



SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company

AML2002 — NPN Epitaxial Planar Silicon Transistor LED Back Light

Features

- $V_{CE0}=200V, I_C=0.7A$
- Low collector-to-emitter saturation voltage $V_{CE(sat)}=0.125V(\text{typ.})@I_C=0.35A$
- High-speed switching $t_f=70ns(\text{typ.})@I_C=0.3A$
- The plastic-covered heat sink eliminates the need for an insulator when mounting the AML2002

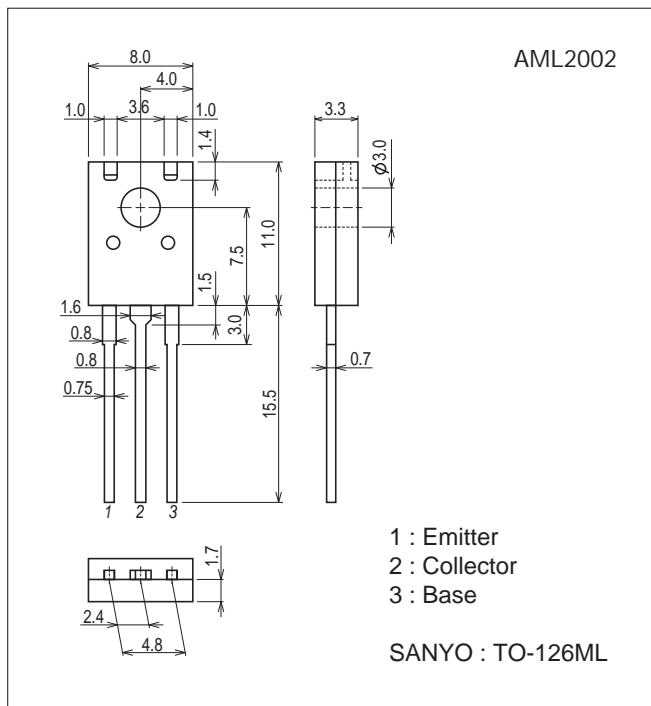
Specifications

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	$^\circ C$

Package Dimensions

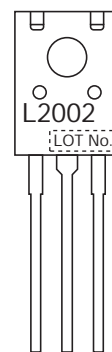
unit : mm (typ)
7516A-002



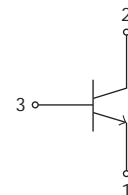
Product & Package Information

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

Marking



Electrical Connection

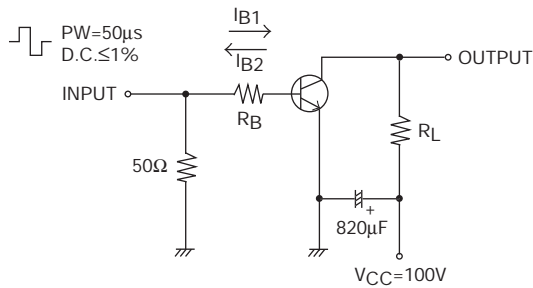


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Electrical Characteristics at Ta=25°C

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

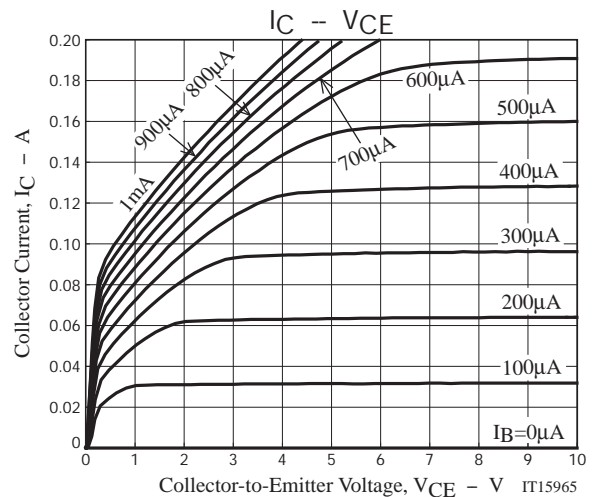
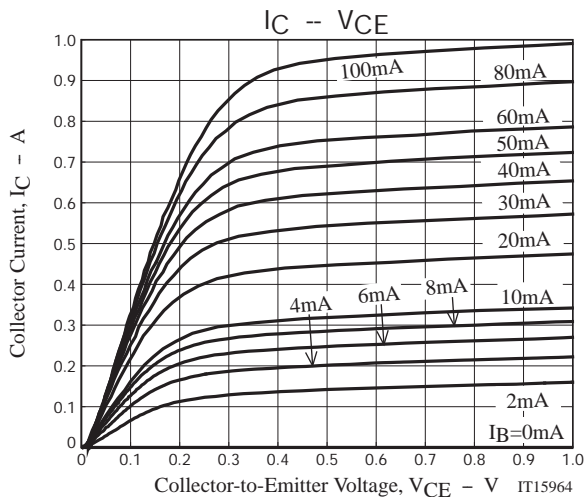
Switching Time Test Circuit

