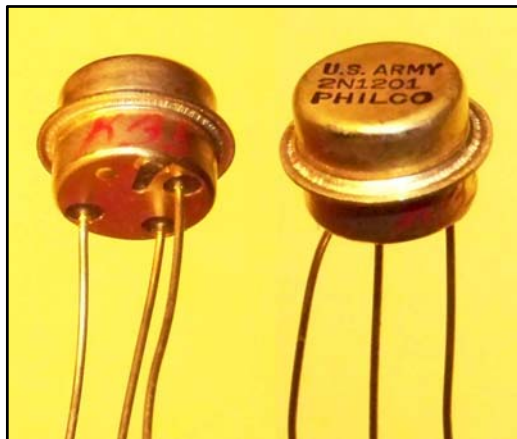
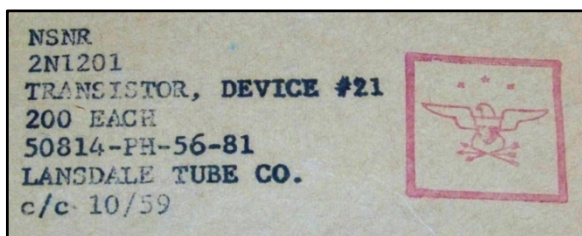


TRANSISTOR MUSEUM™
Historic Transistor Photo Gallery
U.S. Army Signal Corps Transistors from the 1950s/60s



Transistor Size (1/4" OD X 1/4"H)
Each unit is identified with a serial number
handwritten in red ink.



The bulk cardboard container for these transistors was stamped as above. Note the contract number, indicating "PH" for Philco. The devices were actually packed for shipment in Oct 1959 (10/59).

LANSDALE TUBE CO.
2N1201

TYPE

Silicon NPN Surface Alloy
Diffused-base Transistor (SADT)

USAGE

12.5 MC Video Amplifier

LISTING DATES

Sig C: FY 1956,
U.S. ARMY: 1959
JEDEC Registration: 1960

CASE STYLES

Standard TO-9
Gold Plated Metal

AVAILABILITY

Rare (Limited Production)

HISTORIC NOTES

The Lansdale Tube Co (division of Philco) was an early leader in the manufacture of high speed germanium transistors, beginning in 1953 with the development of surface barrier transistors (SBT). The FY-1954 Sig C program included the Philco 2N128, 2N129 and 2N300 surface barrier devices, which at that time held the upper range of the frequency spectrum for transistor technology (up to 100 MC). Philco continued to enhance the SBT technology with even better performing types throughout the 1950s, including the germanium Micro Alloy Diffused Transistor (MADT) and the silicon types SAT (Surface Alloy Transistor) and Surface Alloy Diffused-base Transistor (SADT). For a short time in the late 1950s, until other more robust technologies such as mesa and planar were developed, the Philco devices were regarded as the best high frequency transistors. The 2N1201 type was not sold in large quantities but provided the basis for a family of Philco silicon transistors that was available commercially until the mid 1960s.

TRANSISTOR MUSEUM™
Historic Transistor Photo Gallery
U.S. Army Signal Corps Transistors from the 1950s/60s

LANSDALE TUBE CO. 2N1201

Company	Device Designation	Material	Polarity	Application	Power Dissipation	Frequency Response	Fabrication Technique
LANSDALE TUBE CO.	2N501A	Ge	<i>p-n-p</i>	high-speed switch	60 mw @ 25°C ambient temp.	$t_r + t_s + t_f = 47 \text{ n}\mu\text{sec}$	MADT
	2N502A	Ge	<i>p-n-p</i>	200 Mc-9.5-db a	60 mw @ 25°C ambient temp.		MADT
	2N1158A	Ge	<i>p-n-p</i>	200 Mc oscillator	60 mw @ 25°C ambient temp.		MADT
	2N1199A	Si	<i>n-p-n</i>	high-speed switch	100 mw @ 25°C ambient temp.	$t_r + t_s + t_f = 1.05 \mu\text{sec}$	SADT
	2N1200	Si	<i>n-p-n</i>	4.3 Mc-20-db a	100 mw @ 25°C ambient temp.	25 Mc f_t	SADT
	2N1201	Si	<i>n-p-n</i>	12.5 Mc-20-db a	100 mw @ 25°C ambient temp.	30 Mc f_t	SADT

Materials
 Legend: Ge—germanium
 Si—silicon

Fabrication Technique
 MADT—Micro Alloy Diffused Transistor
 SADT—Silicon Alloy Diffused Transistor

PHILCO


SEMICONDUCTOR DATA SHEET

TENTATIVE

2N1270, 2N1271, 2N1272

SURFACE ALLOY DIFFUSED-BASE TRANSISTORS

The 2N1270, 2N1271 and 2N1272 transistors form a family of silicon NPN Surface Alloy Diffused-base Transistors (SADT*) for 12.5 mc amplifier applications. The transistors feature a typical power gain of 25 db at 12.5 mc. The family is divided into three specified beta ranges. The three beta ranges make it possible to use these transistors also in both narrow and wide band video amplifier applications. Other features of the 2N1270, 2N1271 and 2N1272 are extremely low collector cutoff current, guaranteed maximum collector cutoff current at 125°C, true hermetic seal and a cold welded TO-9 package. The 2N1270, 2N1271 and 2N1272 are intended for military applications; environmental and life tests are performed on the transistors in accordance with MIL-S-19500B



GENERAL DESCRIPTION
 NPN Silicon SADT's for
 12.5 mc Amplifiers

The top chart above lists the six Lansdale/Philco transistors in the Sig C FY-56 PEM program. The three MADT devices are germanium, and the three SADT devices, including the 2N1201, are silicon. Silicon transistors were quite rare at this time, as the first commercial silicon transistors had been available only since late 1954 from Texas Instruments. The Philco data sheet above is from the late 1950s and provides a good description of the more common versions of the 2N1201 - the 2N1271, 2N1272 and 2N1273; these are all 12.5 MC SADT devices, intended to be used primarily in military applications for video amplifier circuits. SADT devices were obsolete by the mid 1960s, when the silicon planar technology developed at Fairchild became the most widely used transistor (and IC) technology.