



## Muting Circuit Applications

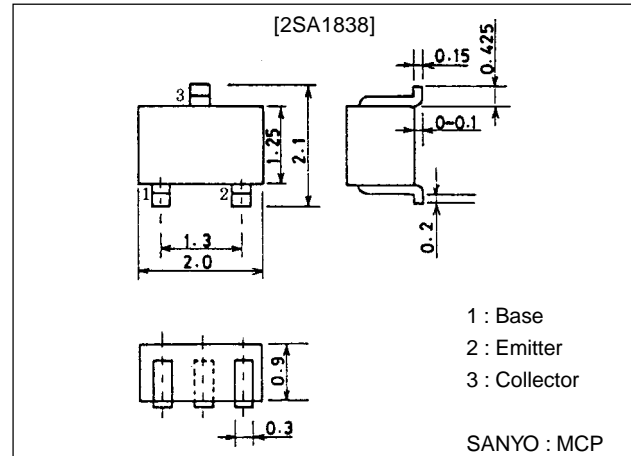
### Features

- Very small-sized package permitting 2SA1838-applied sets to be made small and slim.
- Small output capacitance.
- Low collector-to-emitter saturation voltage.
- Low ON resistance.

### Package Dimensions

unit:mm

2059A



### Specifications

#### Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	$V_{CB0}$		-15	V
Collector-to-Emitter Voltage	$V_{CEO}$		-10	V
Emitter-to-Base Voltage	$V_{EBO}$		-5	V
Collector Current	$I_C$		-100	mA
Collector Current (Pulse)	$I_{CP}$		-200	mA
Base Current	$I_B$		-20	mA
Collector Dissipation	$P_C$		200	mW
Junction Temperature	$T_J$		150	°C
Storage Temperature	$T_{stg}$		-55 to +150	°C

#### Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	$I_{CBO}$	$V_{CB}=-12V, I_E=0$			-0.1	μA
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=-4V, I_C=0$			-0.1	μA
DC Current Gain	$h_{FE}$	$V_{CE}=-2V, I_C=-5mA$	200		600	
Gain-Bandwidth Product	$f_T$	$V_{CE}=-5V, I_C=-10mA$		600		MHz
Output Capacitance	$C_{ob}$	$V_{CB}=-10V, f=1MHz$		0.9		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-10mA, I_B=-1mA$		-0.04	-0.15	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=-10mA, I_B=-1mA$		-0.82	-1.1	V