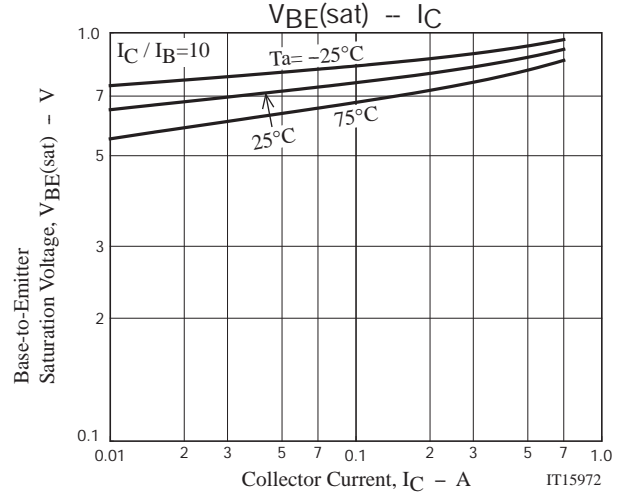
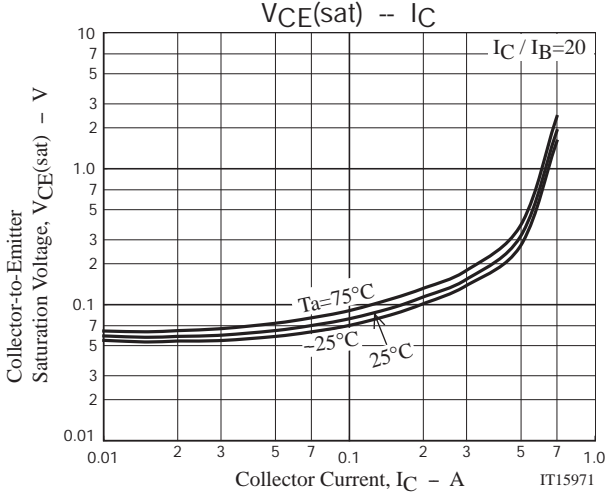
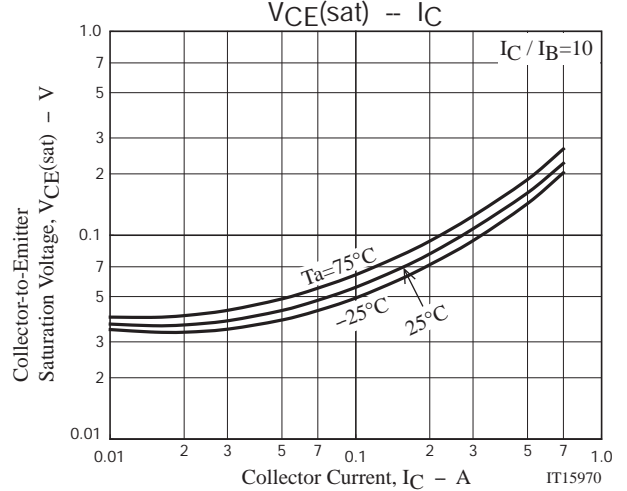
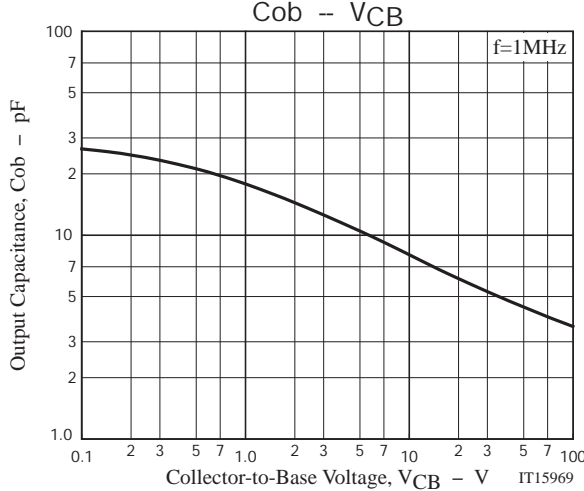
