS (T_A=25°C unless otherwise noted)

Parameter	Symbol	Ratings	Unit
Collector-Emitter Voltage	V_{CEO}	-40	V
Collector-Base Voltage	V_{CBO}	-40	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current-Continuous	I_C	-600	mA
Collector Power Dissipation	P_D	300	mW
Junction, Storage Temperature	T_J, T_{STG}	150, -55~150	°C

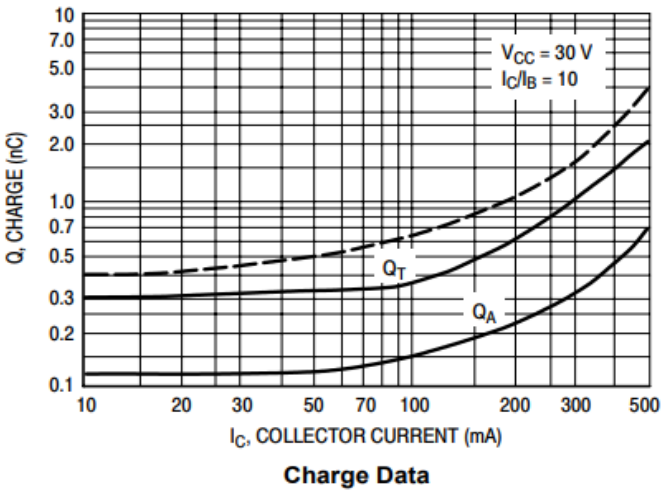
ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-40	-	-	V	I_C= -100μA, I_B=0
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-40	-	-	V	I_C= -1mA, I_E=0
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5	-	-	V	I_E= -100μA, I_C=0
Collector Cut-off Current	I_{CBO}	-	-	-0.1	uA	V_{CB}= -35V, I_E=0
Collector Cut-off Current	I_{CEO}	-	-	-0.1		V_{CE}= -35V, V_{EB}=0
Emitter Cut-off Current	I_{EBO}	-	-	-0.1		V_{EB}= -4V, I_C=0
DC Current Gain	h_{FE}	100	-	300		I_C= -150mA, V_{CE}= -2V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	-	-	-0.4	V	I_C= -150mA, I_B= -15mA
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	-	-	-0.95	V	I_C= -150mA, I_B= -15mA
Current-Gain-Bandwidth Product	f_T	200	-	-	MHz	I_C= -20mA, V_{CE}= -10V, f=100MHz

