



AML2002

Bipolar Transistor 200V, 0.7A, Low $V_{CE(sat)}$, NPN Single TO-126ML

ON Semiconductor®

<http://onsemi.com>

Features

- $V_{CEO}=200V$, $I_C=0.7A$
- Low collector-to-emitter saturation voltage $V_{CE(sat)}=0.125V$ (typ.)@ $I_C=0.35A$
- High-speed switching $t_f=70ns$ (typ.)@ $I_C=0.3A$
- The plastic-covered heat sink eliminates the need for an insulator when mounting the AML2002

Specifications

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

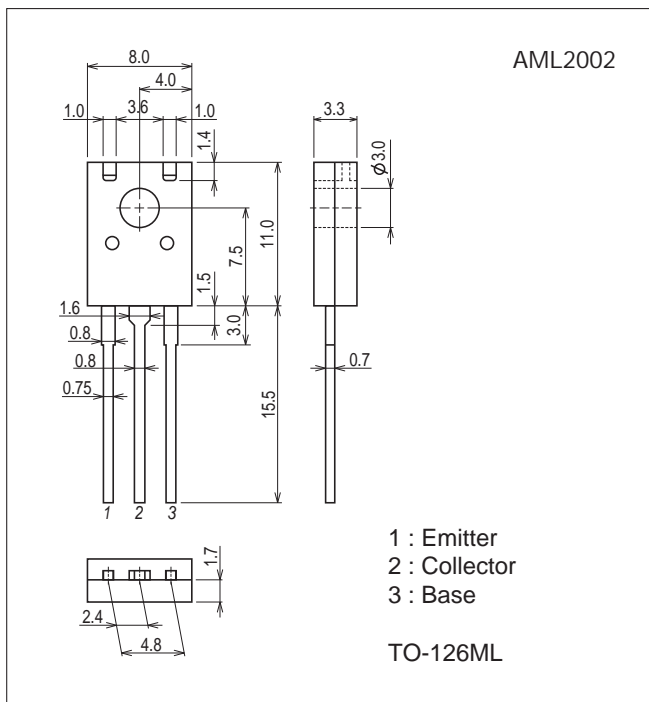
Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		220	V
Collector-to-Emitter Voltage	V_{CEO}		200	V
Emitter-to-Base Voltage	V_{EBO}		8	V
Collector Current	I_C		0.7	A
Collector Current (Pulse)	I_{CP}		2	A
Collector Dissipation	P_C		1.5	W
		$T_C=25^\circ C$	10	W
Junction Temperature	T_j		150	$^\circ C$
Storage Temperature	T_{stg}		-55 to +150	$^\circ C$

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)

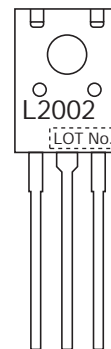
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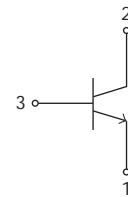
Product & Package Information

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

Marking



Electrical Connection

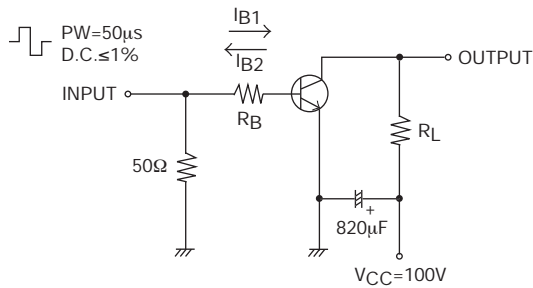


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Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB}=100V, I_E=0A$			1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=4V, I_C=0A$			1	μA
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		μs
Fall Time	t_f			70		ns