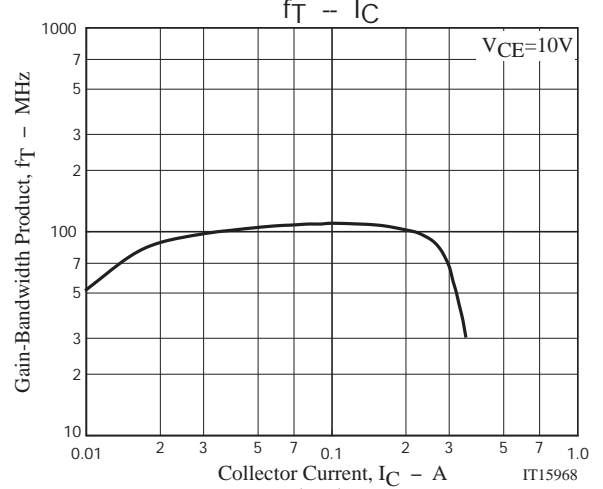
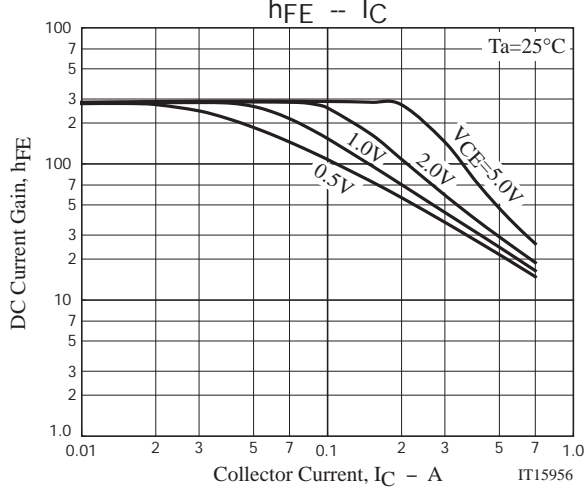
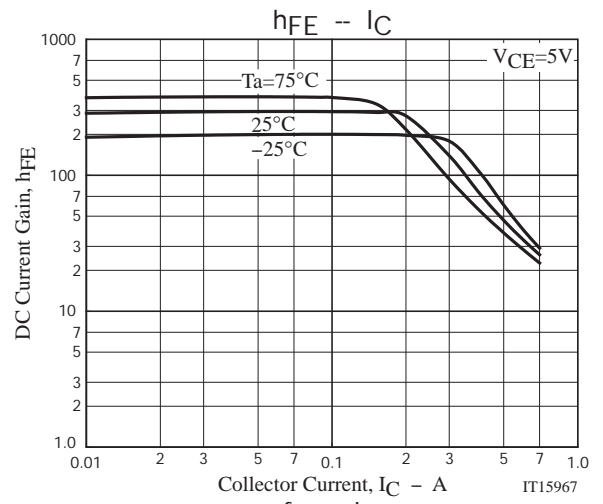
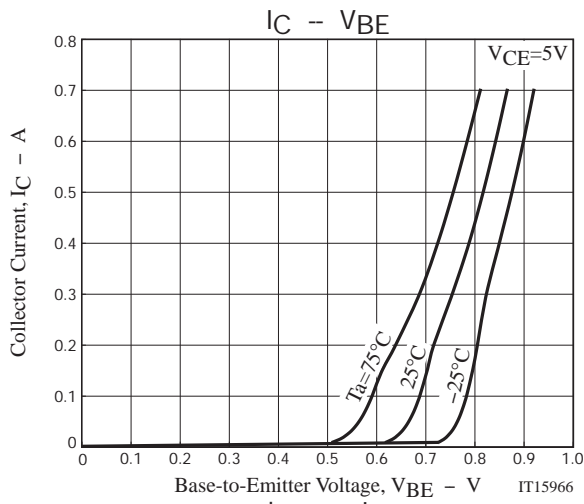


