



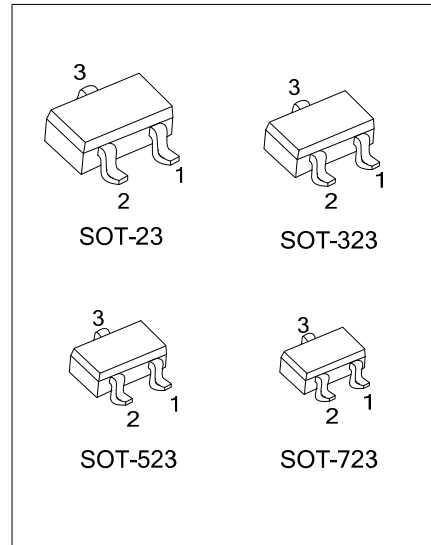
MMBTH10

NPN SILICON TRANSISTOR

RF TRANSISTOR

DESCRIPTION

The UTC **MMBTH10** is designed for using as VHF and UHF oscillators and VHF Mixer in a tuner of a TV receiver.

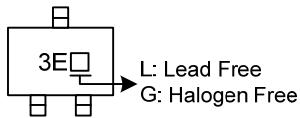


ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free Plating	Halogen Free		1	2	3	
MMBTH10L-x-AE3-R	MMBTH10G-x-AE3-R	SOT-23	E	B	C	Tape Reel
MMBTH10L-x-AL3-R	MMBTH10G-x-AL3-R	SOT-323	E	B	C	Tape Reel
MMBTH10L-x-AN3-R	MMBTH10G-x-AN3-R	SOT-523	E	B	C	Tape Reel
MMBTH10L-x-AQ3-R	MMBTH10G-x-AQ3-R	SOT-723	E	B	C	Tape Reel

MMBTH10L-x-AE3-R	(1)Packing Type	(1) R: Tape Reel
	(2)Package Type	(2) AE3: SOT-23, AL3: SOT-323, AN3: SOT-523 AQ3: SOT-723
	(3)Rank	(3) x: refer to Classification of h_{FE}
	(4)Lead Plating	(4) G: Halogen Free, L: Lead Free

MARKING



■ ABSOLUTE MAXIMUM RATING (T_A=25°C unless otherwise specified)

PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Base Voltage		V _{CB0}	30	V
Collector-Emitter Voltage		V _{CEO}	25	V
Emitter-Base Voltage		V _{EB0}	3	V
Power Dissipation	SOT-23	P _C	225	mW
	SOT-323/SOT-523		200	mW
	SOT-723		150	mW
Collector current		I _C	50	mA
Junction Temperature		T _J	150	°C
Storage Temperature		T _{STG}	-55 ~ +150	°C

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged.
Absolute maximum ratings are stress ratings only and functional device operation is not implied.