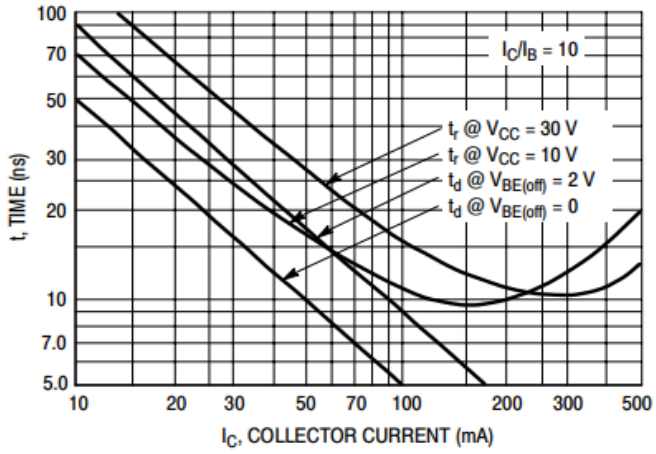
TYPICAL CHARACTERISTICS



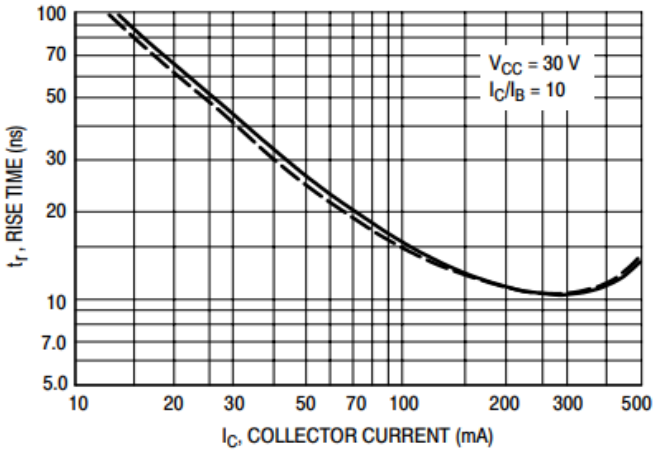
Capacitances



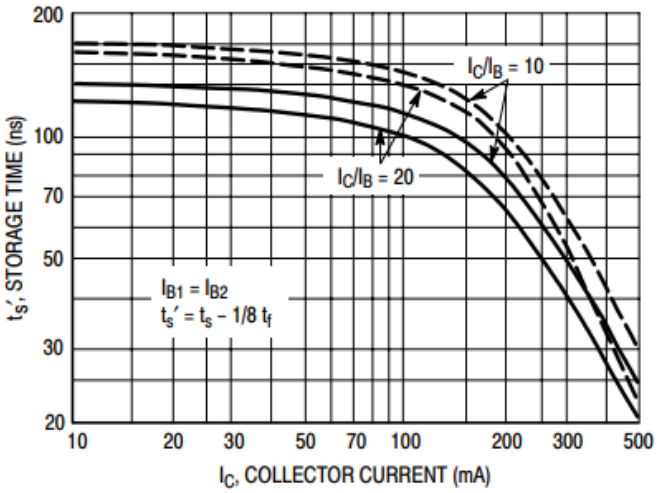
Charge Data



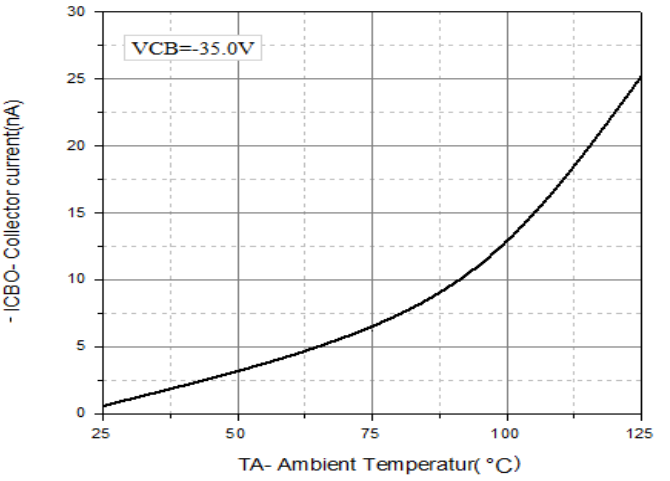
Turn−On Time



Rise Time



Storage Time

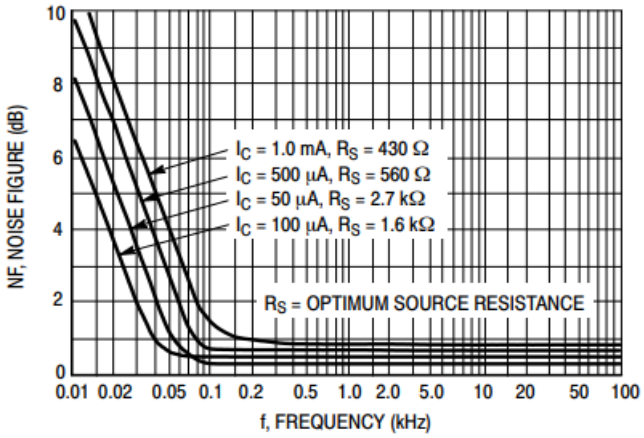


Collector cutoff current vs Ambient temperature

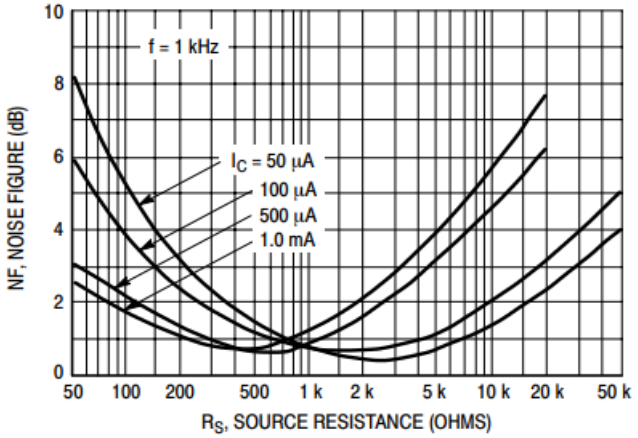
TYPICAL CHARACTERISTICS

SMALL−SIGNAL CHARACTERISTICS NOISE FIGURE

V_{CE} = −10 Vdc, T_A = 25°C; Bandwidth = 1.0 Hz



Frequency Effects