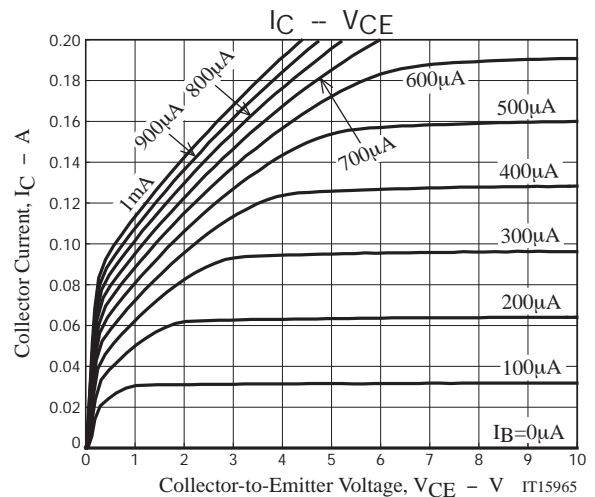
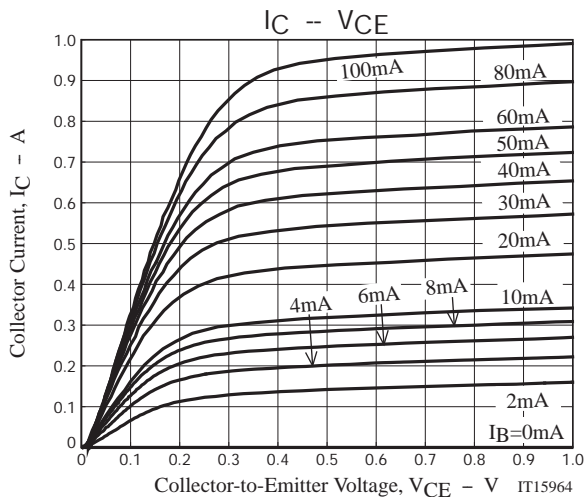
Switching Time Test Circuit

