

# Small Signal Transistors

## TO-39 Case (Continued)



TYPE NO.	DESCRIPTION	V <sub>CBO</sub>	V <sub>CEO</sub>	V <sub>EBO</sub>	I <sub>CBO</sub> (μA) *I <sub>CEO</sub> **I <sub>CEB</sub> ***I <sub>CEV</sub> ****I <sub>CER</sub>	h <sub>FE</sub>		@ I <sub>C</sub> (mA)	@ V <sub>CE</sub> (V)	V <sub>CE(SAT)</sub> (V)	@ I <sub>C</sub> (mA)	f <sub>T</sub>	C <sub>ob</sub>	t <sub>on</sub>	t <sub>off</sub>	NF	
		(V)	(V)	(V)		MIN	MAX					(MHz)	(pF)	(ns)	(ns)	(dB)	
		MIN	*V <sub>CER</sub> MIN	MIN						MAX		*TYP	*TYP	*TYP	*TYP	*TYP	
2N2854	NPN AMPL/SWITCH	60	40	5.0	0.10	40	100	300	1,000	1.0	0.40	1,000	--	--	--	--	--
2N2855	NPN AMPL/SWITCH	60	40	5.0	0.10	40	40	120	1,000	1.0	0.40	1,000	--	--	--	--	--
2N2890	NPN AMPL/SWITCH	100	80	5.0	0.50	60	30	90	1,000	2.0	0.50	1,000	30	70	--	--	--
2N2891	NPN AMPL/SWITCH	100	80	5.0	0.50	60	50	150	1,000	2.0	0.50	1,000	30	70	--	--	--
2N2904A	PNP AMPL/SWITCH	60	60	5.0	0.10	50	40	120	150	10	0.40	150	200	8.0	--	--	--
2N2905A	PNP AMPL/SWITCH	60	60	5.0	0.10	50	100	300	150	10	0.40	150	200	8.0	--	--	--
2N2927	PNP AMPL/SWITCH	30	25	4.0	--	--	30	130	50	5.0	0.25	50	100	20	--	--	--
2N2951	NPN AMPL/SWITCH	60	20	5.0	0.10	50	20	150	10	10	0.50	150	200	8.0	--	--	--
2N2958	NPN AMPL/SWITCH	60	20	5.0	0.025	50	40	120	150	10	0.50	150	250	8.0	--	--	--
2N2959	NPN AMPL/SWITCH	60	20	5.0	0.025	50	100	300	150	10	0.50	150	250	8.0	--	--	--
2N2960	NPN AMPL/SWITCH	60	30	5.0	--	--	100	300	150	10	0.50	150	250	8.0	--	--	--
2N2961	NPN AMPL/SWITCH	60	30	5.0	--	--	100	300	150	10	2.00	500	250	8.0	--	--	--
2N3015	NPN CORE DRIVER	60	30	5.0	0.20	30	30	120	150	10	0.40	150	250	8.0	--	60	--
2N3019	NPN AMPL/SWITCH	140	80	7.0	0.10	90	100	300	150	10	0.20	150	100	12	--	--	--
2N3020	NPN AMPL/SWITCH	140	80	7.0	0.10	90	40	120	150	10	0.20	150	100	12	--	--	--
2N3053	NPN AMPL/SWITCH	60	40	5.0	0.25	30	50	250	150	10	1.40	150	100	15	--	--	--
2N3072	PNP AMPL/SWITCH	60	60	4.0	0.01**	30	30	130	50	1.0	1.00	300	130	10	--	--	--
2N3107	NPN AMPL/SWITCH	100	60	7.0	0.01**	60	100	300	150	10	1.00	1,000	70	20	--	--	--
2N3108	NPN AMPL/SWITCH	100	60	7.0	0.01*	60	40	120	150	10	1.00	1,000	60	20	--	--	--
2N3109	NPN AMPL/SWITCH	80	40	7.0	0.01*	60	100	300	150	10	0.25	150	70	25	--	--	--
2N3110	NPN AMPL/SWITCH	80	40	7.0	0.01*	60	40	120	150	10	0.25	150	60	25	--	--	--
2N3114	NPN HIGH VOLTAGE	150	150	5.0	0.01	100	30	120	30	10	1.00	50	40	9.0	--	--	--
2N3119	NPN AMPL/SWITCH	100	80	4.0	50	60	50	200	100	10	0.50	100	250	6.0	40	700	--
2N3120	PNP AMPL/SWITCH	45	45	4.0	0.01*	30	30	130	150	1.0	0.50	300	130	10	--	--	--
2N3122	NPN AMPL/SWITCH	50	30	5.0	--	--	25	100	300	10	1.50	300	60	25	--	--	--
2N3133	PNP AMPL/SWITCH	50	35	4.0	0.50	30	40	120	150	10	0.60	150	200	10	--	--	--
2N3134	PNP AMPL/SWITCH	50	35	4.0	0.50	30	100	300	150	10	0.60	150	200	10	--	--	--
2N3137	NPN VHF/UHF OSC	40	20	4.0	0.50	20	20	120	50	5.0	0.30	50	500	3.5	--	--	--
2N3244	PNP CORE DRIVER	40	40	5.0	0.50	30	50	150	500	1.0	1.00	1,000	175	25	50	185	--
2N3245	PNP CORE DRIVER	50	50	5.0	0.50	30	30	90	500	1.0	1.20	1,000	150	25	55	165	--
2N3252	NPN CORE DRIVER	60	30	5.0	0.50	40	30	90	500	1.0	1.00	1,000	200	12	45	70	--
2N3253	NPN CORE DRIVER	75	40	5.0	0.50	60	25	75	500	1.0	1.20	1,000	175	12	50	70	--
2N3299	NPN AMPL/SWITCH	60	30	5.0	0.01**	50	40	120	150	10	0.60	500	250	8.0	60	150	--
2N3300	NPN AMPL/SWITCH	60	30	5.0	0.01**	50	100	300	150	10	0.60	500	250	8.0	60	150	--
2N3326	NPN AMPL/SWITCH	60	40	5.0	0.10	50	40	120	150	10	0.40	150	250	8.0	--	--	--
2N3388	NPN AMPL/SWITCH	125	100	6.0	--	--	60	--	2.5	5.0	1.00	2.5	36	35	--	--	--
2N3420	NPN AMPL/SWITCH	85	60	6.0	0.50***	80	40	160	1,000	2.0	0.50	2,000	40	150	--	--	--
2N3421	NPN AMPL/SWITCH	125	80	8.0	0.50***	120	40	160	1,000	2.0	0.50	2,000	40	150	--	--	--
2N3439	NPN HIGH VOLTAGE	450	350	7.0	20	360	40	160	20	10	0.50	50	15	10	--	--	--
2N3440	NPN HIGH VOLTAGE	300	250	7.0	20	250	40	160	20	10	0.50	50	15	10	--	--	--