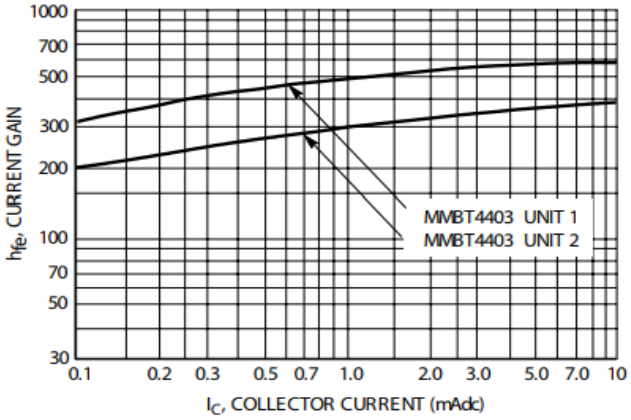


Source Resistance Effects

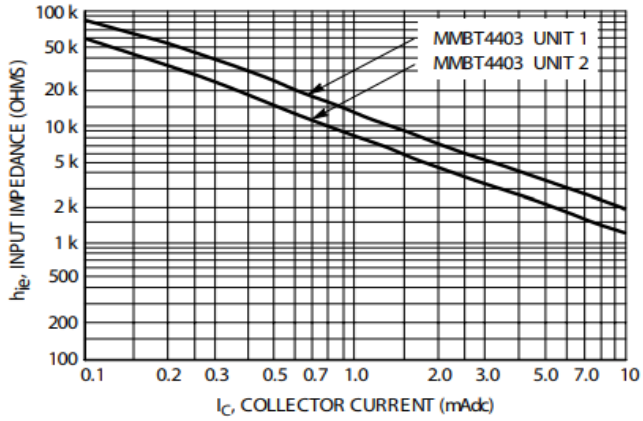
h PARAMETERS

V_{CE} = 10 Vdc, f = 1.0 kHz, T_A = 25C

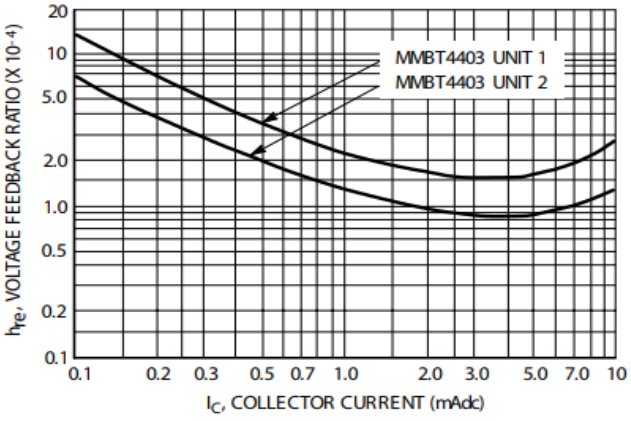
This group of graphs illustrates the relationship between h_{fe} and other "h" parameters for this series of transistors. T o obtain these curves, a high-gain and a low-gain unit were selected from the MMBT4403 lines, and the same units were used to develop the correspondingly numbered curves on each graph.



