

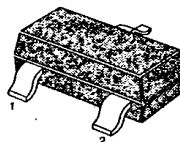
MMBT5088**NPN EPITAXIAL SILICON TRANSISTOR**

T-29-19

LOW NOISE TRANSISTOR**ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)**

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	35	V
Collector-Emitter Voltage	V_{CEO}	30	V
Emitter-Base Voltage	V_{EBQ}	4.5	V
Collector Current	I_C	50	mA
Collector Dissipation	P_C	350	mW
Storage Temperature	T_{stg}	150	$^\circ\text{C}$

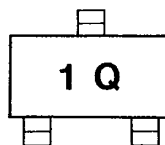
SOT-23



1. Base 2. Emitter 3. Collector

ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

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

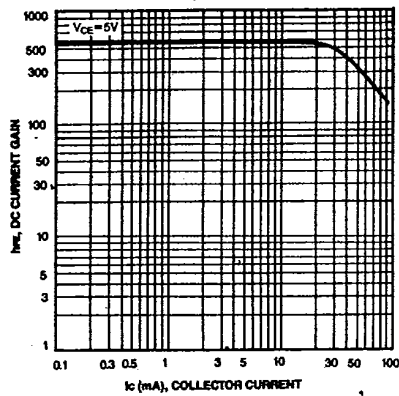
Marking

MMBT5088

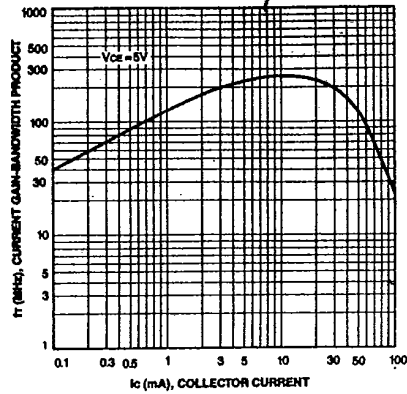
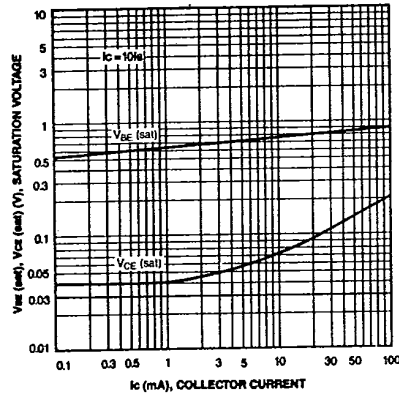
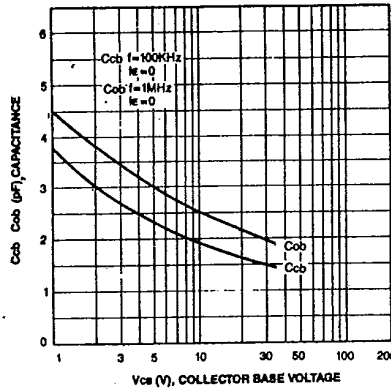
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T-29-19

DC CURRENT GAIN



CURRENT GAIN BANDWIDTH PRODUCT

BASE-EMITTER SATURATION VOLTAGE
COLLECTOR-EMITTER SATURATION VOLTAGEOUTPUT CAPACITANCE
COLLECTOR-BASE CAPACITANCE

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