Marking : LS

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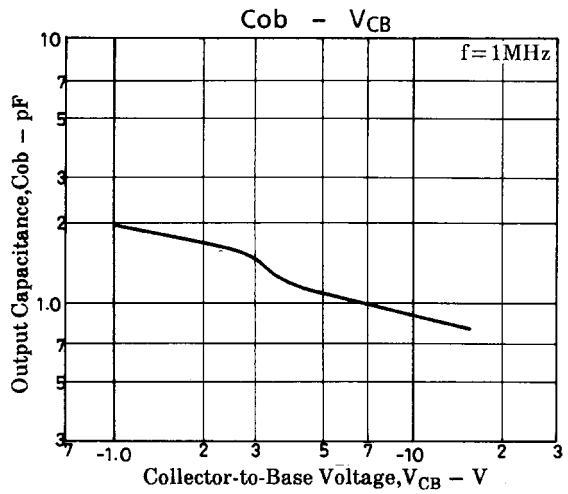
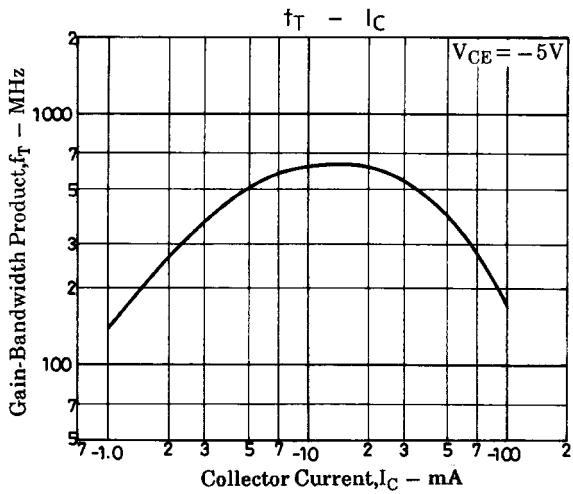
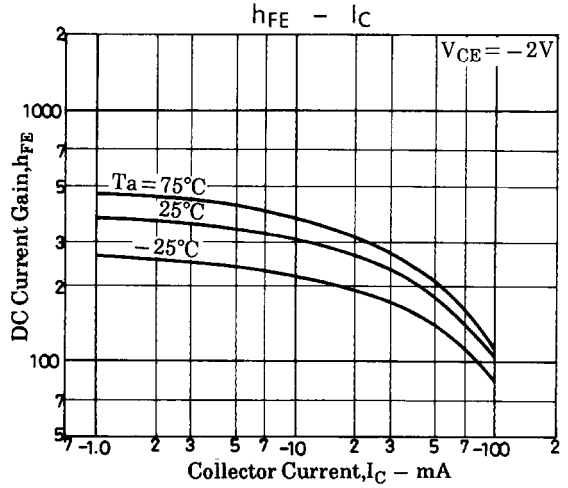
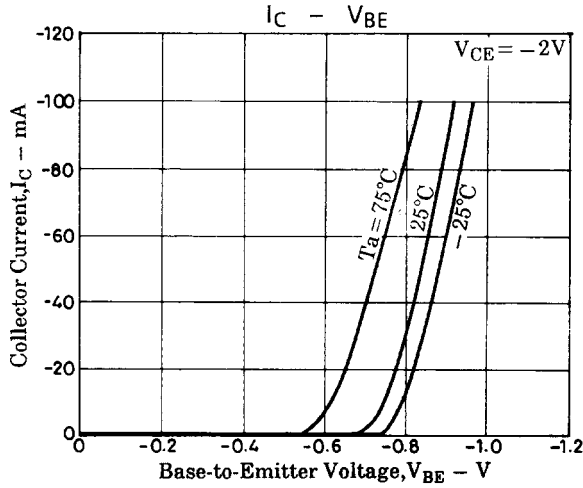
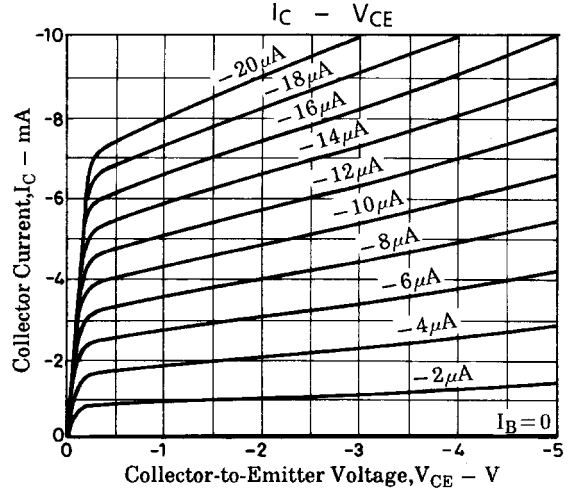
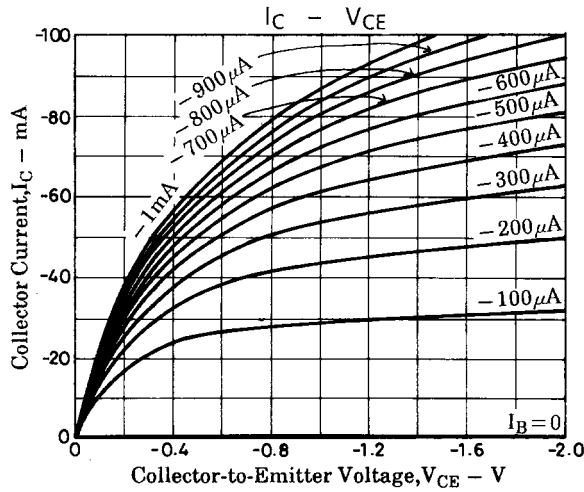
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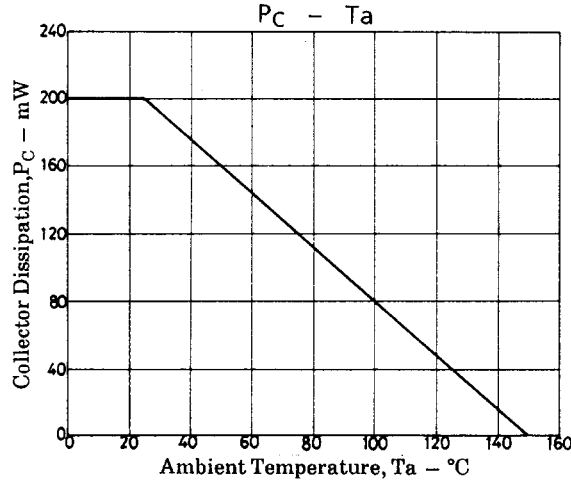
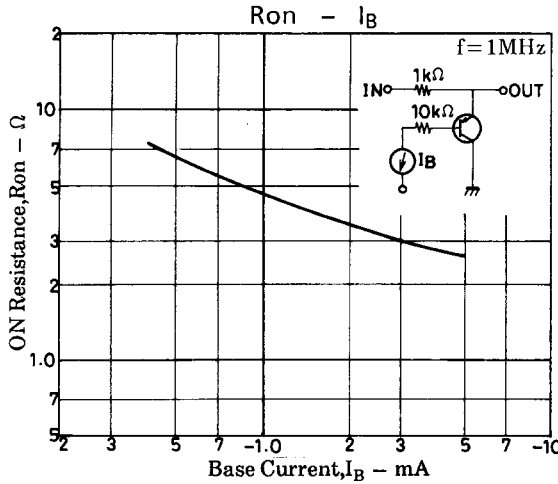
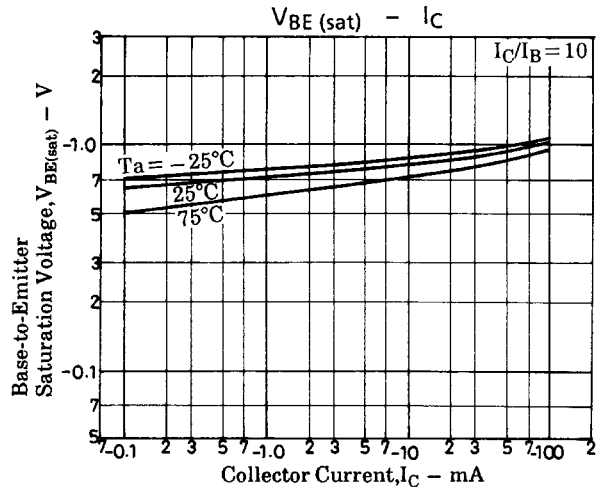
