



# AML2002

## Bipolar Transistor 200V, 0.7A, Low VCE(sat), NPN Single TO-126ML

ON Semiconductor®

<http://onsemi.com>

### Features

- VCE0=200V, IC=0.7A
- Low collector-to-emitter saturation voltage VCE(sat)=0.125V(typ.)@IC=0.35A
- High-speed switching tf=70ns(typ.)@IC=0.3A
- The plastic-covered heat sink eliminates the need for an insulator when mounting the AML2002

### Specifications

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

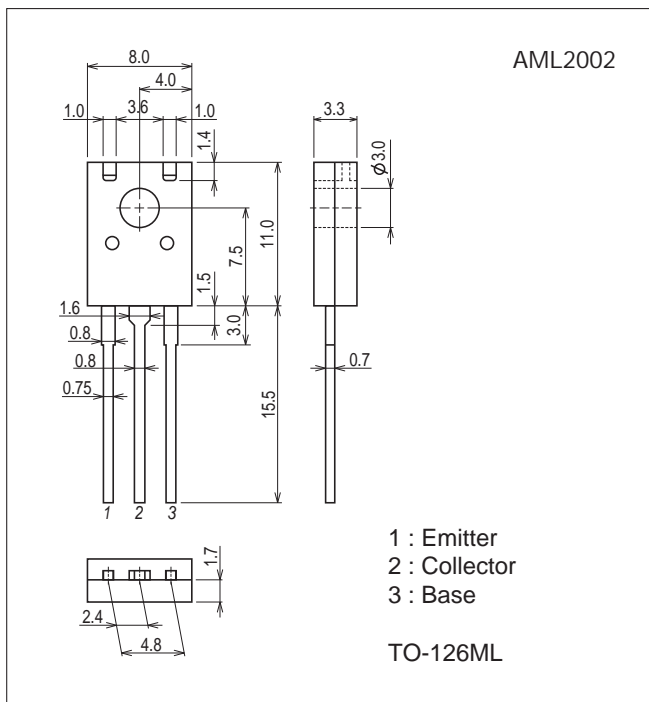
Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V <sub>CB0</sub>		220	V
Collector-to-Emitter Voltage	V <sub>CE0</sub>		200	V
Emitter-to-Base Voltage	V <sub>EB0</sub>		8	V
Collector Current	I <sub>C</sub>		0.7	A
Collector Current (Pulse)	I <sub>CP</sub>		2	A
Collector Dissipation	P <sub>C</sub>		1.5	W
		T <sub>C</sub> =25°C	10	W
Junction Temperature	T <sub>J</sub>		150	°C
Storage Temperature	T <sub>stg</sub>		-55 to +150	°C

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

### Package Dimensions

unit : mm (typ)

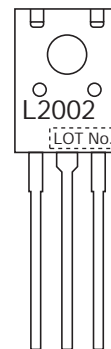
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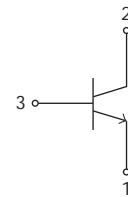
### Product & Package Information

- Package : TO-126ML
- JEITA, JEDEC : TO-126
- Minimum Packing Quantity : 200 pcs./bag