(04-April 2014)

## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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### PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

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### DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2<sup>nd</sup> day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

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### REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix "TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix "PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

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### CONTACT US

#### Corporate Headquarters & Customer Support Team

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<https://www.centrasemi.com>

# Product End of Life Notification

<b>PDN ID:</b>	PDN01261
<b>Notification Date:</b>	7/25/23
<b>Last Buy Date:</b>	1/25/24
<b>Last Shipment Date</b>	7/25/24

Summary: The following PNP transistors are discontinued and are now classified as End of Life (EOL).

Although Central Semiconductor makes every effort to continue to produce devices that have been proclaimed EOL (End of Life) by other manufacturers, it is an accepted industry practice to discontinue certain devices when customer demand falls below a minimum level of sustainability. Accordingly, the following product(s) have been transitioned to End of Life status as part of Central's ongoing Product Portfolio Management. Any replacement products are noted below. The effective date for placing last purchase orders will be six (6) months from the date of this notice and twelve (12) months from the notice date for final shipments, and minimum order quantities may apply. The last purchase and shipment dates may be extended if inventory is available.

**\* All Plating types (PBFREE,TIN/LEAD) for each item listed are included in this notice.**

<b>Central Part Number</b>	<b>Suggested Replacement</b>
BFX87	N/A
BFX88	N/A
2N2904	N/A
2N2904A	N/A
2N2927	N/A
2N3072	N/A
2N3120	N/A
2N3133	N/A
40406	N/A

Central would be happy to assist you by providing additional information or technical data to help locate an alternate source if we have no replacement available. If you would like assistance, please visit <https://my.centrasemi.com/submit-inquiry?type=ER> to submit an online inquiry.

DISCLAIMER: This End of Life (EOL) notification is in accordance with JEDEC standard JESD48 - Product Discontinuance. Central Semiconductor will make every effort to offer life-time buy (LTB) opportunities and/or offer replacement devices to existing customers for discontinued devices, however, one or both may not be possible for all devices. Please contact your local Central Semiconductor sales representative for LTB opportunities/additional information.



<http://www.centrasemi.com>

# Product End of Life Notification

<b>PDN ID:</b>	PDN01191
<b>Notification Date:</b>	10/14/21
<b>Last Buy Date:</b>	4/14/22
<b>Last Shipment Date</b>	10/14/22

Summary: The 2N3253 transistor is discontinued and now classified as End of Life (EOL).

Although Central Semiconductor Corp. makes every effort to continue to produce devices that have been proclaimed EOL (End of Life) by other manufacturers, it is an accepted industry practice to discontinue certain devices when customer demand falls below a minimum level of sustainability. Accordingly, the following product(s) have been transitioned to End of Life status as part of Central's ongoing Product Management Process. Any replacement products are noted below. The effective date for placing last purchase orders will be six (6) months from the date of this notice and twelve (12) months from the notice date for final shipments, and minimum order quantities may apply. The last purchase and shipment dates may be extended if inventory is available.

**\* All Plating types (PBFREE,TIN/LEAD) for each item listed are included in this notice.**

<u>Central Part Number</u>	<u>Suggested Replacement</u>
2N3253	N/A

Central would be happy to assist you by providing additional information or technical data to help locate an alternate source if we have no replacement available. Please email your requests to [engineering@centrasemi.com](mailto:engineering@centrasemi.com).

**DISCLAIMER:** This End of Life (EOL) notification is in accordance with JEDEC standard JESD48 - Product Discontinuance. Central Semiconductor Corp. will make every effort to offer life-time buy (LTB) opportunities and/or offer replacement devices to existing customers for discontinued devices, however, one or both may not be possible for all devices. Please contact your local Central Semiconductor sales representative for LTB opportunities/additional information.