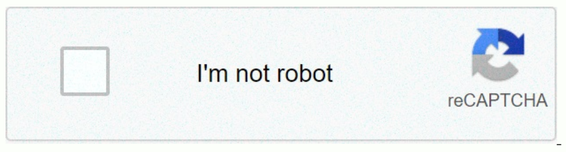

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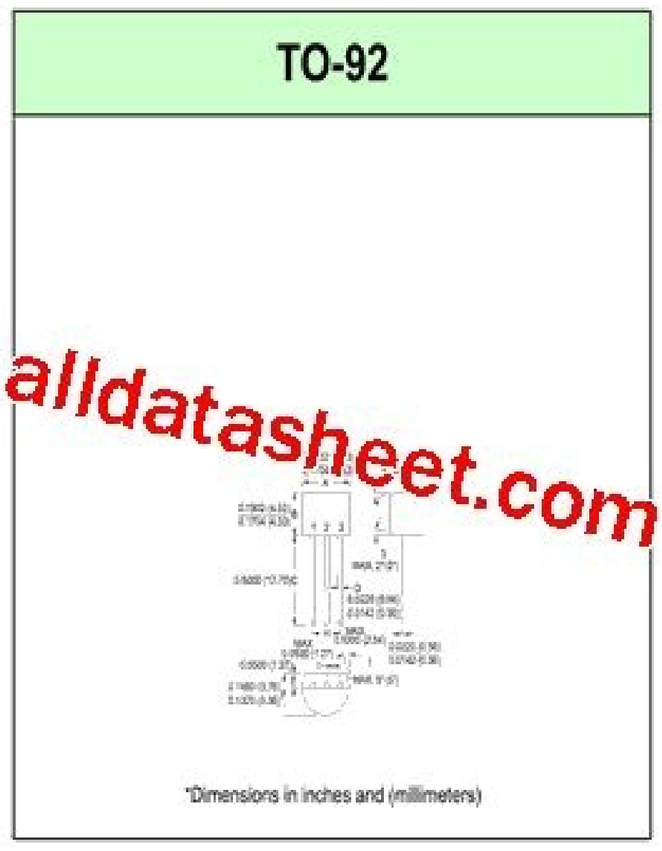
To-92 datasheet pdf

Lm317 to 92 datasheet pdf. 2n2222 to 92 datasheet pdf.

Download Datasheet ManufacturerPart No.DatasheetDescription List of Unclassifed Man... TO-92 169Kb / 4P TO-92 (3 leads) Leaded Thru-hole Plastic Package SHENZHEN YONGERJIA INDU... TO-92 126Kb / 1P TRANSISTOR (PNP) TO-92 148Kb / 1P TRANSISTOR (NPN) List of Unclassifed Man... TO-92 306Kb / 8P Sample Instructions for Choosing a Packing Option SHENZHEN YONGERJIA INDU... TO-92 132Kb / 1P TRANSISTOR (PNP) More results ManufacturerPart No.DatasheetDescription Supertex, Inc CL2 256Kb / 7P Simple 90V 20mA Temperature Compensated Constant Current LED Driver IC CL1 1Mb / 7P Simple 90V 20mA Temperature Compensated Constant Current LED Driver IC CL1 804Kb / 7P Simple 90V 20mA Temperature Compensated Constant Current LED Driver IC CL2N8-G 932Kb / 7P Simple 90V, 20mA, Temperature Compensated Constant Current LED Driver IC CL25 667Kb / 6P Simple 90V, 25mA, Temperature Compensated, Constant Current, LED Driver IC CL25 508Kb / 5P Simple 90V, 25mA, Temperature Compensated, Constant Current, LED Driver IC CL220 1Mb / 7P Simple, 220V, 20mA, Temperature-Compensated, Constant Current, LED Driver IC Microchip Technology CL220 396Kb / 13P Simple, 220V, 20mA, Temperature-Compensated, Constant-Current, LED Driver IC 01/27/15 CL2 426Kb / 15P Simple 90V, 20mA, Temperature Compensated 07/14/15 SHENZHEN FUMAN ELECTRON... TC1360 350Kb / 10P LED constant current driver IC More results English 中文 français español 日本語 Deutsch italiano русский polski português Tiếng việt Indian Mexican British New Zealand Privacy Policy ALLDATASHEET.COM English 中文 français español 日本語 Deutsch italiano русский polski português Tiếng việt Indian Mexican British New Zealand Small and cheap semiconductor package often used for transistors TO-92 front view[1]TO-92 back view[1] The TO-92 is a widely used style of semiconductor package mainly used for transistors.
The case is often made of epoxy or plastic, and offers compact size at a very low cost. History and origin The JEDEC TO-92 descriptor is derived from the original full name for the package: Transistor Outline Package, Case Style 92.[1] The package is also known by the designation SOT54. By 1966 the package was being used by Motorola for their 2N3904 devices among others.[2] Construction and orientation Size comparison of BJT transistor packages, from left to right: SOT-23, TO-92, TO-126, TO-3 The case is molded around the transistor elements in two parts; the face is flat, usually bearing a machine-printed part number (some early examples had the part number printed on the top surface instead). The back is semi-circularly-shaped. A line of moulding flash from the injection-moulding process can be seen around the case. The leads protrude from the bottom of the case. When looking at the face of the transistor, the leads are commonly configured from left-to-right as the emitter, base, and collector for 2N series (JEDEC) transistors, however, other configurations are possible, such as emitter, collector, and base commonly used for 2S series (Japanese) transistors or collector, base, and emitter for many of the BC series (Pro Electron) types.



