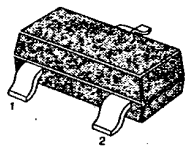
MMBT5088 NPN EPITAXIAL SILICON TRANSISTOR

T-29-19

LOW NOISE TRANSISTOR

SOT-23



1. Base 2. Emitter 3. Collector

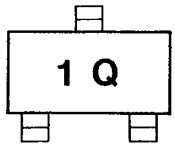
ABSOLUTE MAXIMUM RATINGS (T_a=25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	35	V
Collector-Emitter Voltage	V_{CEO}	30	V
Emitter-Base Voltage	V_{EBO}	4.5	V
Collector Current	I_C	50	mA
Collector Dissipation	P_C	350	mW
Storage Temperature	Tstg	150	°C

ELECTRICAL CHARACTERISTICS (T_a=25°C)

Characteristic	Symbol	Test Condition	Min	Max	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	I_C=100μA, I_E=0	35		V
Collector-Emitter Breakdown Voltage	BV_{CEO}	I_C=1mA, I_B=0	30		V
Collector Cutoff Current	I_{CBO}	V_{CB}=20V, I_E=0		50	nA
Emitter Cutoff Current	I_{EBO}	V_{BE}=3V, I_C=0		50	nA
DC Current Gain	h_{FE}	V_{CE}=5V, I_C=100μA	300	900	
		V_{CE}=5V, I_C=1mA	350		
		V_{CE}=5V, I_C=10mA	300		
Collector-Emitter Saturation Voltage	V_{CE} (sat)	I_C=10mA, I_B=1.0mA		0.5	V
Base-Emitter Saturation Voltage	V_{BE} (sat)	I_C=10mA, I_B=1.0mA		0.8	V
Current Gain-Bandwidth Product	f_T	I_C=500μA, V_{CE}=5V f=20MHz	50		MHz
Collector Base Capacitance	Ccb	V_{CB}=5V, I_E=0 f=100kHz		4	pF
Noise Figure	NF	I_C=100μA, V_{CE}=5V R_S=10 KΩ f=10Hz to 15.7KHz		3	dB

Marking



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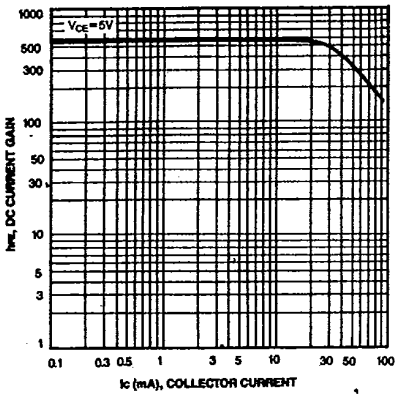
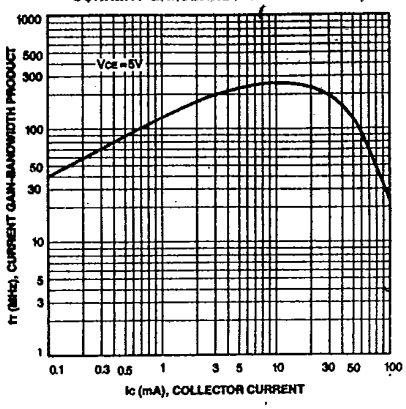
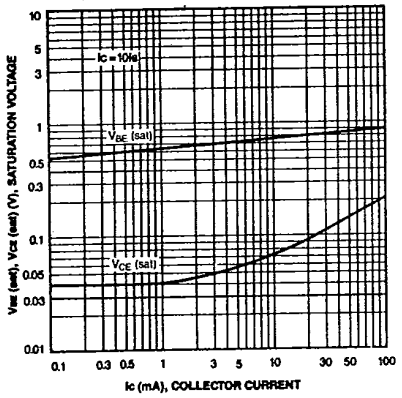
DC CURRENT GAIN



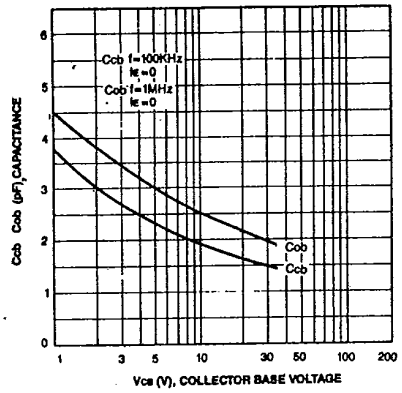
CURRENT GAIN BANDWIDTH PRODUCT



BASE-EMITTER SATURATION VOLTAGE
COLLECTOR-EMITTER SATURATION VOLTAGE



OUTPUT CAPACITANCE
COLLECTOR-BASE CAPACITANCE



3

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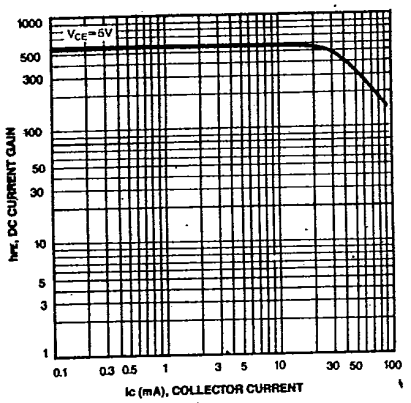
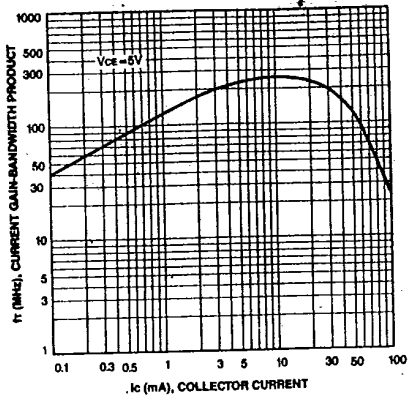
DC CURRENT GAIN



CURRENT GAIN BANDWIDTH PRODUCT



NOISE FIGURE