

GSMBT4075 NPN EPITAXIAL PLANAR TRANSISTOR

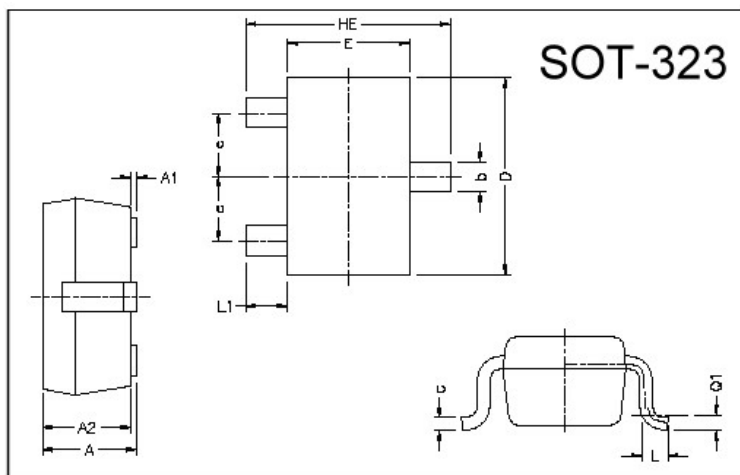
Description

The GSMBT4075 is designed for general purpose switching and amplifier applications.

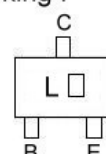
Features

- Excellent h_{FE} Linearity : $h_{FE}(0.1mA)/h_{FE}(2mA)=0.95$ (Typ.)
- High h_{FE} : $h_{FE} = 70 \sim 700$
- Complementary to GSMBT2014

Package Dimensions



Marking :



□: h_{FE} Rank Code

REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	0.80	1.10	L1	0.42 REF.	
A1	0	0.10	L	0.15	0.35
A2	0.80	1.00	b	0.25	0.40
D	1.80	2.20	c	0.10	0.25
E	1.15	1.35	e	0.65 REF.	
HE	1.80	2.40	Q1	0.15 BSC.	

Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Ratings	Unit
Junction Temperature	T_j	+150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55~+150	$^\circ\text{C}$
Collector to Base Voltage	V_{CBO}	60	V
Collector to Emitter Voltage	V_{CEO}	50	V
Emitter to Base Voltage	V_{EBO}	5	V
Collector Current	I_C	150	mA
Base Current	I_B	30	mA
Total Power Dissipation	P_D	225	mW

Electrical Characteristics ($T_a = 25^\circ\text{C}$)