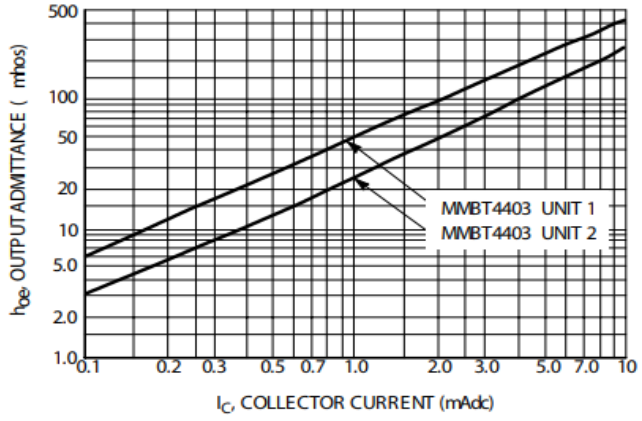
Current Gain



Input Impedance



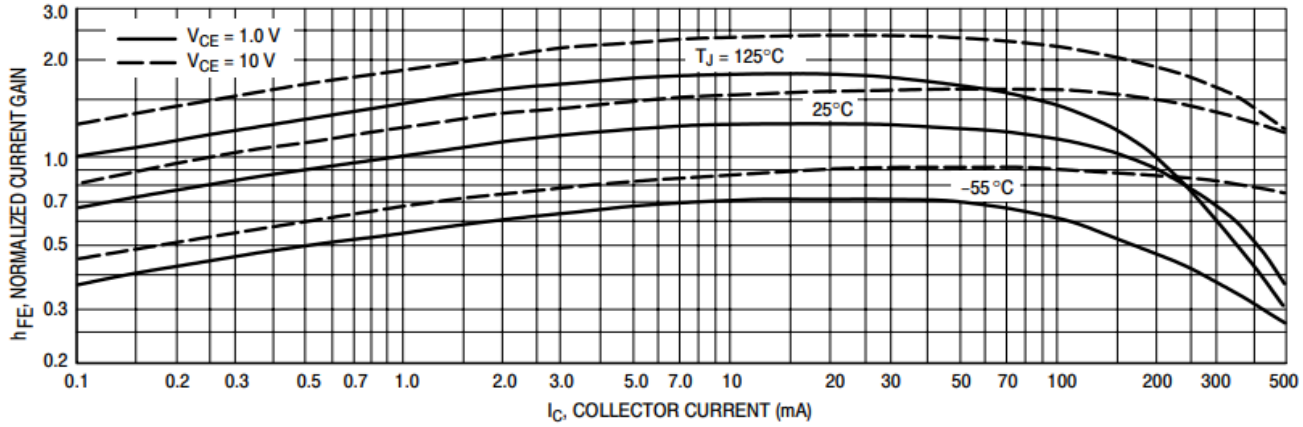
Voltage Feedback Ratio



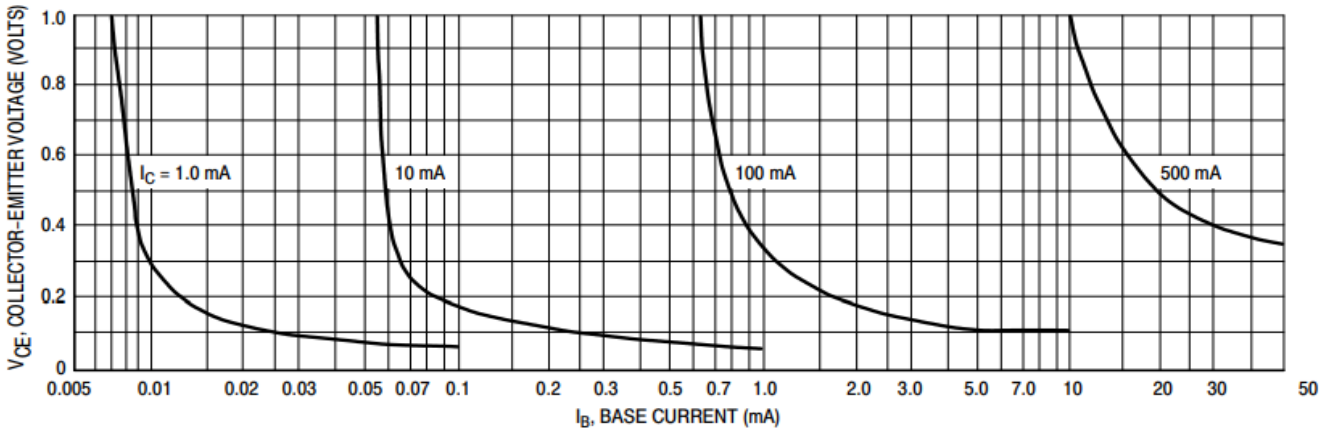
Output Admittance