If the face has a part name made up of only one letter and a few numbers, it can be either a Japanese or a Pro Electron part number. Thus, "C1234" would likely be a 2SC1234 device, but "C547" is usually short for "BC547". TO-92 packages with pre-bent wires; on the left to emulate a TO-18 footprint (SO-97 in BS 3934, 10A3 in DIN 41868) The leads coming out of the case are spaced 0.05" (1.27 mm) apart. It is often convenient to bend them outward to a 0.10" (2.54 mm) spacing to make more room for wiring.[3] Units with their leads pre-bent may be ordered to fit specific board layouts, depending on the application. Otherwise, the leads may be bent manually; however, care must be taken as they can break easily, as with any other device that is manually configured. The physical dimensions of the TO-92 housing may vary slightly depending on the manufacturer, however, the 1.27mm lead spacing must be respected. Advantages Transistors of this type can be made very inexpensively and take up very little board space. Most models are readily available in large quantities from wholesale distributors.

They are easy to find in small electronics stores because of their wide usefulness, making them a popular choice for hobby work and prototyping.

Disadvantages The main disadvantage of this style of case is the lack of heat sinking. Transistors and ICs of these types cannot handle as much power as higher-power equivalents, such as the TO-220, and can burn out quickly if they dissipate excessive power. There is no standard pinout for the TO-92. The American BJTs use the E-B-C pinout while their Japanese counterparts use the E-C-B pinout and some RF devices use the B-E-C pinout. Voltage and current Although TO-92 devices are mainly used in low-voltage / low-current (<30 V; <1 A) applications, high-voltage (600 Volt Vce) and high-current (5 A Ic) devices are available.
Nominal maximum power dissipation is less than one watt (600 mW). Variants For diodes or integrated circuits with two connections (e.g. temperature sensors) the middle lead is either not connected or omitted entirely. Comparison between the E-Line/Miniplast package and the TO-92 package In the late 1960s, Ferranti introduced a smaller package with a compatible footprint, called "E-Line".[4][5] This package was later standardized as a British Standard (but not by JEDEC) and remained in production with Ferranti Semiconductors' successor companies (Plessey, Zetex Semiconductors, Diodes Incorporated[6]). In East Germany the E-Line package was known as the "Miniplast" package and widely used by Kombinat Mikroelektronik Erfurt. Standards Standards organization Standard Designation for TO-92 E-Line/Miniplast 3-lead 2-lead IEC IEC 60191[7] A68 DIN DIN 41868[8] 10B3[a] EIAJ / JEITA ED-7500A[9][10] SC-43A British Standards BS 3934[11] SO-94[b] Gosstandart GOST 18472—88[12] KT-26[c] — KD-129[d] Rosstandart GOST R 57439—2017[13] Kombinat Mikroelektronik Erfurt TGL 200-8380[14] — — L2 TGL 11811[7] — L3 — TGL 26713/07[7] F2 F3 F4 ^ DIN 41868 also defines variants with the leads bent to emulate the footprint of other packages: 10A3 (TO-18 footprint). ^ BS-3934 also defines variants with the leads bent to emulate the footprint of other packages: SO-95 (TO-5 footprint), SO-96 (for flat mounting), and SO-97 (TO-18 footprint). ^ Russian: KT-26 ^ Russian: КД-129 Common components in a TO-92 package Common transistors: BC548, general purpose NPN transistor BC558, general purpose PNP transistor 2N3904, general purpose NPN transistor 2N3906, general purpose PNP transistor 2N7000, N-channel FET BS170, N-channel FET, similar to 2N7000 PN2222A, a "plastic" version of the original 2N2222 NPN transistor which came in a TO-18 package Other common components: MK484, AM radio integrated circuit 78Lxx series, voltage regulator integrated circuits TL431, voltage regulator integrated circuit References ^