### Marking



### Electrical Connection

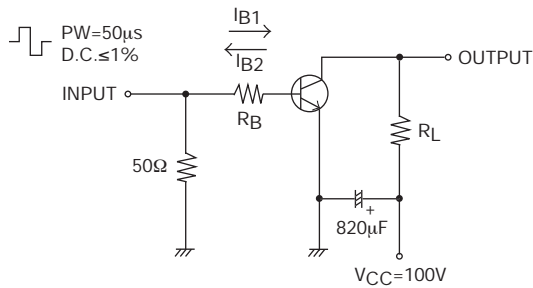


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## Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	$I_{CBO}$	$V_{CB}=100V, I_E=0A$			1	$\mu A$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=4V, I_C=0A$			1	$\mu A$
DC Current Gain	$h_{FE}$	$V_{CE}=5V, I_C=100mA$	200		560	
Gain-Bandwidth Product	$f_T$	$V_{CE}=10V, I_C=100mA$		120		MHz
Output Capacitance	$C_{ob}$	$V_{CB}=10V, f=1MHz$		9		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=0.35A, I_B=35mA$		125	220	mV
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=0.35A, I_B=35mA$		0.82	1.2	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=10\mu A, I_E=0A$	220			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=1mA, R_{BE}=\infty$	200			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=10\mu A, I_C=0A$	8			V
Turn-On Time	$t_{on}$	See specified Test Circuit.		50		ns
Storage Time	$t_{stg}$			2		$\mu s$
Fall Time	$t_f$			70		ns

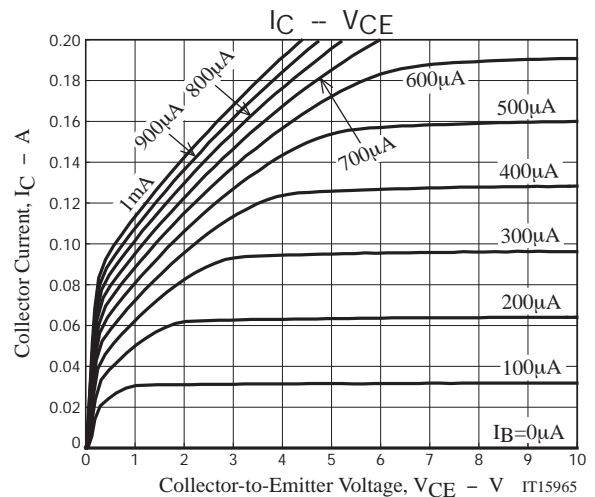
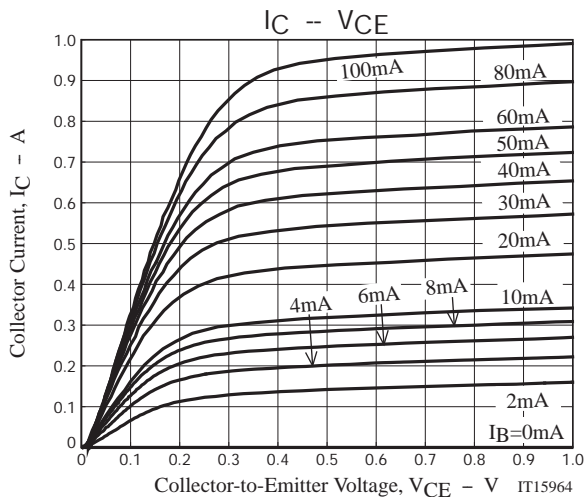
## Switching Time Test Circuit