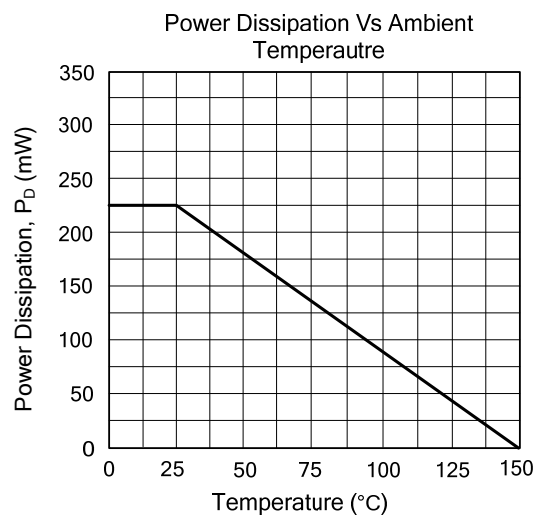
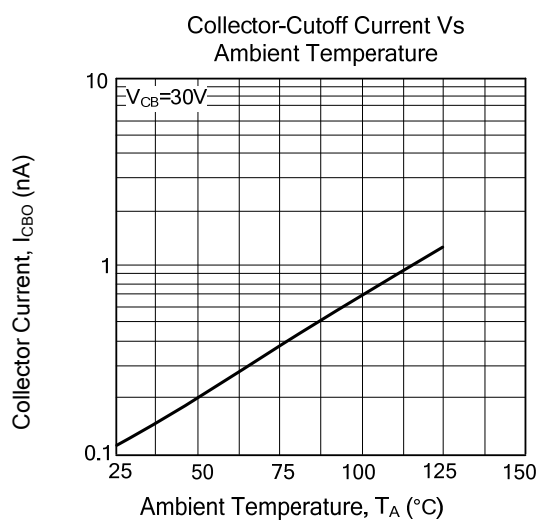
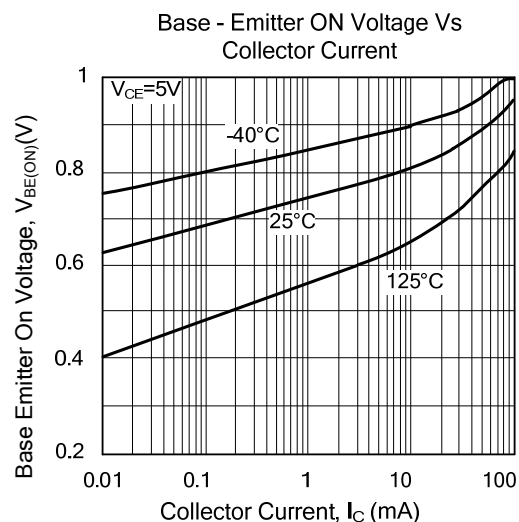
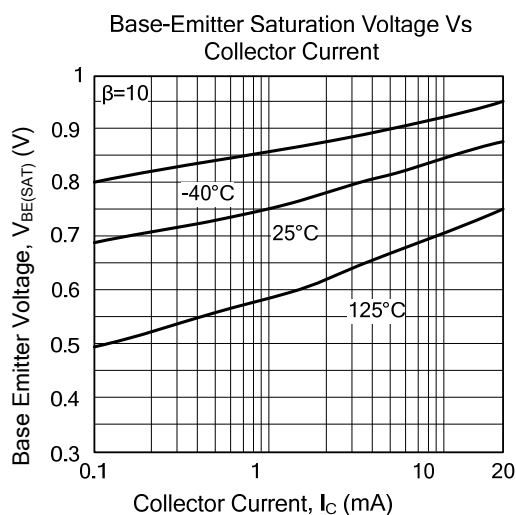
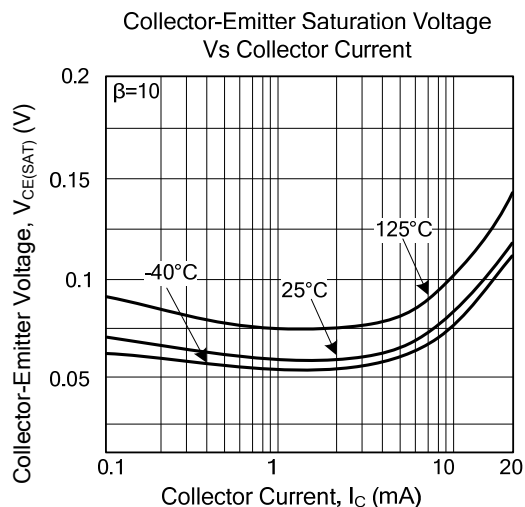
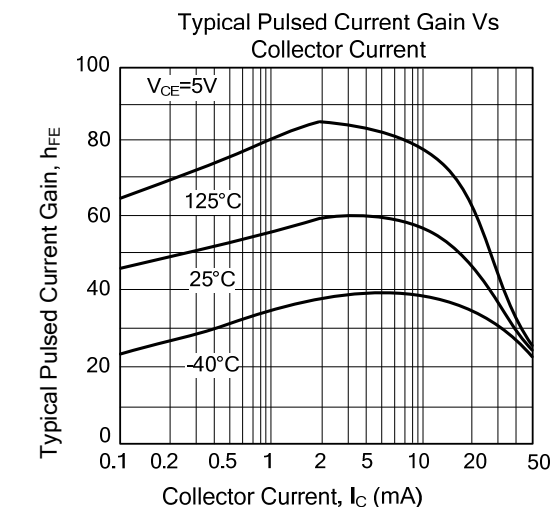
■ ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV _{CBO}	I _C =100μA	30			V
Collector-Emitter Breakdown Voltage	BV _{CEO}	I _C =1mA	25			V
Emitter-Base Breakdown Voltage	BV _{EB0}	I _E =10μA	3			V
Collector-Emitter Saturation Voltage	V _{CE(SAT)}	I _C =4mA, I _B =400μA			500	mV
Base-Emitter on Voltage	V _{BE(ON)}	V _{CE} =10V, I _C =4mA			950	mV
Collector Cut-off Current	I _{CBO}	V _{CB} =25V			100	nA
Emitter Cut-off Current	I _{EB0}	V _{EB} =2V			100	nA
DC Current Gain	h _{FE}	V _{CE} =10V, I _C =4mA	60			
Output Capacitance	C _{ob}	V _{CB} =10V, f=1MHZ			0.7	pF
Current Gain Bandwidth Product	f _T	V _{CE} =10V, I _C =4mA, f=100MHz	650			MHz