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Package Outline, Taping and
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The pinout from left to right is: Emitter, Base, Collector.[1] A 2N3904 in a TO-92 package on a breadboard (lower left) The 2N3904 is a common NPN bipolar junction transistor used for general-purpose low-power amplifying or switching applications.[1][2][3] It is designed for low current and power, medium voltage, and can operate at moderately high speeds. It is complementary to the 2N3906 PNP transistor. Both types were registered by Motorola Semiconductor in the mid-1960s. Device packaging and specifications The construction of the 2N3904 and 2N3906 in the 1960s represented a significant performance and cost improvement, with the plastic TO-92 case replacing metal cans. This transistor is a low-cost device, widely available and sufficiently robust to be of use by experimenters and electronics hobbyists.[4] When looking at the flat side with the leads pointed downward, the three wires emerging from the bottom are connected to, from left to right, the emitter, the base and the collector.[5] Some manufacturers mark "EBC" on the molded part, but all are required to have those connections for a part which is a "2N3904".[6] It is a 200 mA, 40 V, 625 mW transistor with a transition frequency of 300 MHz,[1] with a minimum beta, or current gain, of 100 at a collector current of 10 mA. Related parts Electrically similar devices, such as the MMBT3904, are available in a variety of small through-hole and surface-mount packages, including TO-92, SOT-23, and SOT-223, with package-dependent thermal ratings from 625 milliwatts to 1 watt. The complementary PNP transistor is 2N3906.[7] Part numbers Pinout of 2N3904 in TO-92 package. Top view or PCB layout view is shown in the lower right corner. The 2N3904 (NPN) and 2N3906 (PNP) are complementary transistor pairs. These transistors are available in package styles TO-92, SOT23, SOT223 with different prefixes. Transistor part numbers BJT Thru-hole Surface-mount TO92 SOT23 SOT223 NPN 2N3904[1] MMBT3904 PZT3904 PNP 2N3906[7] MMBT3906 PZT3906 See also 2N2222, 2N2907 2N3055 BC108 BC548 KT315 References ^ a b c d "2N3904 Datasheet (TO-92)" (PDF).

JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

TO-92 Encapsulate Adjustable Reference Source

CJ431 Adjustable Accurate Reference Source

FEATURES
The output voltage can be adjusted to 36V
Low dynamic output impedance ,its typical value is 0.2Ω
Trapping current capability is 1 to 100mA
The typical value of the equivalent temperature factor in the whole temperature scope is 50 ppm/℃
The effective temperature compensation in the working range of full temperature
Low output noise voltage
Fast on -state response

TO—92

ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

Parameter	SYMBOL	VALUE	UNITS
	V_{KA}	37	V
	I_K	-100~+150	mA
	I_{REF}	0.05~3.0	mA
		770	mW
		6.16	mW/℃
(operating temperature range)		0~70	℃
(storage temperature range)		-65~+150	℃

ELECTRICAL CHARACTERISTICS (Tamb=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions		MIN	TYP	MAX	UNITS
Reference input voltage	V_{REF}	V_{KA}=V_{REF}, I_{KA}=10mA		2.475	2.5	2.525	V
Deviation of reference input voltage over temperature (note)	$\Delta V_{REF}/\Delta T$	V_{KA}=V_{REF}, I_{KA}=10mA Tmin≤Ta≤Tmax			4.5	17	mV
Ratio of change in reference input voltage to the change in cathode voltage	$\Delta V_{REF}/\Delta V_{KA}$	I_{KA}=10mA	ΔV_{KA} =10V~V_{REF}		-1.0	-2.7	mV/V
			ΔV_{KA} =36V~10V		-0.5	-2.0	mV/V
Reference input current	I_{REF}	I_{KA}=10mA, R_1=10kΩ R_2=∞			1.5	4	μA
Deviation of reference input current over full temperature range	$\Delta I_{REF}/\Delta T$	I_{KA}=10mA, R_1=10kΩ R_2=∞ Tmin≤Ta≤Tmax			0.4	1.2	μA
Minimum cathode current for regulation	$I_{KA(MIN)}$	V_{KA}=V_{REF}			0.45	1.0	mA
Off-state cathode current	$I_{KA(OFF)}$	V_{KA}=36V, V_{REF}=0			0.05	1.0	μA
Dynamic impedance	Z_{KA}	V_{KA}=V_{REF}, ΔI_{KA}=1.0~10.0mA f≤1.0kHz			0.15	0.5	Ω