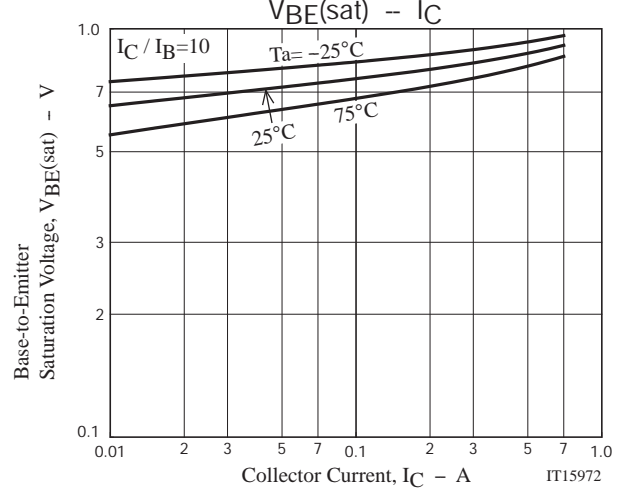
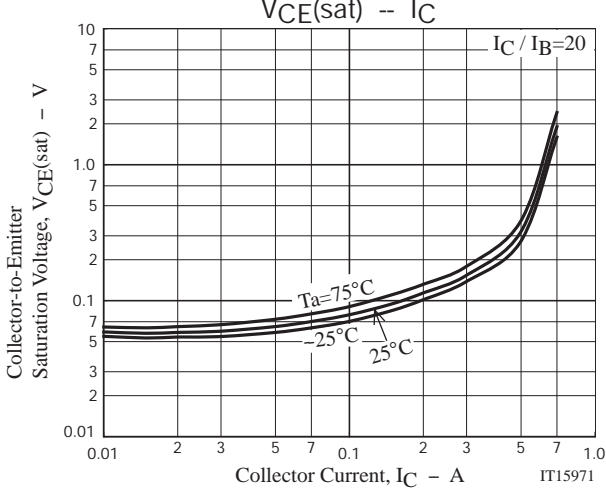
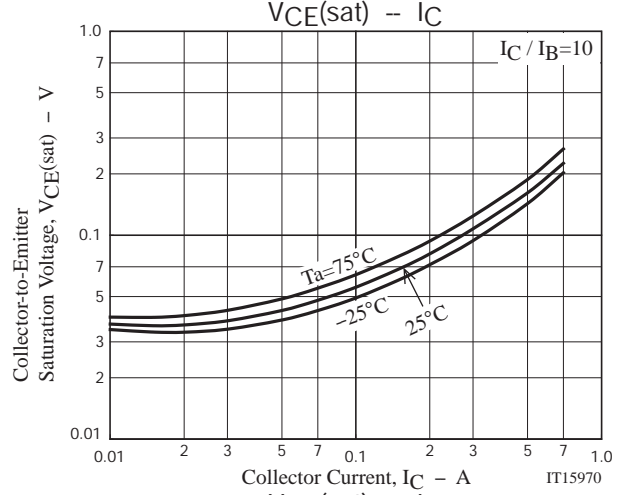
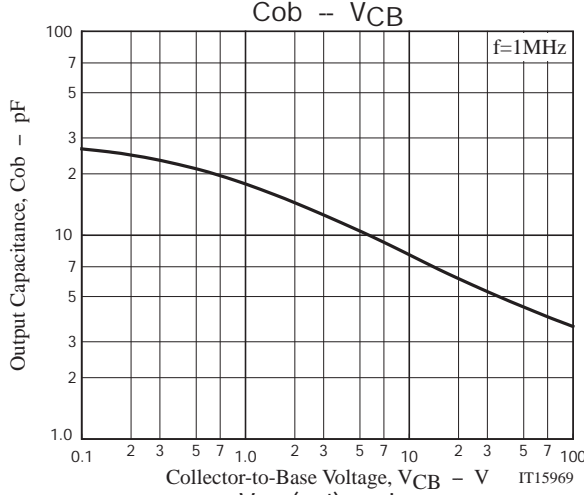