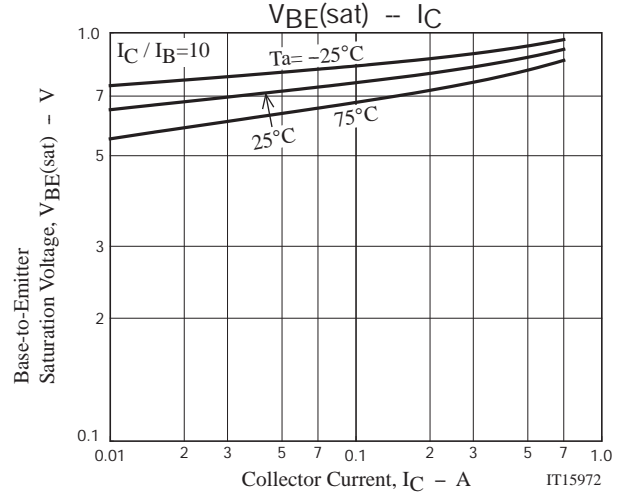
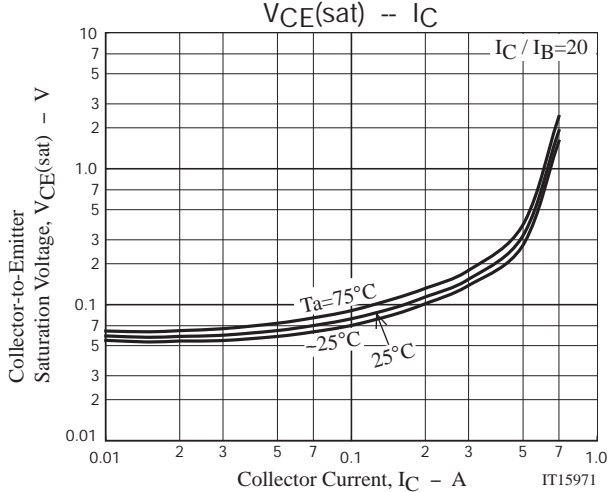
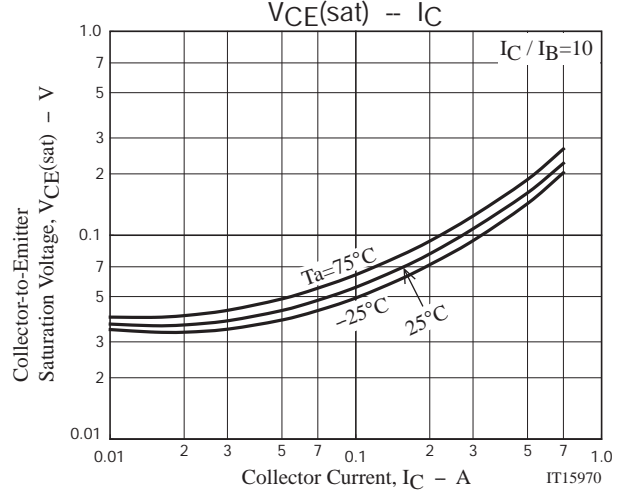
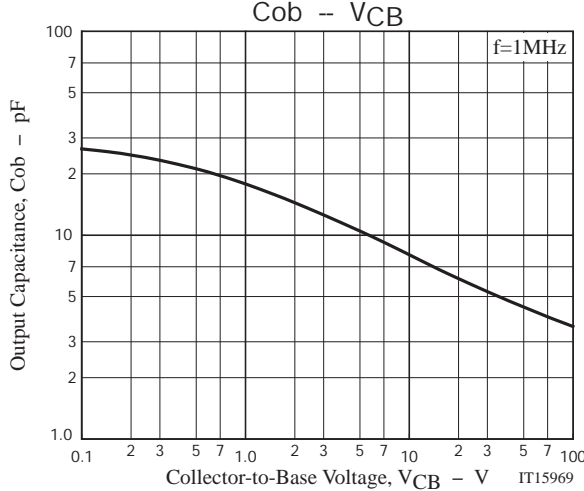
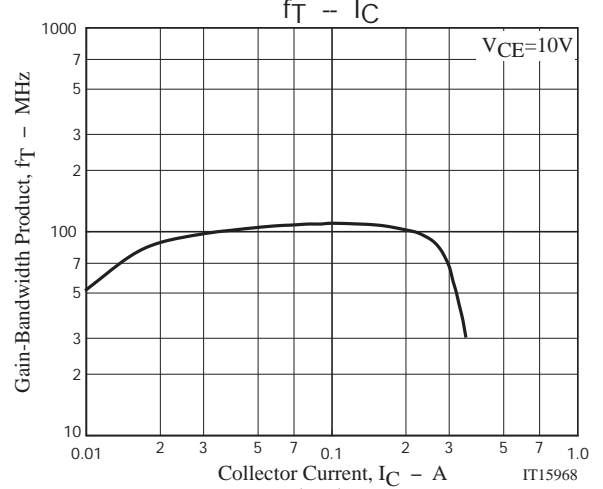
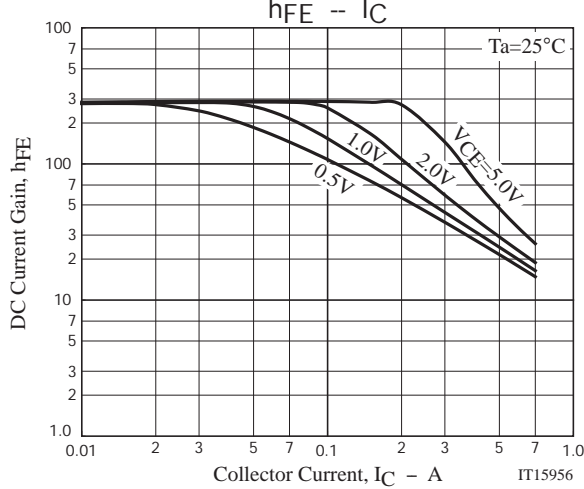
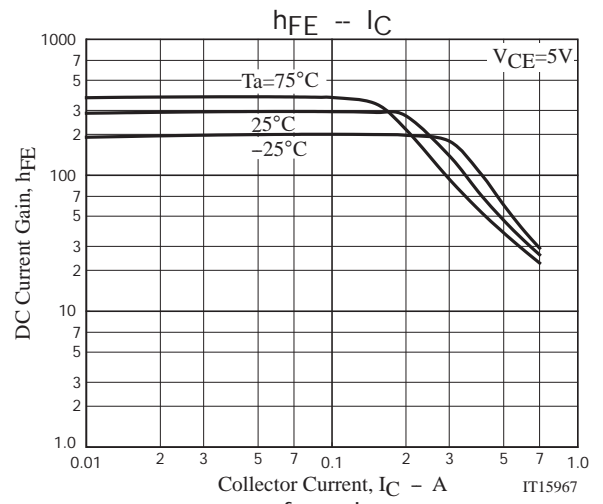
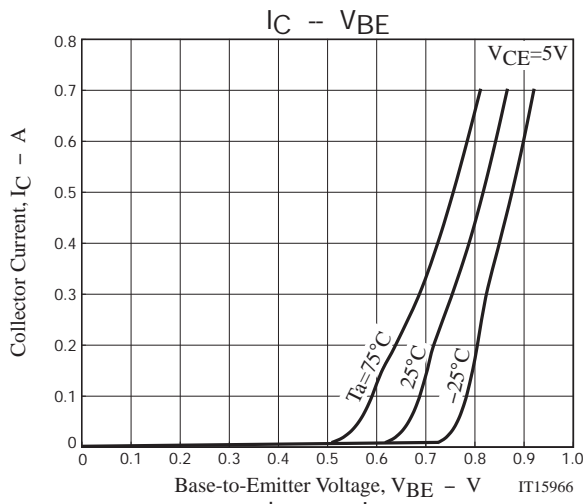