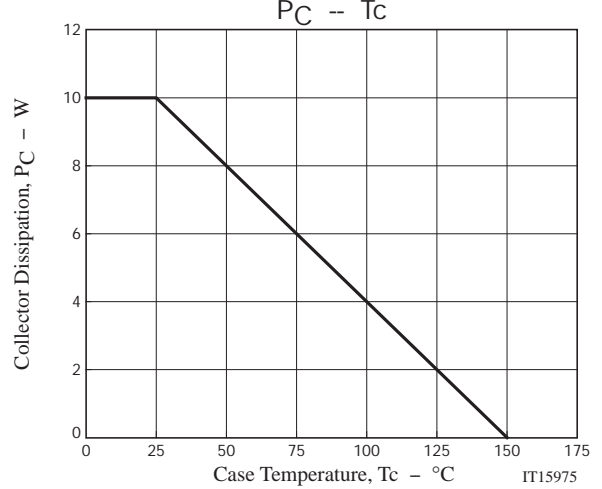
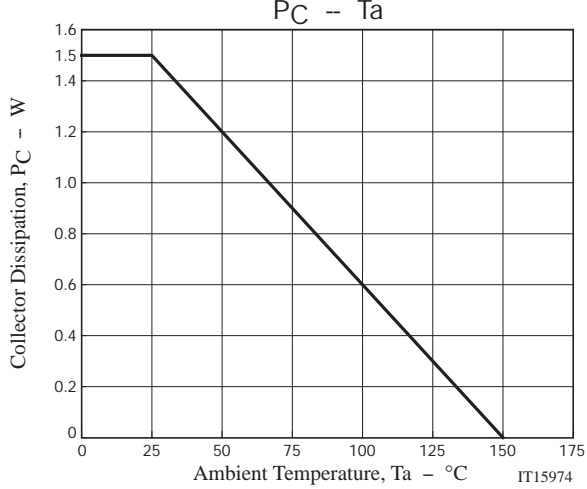
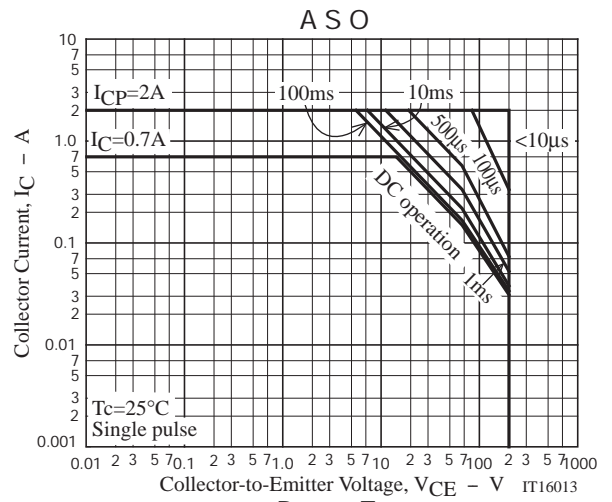
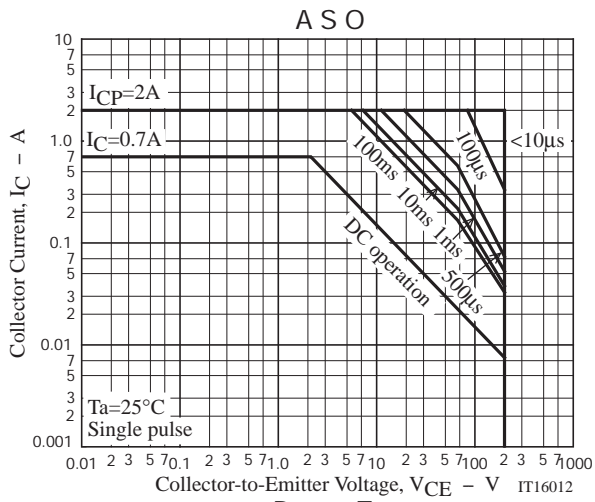
$$I_C = 10I_{B1} = -10I_{B2} = 0.3A$$