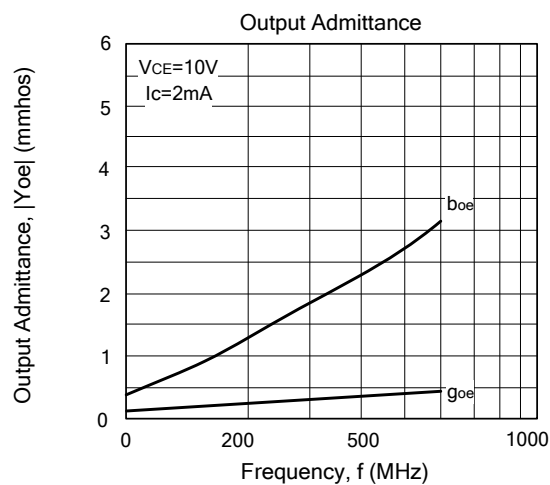
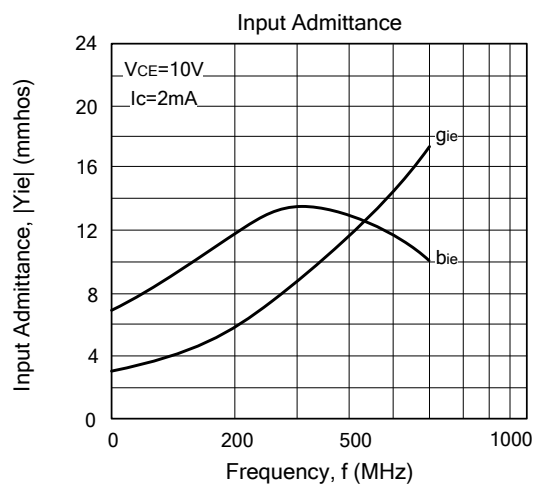
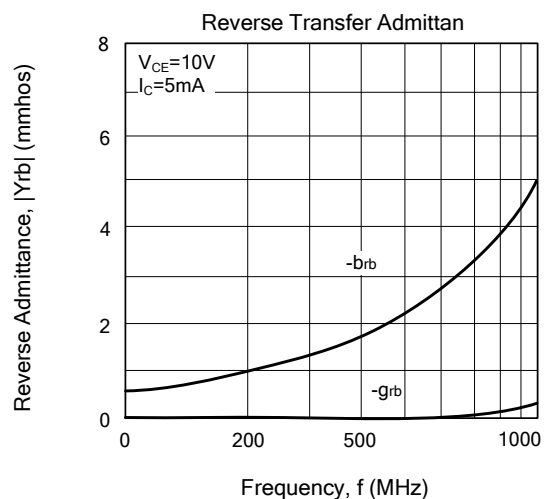
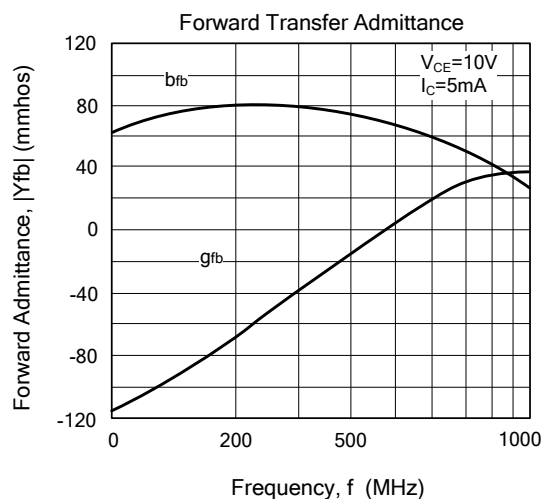
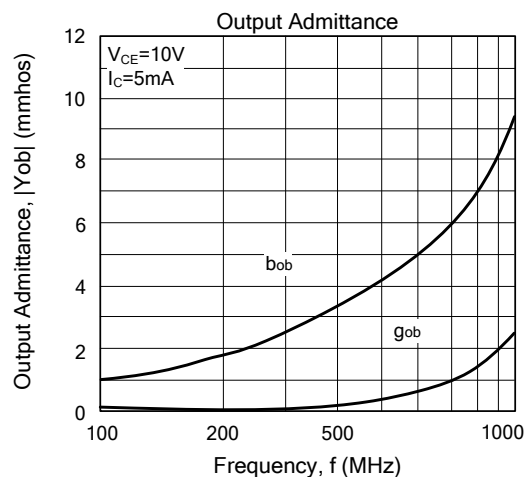
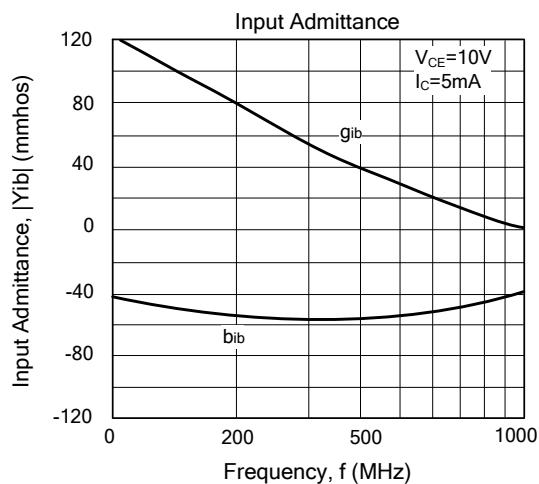
■ CLASSIFICATION OF h_{FE}