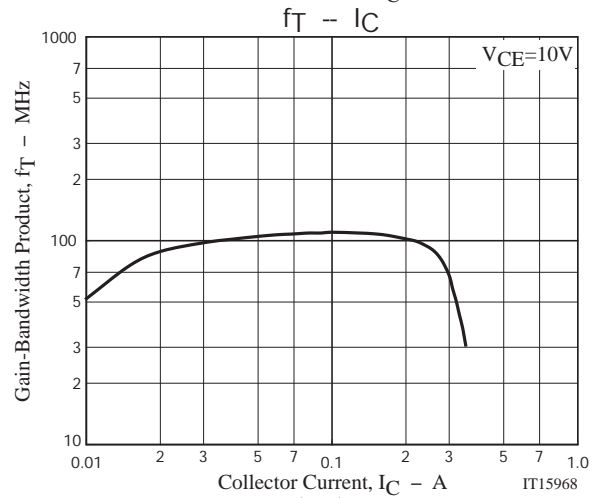
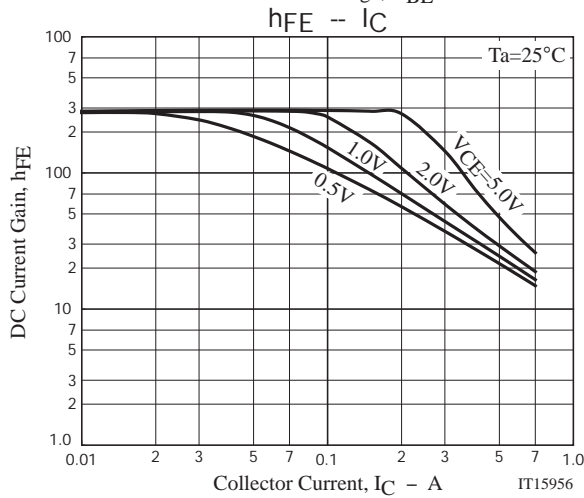
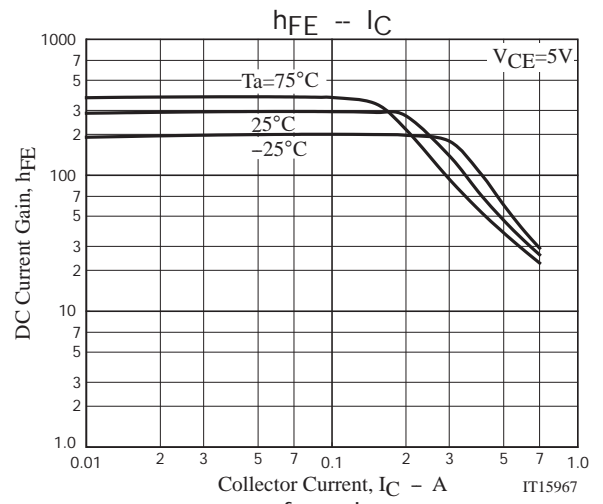
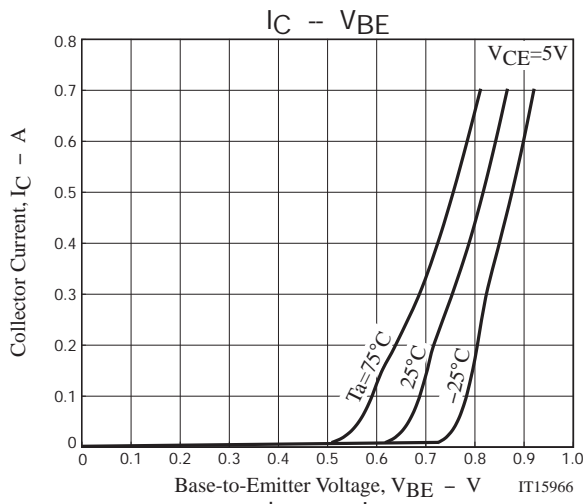