Note:T_{min}=0℃ ,T_{max}=+70℃

CLASSIFICATION OF V_{ref}

Rank	0.5%	1%	2%
Range	2.487-2.512	2.475-2.525	2.450-2.550

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Please help improve this article by adding citations to reliable sources. Unsourced material may be challenged and removed.Find sources: "2N3906" – news · newspapers · books · scholar · JSTOR (May 2011) (Learn how and when to remove this template message) 2N3906 transistors in plastic TO-92 packaging. The cases are marked with E, B, and C for lead identification. Photomicrograph of the transistor chip inside a 2N3906 transistor package, showing the conductive metal layers used to connect the semiconductor junctions to the package leads. The upper-left and lower-right quadrants are bonding pad areas where wires for two of the terminals are attached, and the other two quadrants have the actual transistor structures, in a bulk region that is contacted at the back side of the chip to the third terminal. The 2N3906 is a commonly used PNP bipolar junction transistor intended for general purpose low-power amplifying or switching applications.[1][2] It is designed for low electric current and power and medium voltage, and can operate at moderately high speeds.
It is complementary to the 2N3904 NPN transistor.[3] Both types were registered by Motorola Semiconductor in the mid-1960s.
Device packaging and specifications The 2N3906 is manufactured in a plastic TO-92 case. When looking at the flat side with the leads pointed downward, the three leads emerging from the case are, from left to right, the emitter, base, and collector leads. The 2N3906 is specified by a collector current of 200 mA, collector-base and collector-emitter voltages of 40 V, for power dissipation of 300 mW.
Its transition frequency Ft is 250 MHz, with a beta of at least 100.[1] Part numbers The 2N3904 (NPN) and 2N3906 (PNP) are complementary transistor pairs. These transistors are available in package styles TO-92, SOT23, SOT223 with different prefixes. Transistor part numbers BJT Thru-hole Surface-mount TO92 SOT23 SOT223 NPN 2N3904[3] MMBT3904[4] PZT3904 PNP 2N3906[1] MMBT3906 PZT3906 See also 2N2222, 2N2907 2N3055 BC108 BC548 KT315 References ^ a b c "2N3906 Datasheet (TO-92)" (PDF). ON Semiconductor. February 2010. Archived (PDF) from the original on August 8, 2019. ^ "2N3906 Datasheet (TO-92)" (PDF). Micro Commercial Components (MCC). January 2013. Archived (PDF) from the original on August 8, 2019. ^ a b "2N3904 Datasheet (TO-92)" (PDF).
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External links Wikimedia Commons has media related to 2N3906. This electronics-related article is a stub. You can help Wikipedia by expanding it.vte Retrieved from " 4 The following pages link to 2N3906 External tools: Link count Transclusion count Sorted list Displayed 22 items. View (previous 50 | next 50) (20 | 50 | 100 | 250 | 500)TO-92 (links | edit) 2N3904 (links | edit) 2N2222 (links | edit) 2N2907 (links | edit) 2N3906 (transclusion) (links | edit) BC548 (links | edit) KT315 (links | edit) BC108 family (links | edit) Talk:Bipolar junction transistor (links | edit) Talk:2N3906 (links | edit) Talk:Transistor/Archive 3 (links | edit) Talk:1N400x rectifier diode (links | edit) User:Joe Sewell/Wikipedia Bookmarks (links | edit) User:Moonriddengirl/Wtshymanski article edits 2 (links | edit) User:Glrx/sandbox (links | edit) User:Ajoyz/Books/Silicon on Insulator (links | edit) User:JPxG/Oracle/2011-03 (links | edit) User talk:Thparkth/Archives/2011/June (links | edit) User talk:Thparkth/Archives/2011/August (links | edit) Wikipedia:Articles for deletion/Log/2011 March 26 (links | edit) Wikipedia:Articles for deletion/2N3906 (links | edit) Wikipedia talk:WikiProject Electronics/Archive 5 (links | edit) View (previous 50 | next 50) (20 | 50 | 100 | 250 | 500) Retrieved from " WhatLinksHere/2N3906" Scan this QR code to download the app now Or check it out in the app stores