

TRANSISTOR (NPN)

Features

- Power dissipation

$$P_{CM} : 0.225 \text{ W (Tamb}=25 \text{ C)}$$

- Pluse Drain

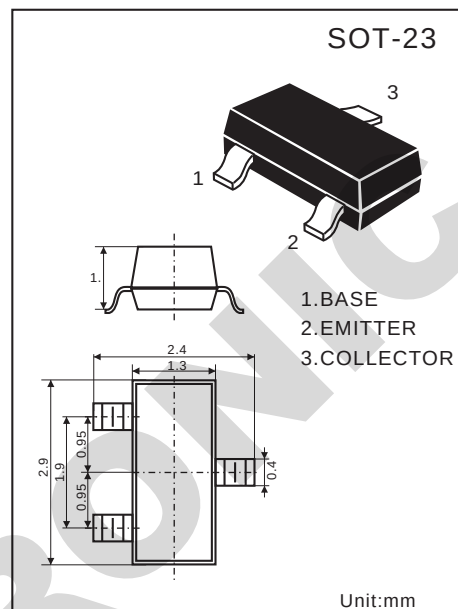
$$I_{CM} : -0.6 \text{ mA}$$

- Reverse Voltage

$$V_{(BR)CBO} : -40\text{V}$$

- Operating and storage junction temperature range

$$T_j, T_{stg} : -55^{\circ}\text{C to } +150^{\circ}\text{C}$$



Electrical Characteristics

(Ta=25°C)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -100\mu\text{A}, I_E = 0$	-40			V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -1 \text{ mA}, I_B = 0$	-40			V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -100\mu\text{A}, I_C = 0$	-5			V
Collector Cut-off Current	I_{CBO}	$V_{CB} = -35\text{V}, I_E = 0$			-0.1	μA
Collector Cut-off Current	I_{CEO}	$V_{CB} = -35\text{V}, I_B = 0$			-0.1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = -4\text{V}, I_C = 0$			-0.1	μA
DC Current Gain (Note)	$H_{FE(1)}$	$V_{CE} = -2\text{V}, I_C = -150\text{mA}$	100		300	
	$H_{FE(2)}$	$V_{CE} = -2\text{V}, I_C = -500\text{mA}$	20			
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -150\text{mA}, I_B = -15\text{mA}$			-0.4	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -150\text{mA}, I_B = -15\text{mA}$			-0.95	V
Transition Frequency	f_T	$V_{CE} = -10\text{V}, I_C = -20\text{mA}, f = 100\text{MHz}$	200			Mhz

Device Marking

MMBT4401LT1 = 2X

Typical Characteristics

STATIC CHARACTERISTICS

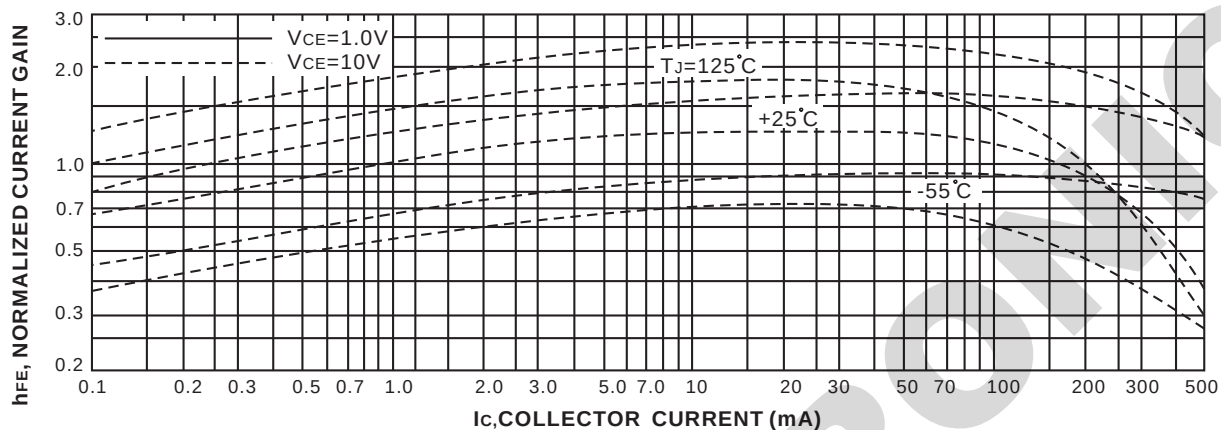


Figure 14. DC Current Gain

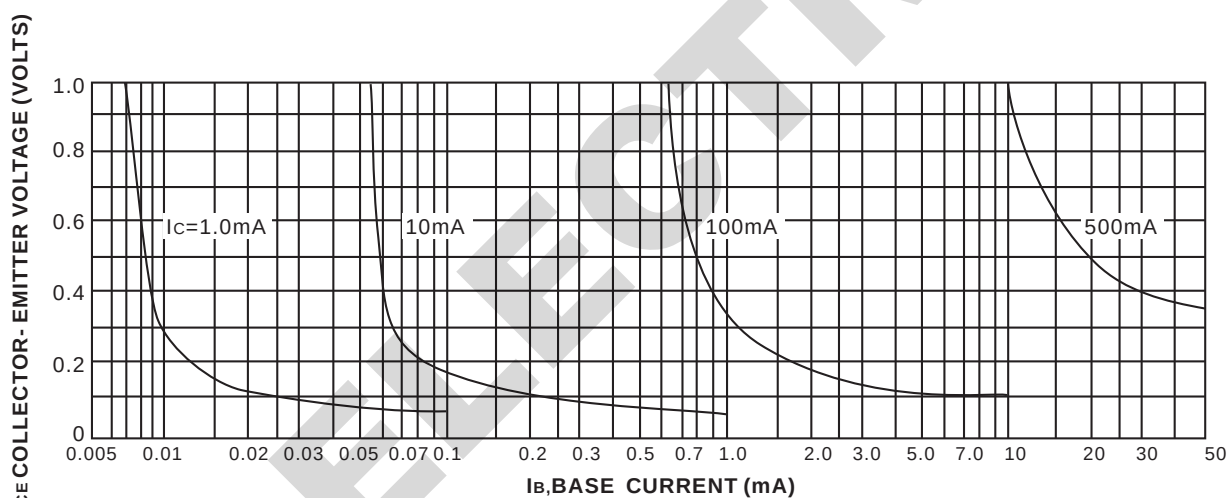


Figure 15. Collector Saturation Region

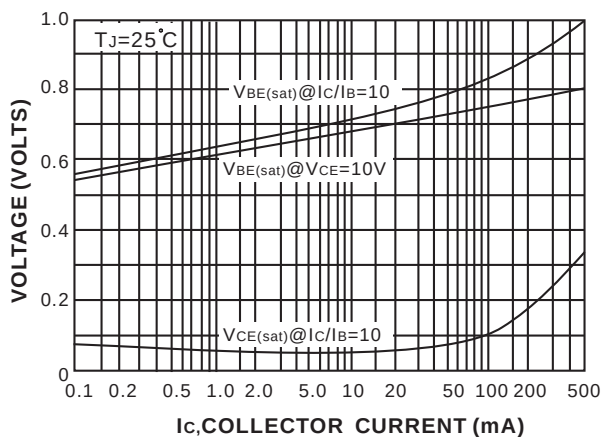


Figure 16. "On" Voltages