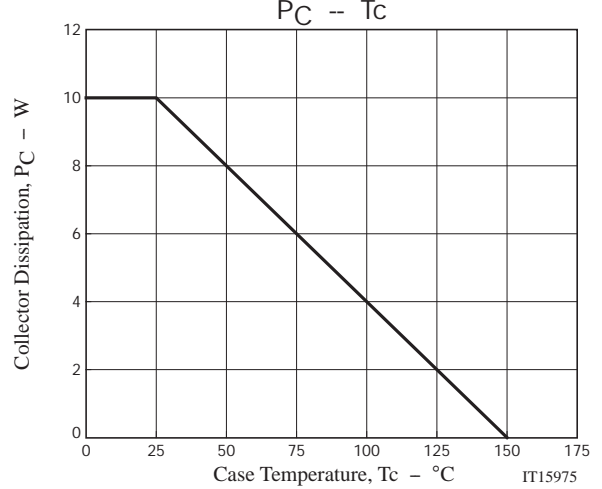
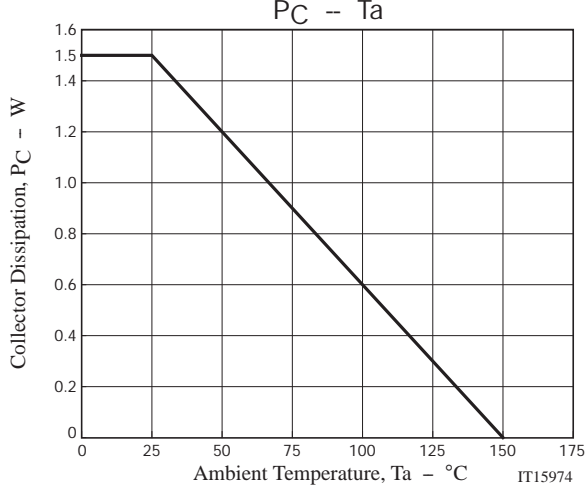
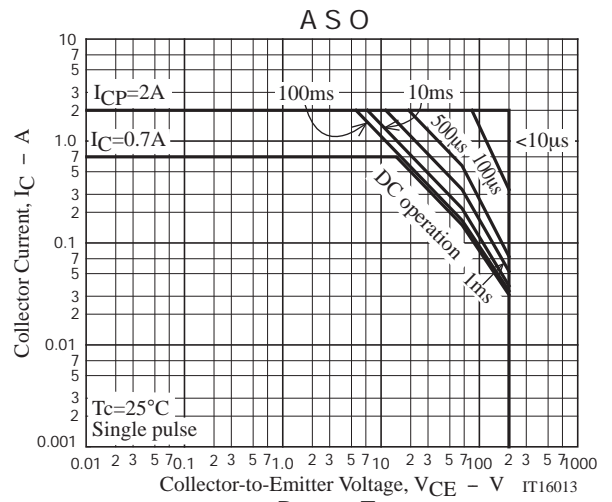
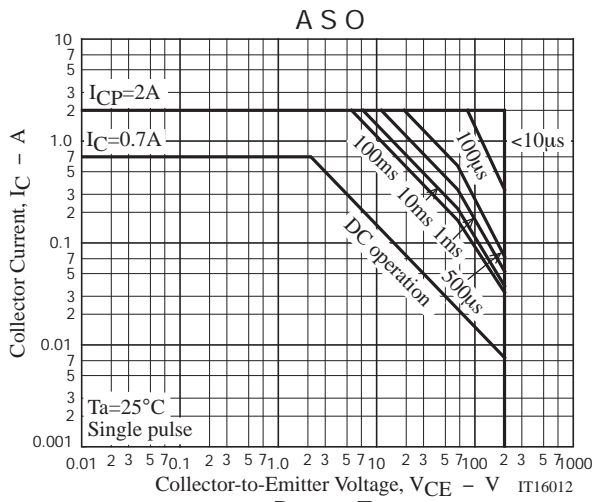
$$I_C = 10I_{B1} = -10I_{B2} = 0.3A$$