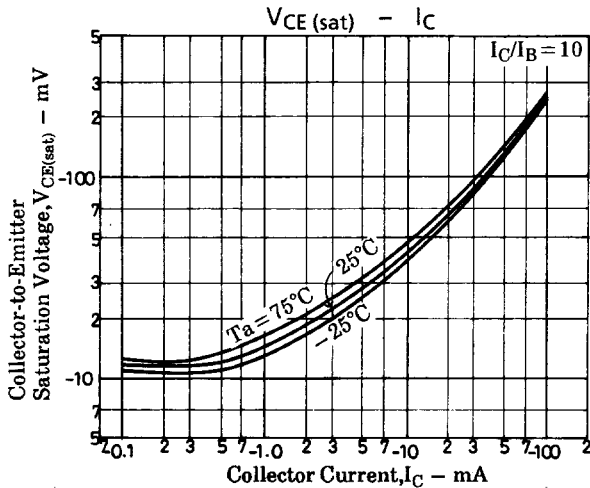
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# 2SA1838

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -10\mu A, I_E = 0$	-15			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -1mA, R_{BE} = \infty$	-10			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -10\mu A, I_C = 0$	-5			V
On Resistance	$R_{on}$	$I_B = -3mA, f = 1MHz$		3.0		$\Omega$





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