RANK	A	B	C
RANGE	60-100	90-130	120-200

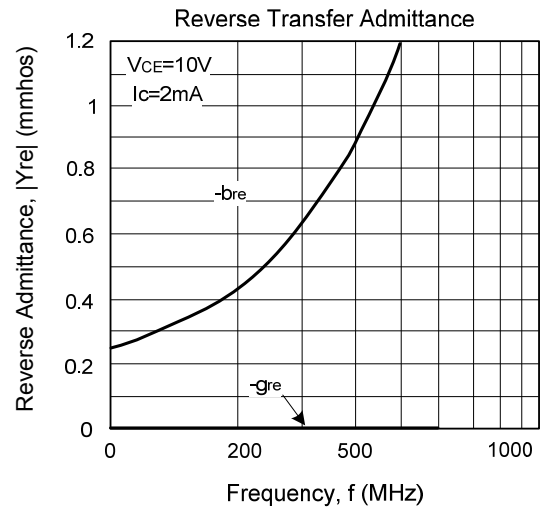
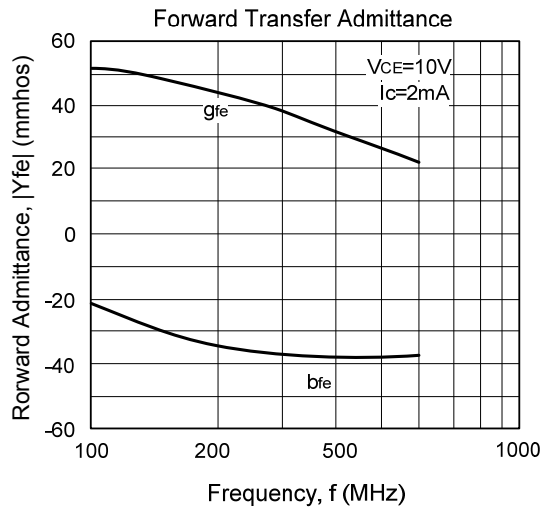
TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS(Cont.)



■ TYPICAL CHARACTERISTICS(Cont.)



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