## Ordering Information

Device	Package	Shipping	memo
AML2002	TO-126ML	200pcs./bag	Pb Free







Bag Packing Specification

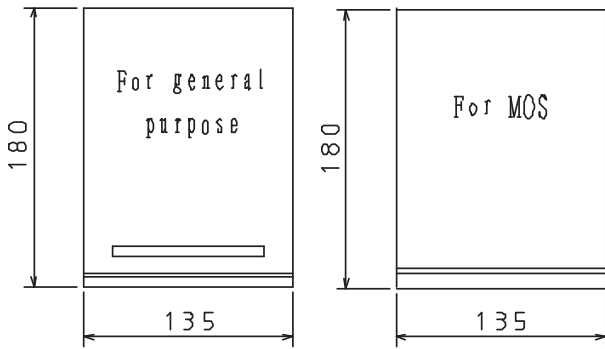
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1. Packing Format

Package Name	Maximum Number of devices contained (pcs)			Packing format	
	Bag	Inner box	Outer box	Inner BOX	Outer BOX
TO-126ML	200	4,000	12,000	B-1 20 bags contained Dimensions:mm (external) 445×225×55	A-2 3 inner boxes contained Dimensions:mm (external) 470×250×190

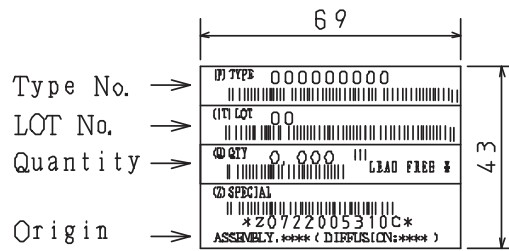
2. Bag dimensions

(unit:mm)



3. Bag label, Inner box label

(unit:mm)



NOTE (1)

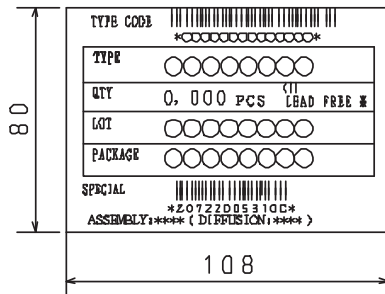
The LEAD FREE \* description shows that the surface treatment of the terminal is lead free.

Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

4. Outer box label

(unit:mm)

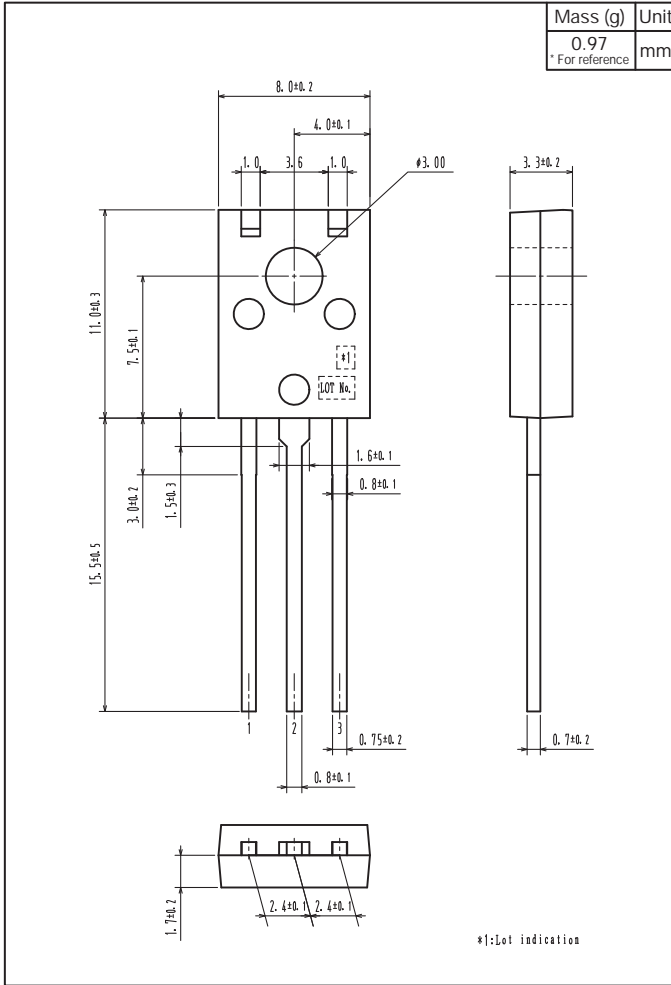
It is a label at the time of factory shipments.  
The form of a label may change in physical distribution process.



# AML2002

## Outline Drawing

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