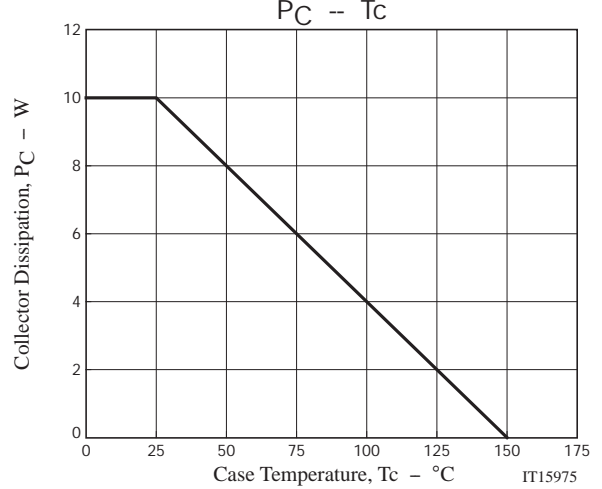
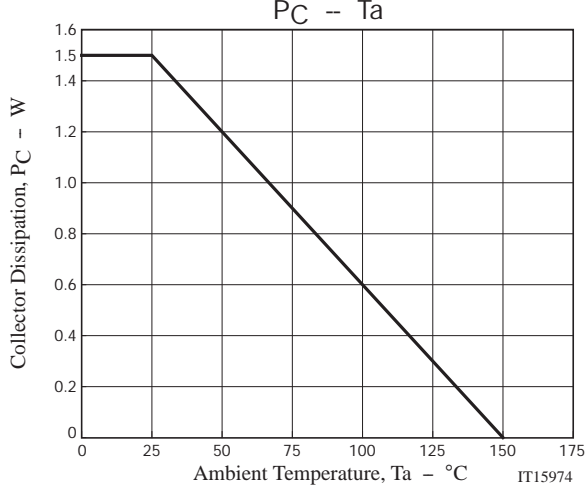
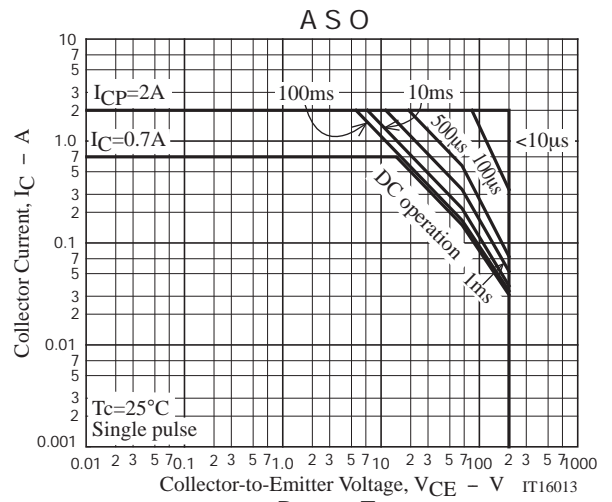
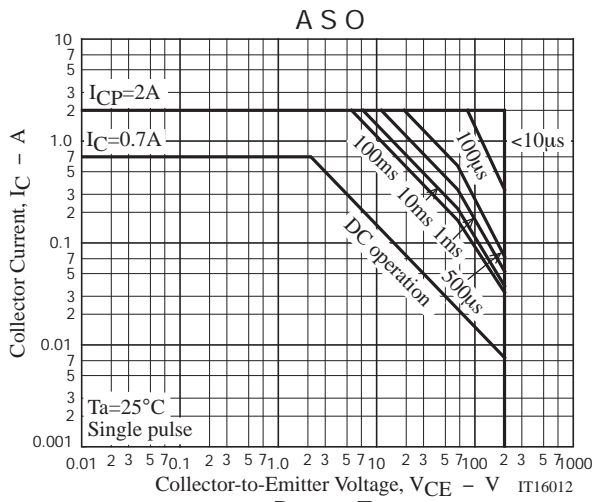
$$I_C = 10I_{B1} = -10I_{B2} = 0.3A$$

