Low-frequency Transistor

2SA2018

The transistor of 500mA class which went only into 2125 size conventionally was attained in 1608 sizes.

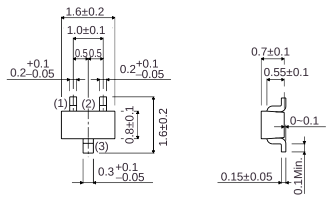
●Applications

For switching, for muting.

●Features

1) A collector current is large.
2) Collector saturation voltage is low.
   $V_{CE(sat)}$ 250mV
   At I_C = 200mA / I_B = 10mA

●External dimensions (Units : mm)



ROHM : EMT3

(1) EMITTER
(2) BASE
(3) COLLECTOR

●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CBO}	15	V
Collector-emitter voltage	V_{CEO}	12	V
Collector current	I_C	500	mA
	I_{CP}	1	A *
Collector power dissipation	P_C	150	mW
Junction temperature	Tj	150	°C
Storage temperature	Tstg	-55~+150	°C

* Single pulse, Pw=1ms

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	15	-	-	V	I_C=10μA
Collector-emitter breakdown voltage	BV_{CEO}	12	-	-	V	I_C=1mA
Emitter-base breakdown voltage	BV_{EBO}	6	-	-	V	I_E=10μA
Collector cutoff current	I_{CBO}	-	-	100	nA	V_{CB}=15V
DC current transfer ratio	h_{FE}	270	-	680	-	V_{CE}=2V / I_C=10mA
Collector-emitter saturation voltage	$V_{CE(sat)}$	-	100	250	mV	I_C=200mA / I_B=10mA
Transition frequency	f_T	-	260	-	MHz	V_{CE}=2V , I_E=10mA , f_T=100MHz
Output capacitance	Cob	-	6.5	-	pF	V_{CB}=10V , I_E=0A , f=1MHz

●Packaging specifications and h_{FE}

		Package name	Taping
		Code	TL
Type	h_{FE}	Basic ordering unit (pieces)	3000
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●**Electrical characteristic curves**

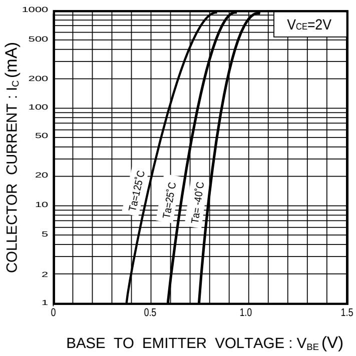

Fig.1 Grounded emitter propagation characteristics

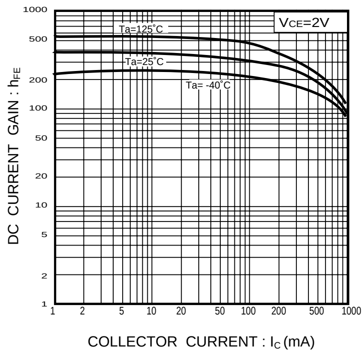

Fig.2 DC current gain vs. collector current

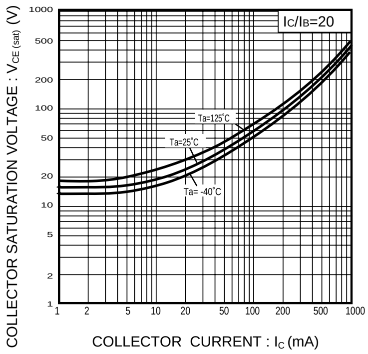

Fig.3 Collector-emitter saturation voltage vs. collector current (I)

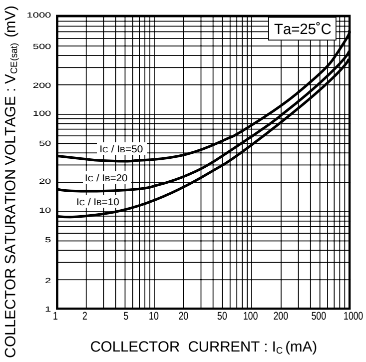

Fig.4 Collector-emitter saturation voltage vs. collector current

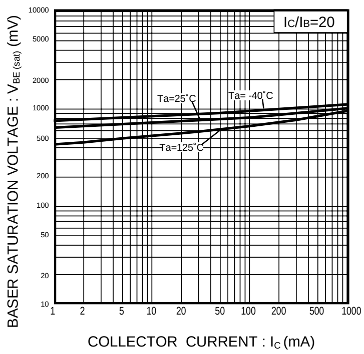

Fig.5 Base-emitter saturation voltage vs. collector current

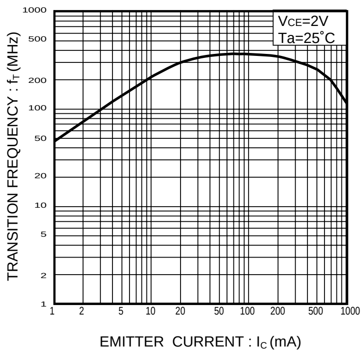

Fig.6 Gain bandwidth product vs. emitter current

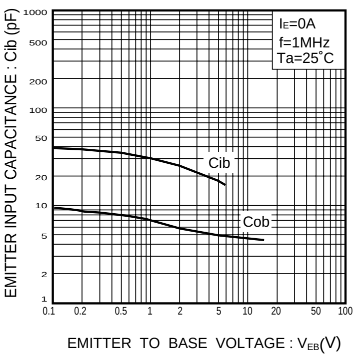

Fig.7 Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base voltage