Ordering Information

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







Bag Packing Specification

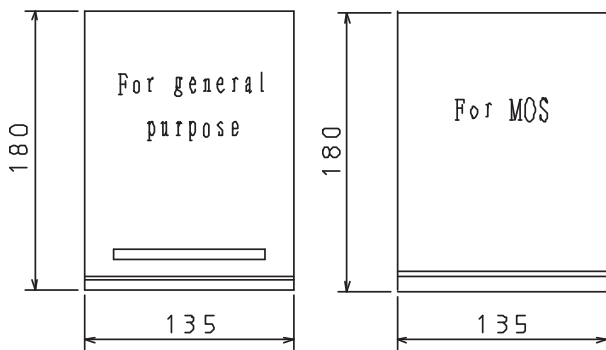
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1. Packing Format

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

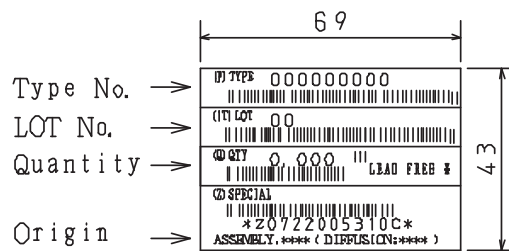
2. Bag dimensions

(unit:mm)



3. Bag label, Inner box label

(unit:mm)



NOTE (1)

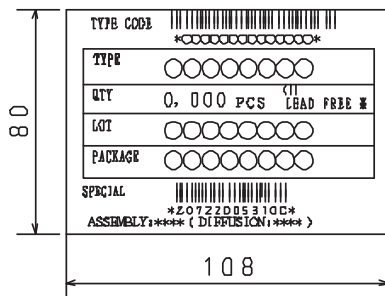
The LEAD FREE * description shows that the surface treatment of the terminal is lead free.

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

4. Outer box label

(unit:mm)

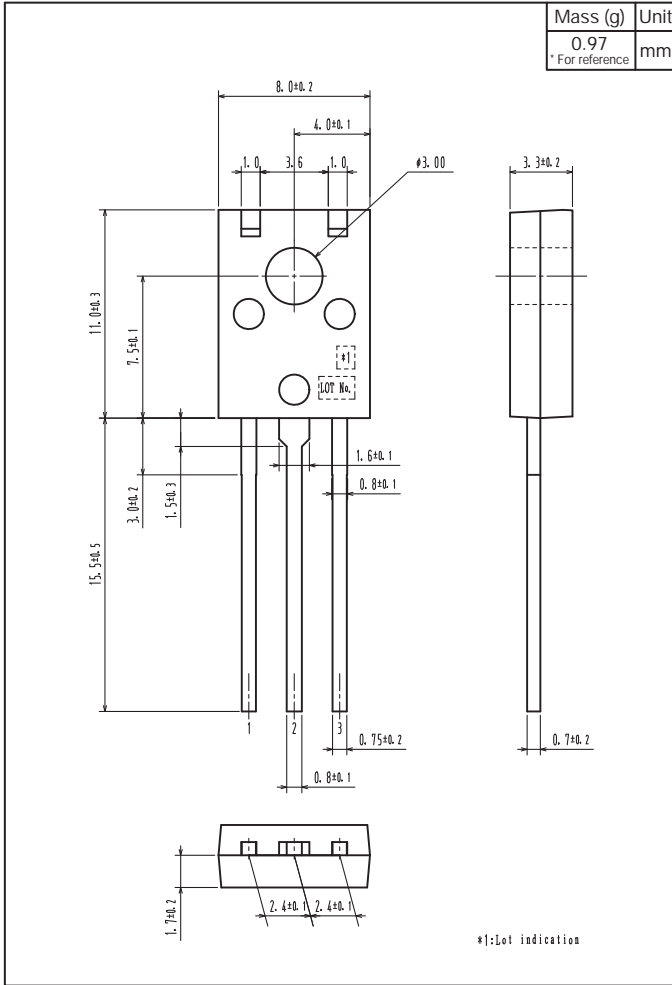
It is a label at the time of factory shipments.
The form of a label may change in physical distribution process.



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Outline Drawing

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