Ordering Information

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







Bag Packing Specification

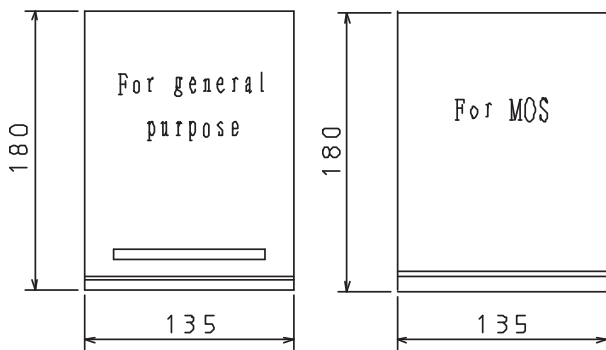
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1. Packing Format

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

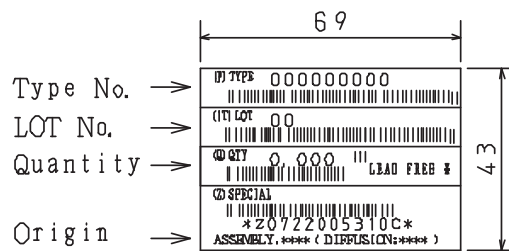
2. Bag dimensions

(unit:mm)



3. Bag label, Inner box label

(unit:mm)



NOTE (1)

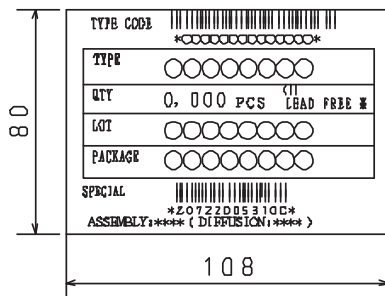
The LEAD FREE * description shows that the surface treatment of the terminal is lead free.

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

4. Outer box label

(unit:mm)

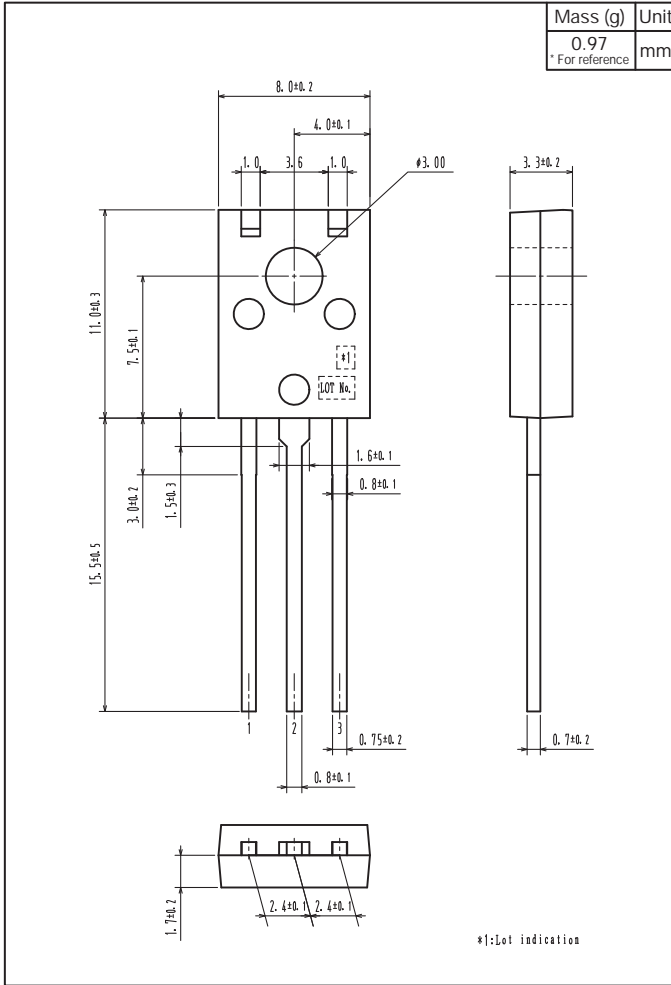
It is a label at the time of factory shipments.
The form of a label may change in physical distribution process.



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Outline Drawing

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