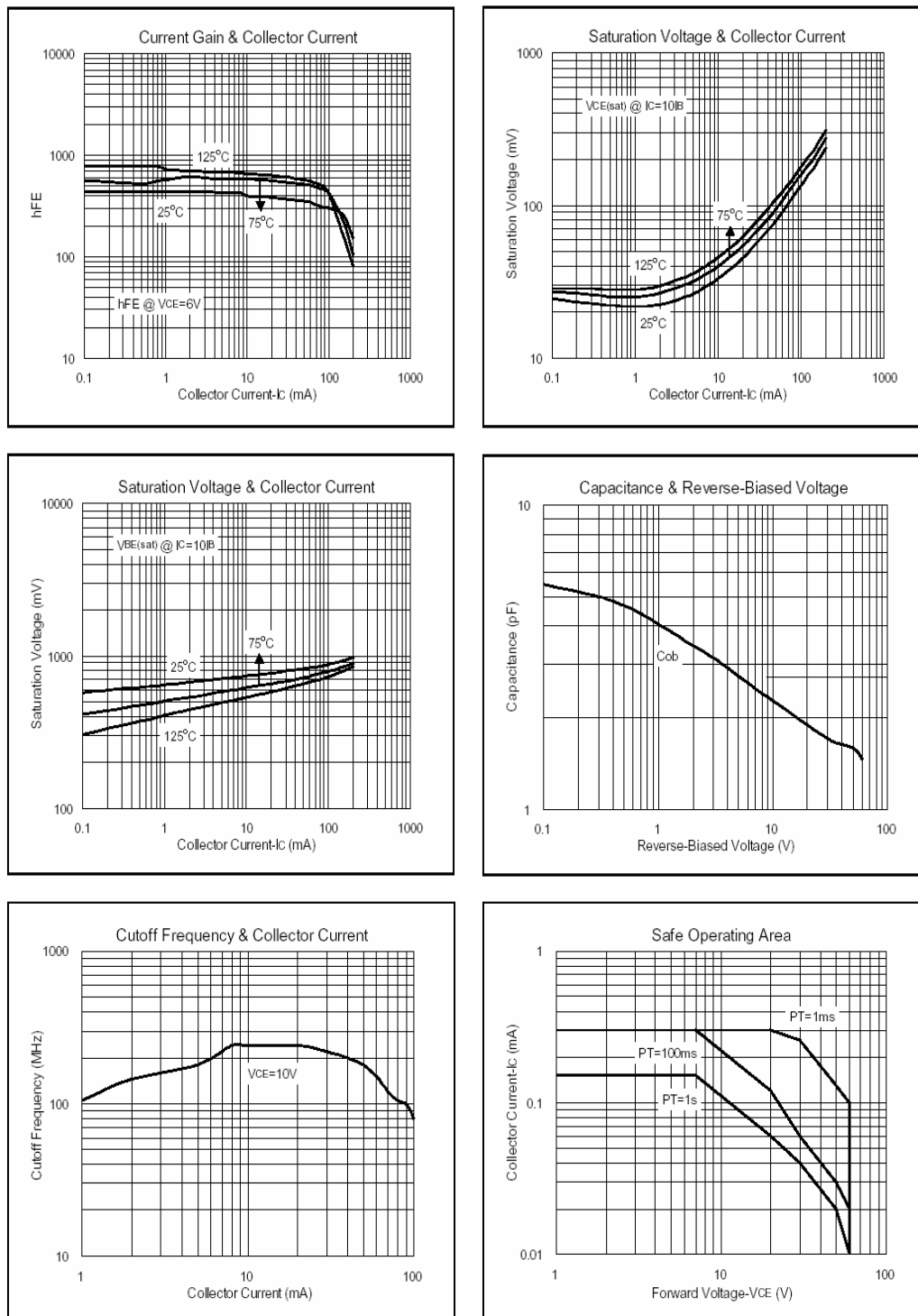
Symbol	Min.	Typ.	Max.	Unit	Test Conditions
V_{CBO}	60	-	-	V	$I_C=100\mu A, I_E=0$
V_{CEO}	50	-	-	V	$I_C=1mA, I_B=0$
V_{EBO}	5	-	-	V	$I_E=10\mu A, I_C=0$
I_{CBO}	-	-	100	nA	$V_{CB}=60V, I_E=0$
I_{EBO}	-	-	100	nA	$V_{EB}=5V, I_C=0$
* $V_{CE(sat)}$	-	-	250	mV	$I_C=100mA, I_B=10mA$
* $V_{BE(sat)}$	-	-	1	V	$I_C=100mA, I_B=10mA$
* h_{FE1}	70	-	700		$V_{CE}=6V, I_C=2mA$
* h_{FE2}	25	-	-		$V_{CE}=6V, I_C=150mA$
f_T	80	-	-	MHz	$V_{CE}=10V, I_C=1mA, f=100MHz$
C_{ob}	-	-	3.5	pF	$V_{CB}=10V, I_E=0, f=1MHz$

* Pulse Test: Pulse Width $\leq 380\mu s$, Duty Cycle $\leq 2\%$

Classification Of h_{FE1}

Rank	LO	LY	LG	LB
Range	70 - 140	120 - 240	200 - 400	350 - 700

Characteristics Curve



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