TYPICAL CHARACTERISTICS

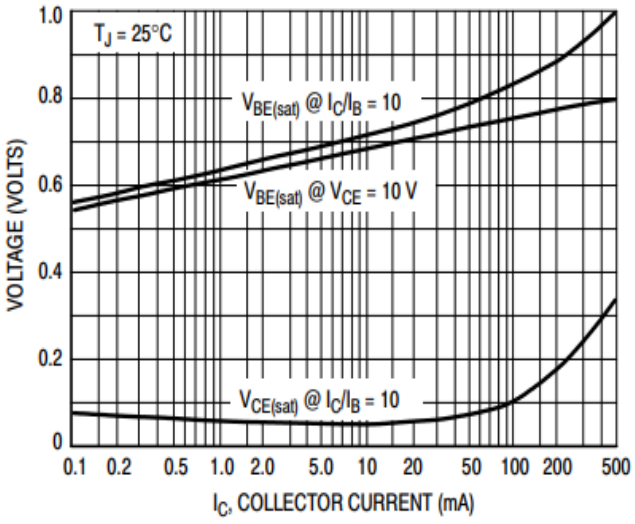
STATIC CHARACTERISTICS



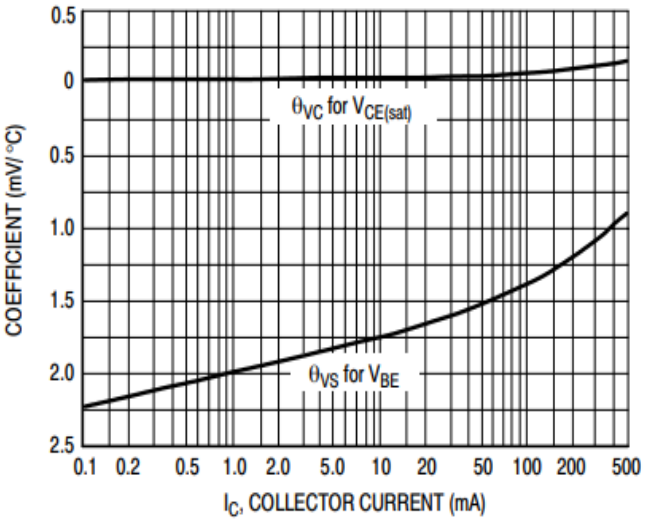
DC Current Gain



Collector Saturation Region



"On" Voltages



Temperature Coefficients