

Small Signal Transistors

TO-39 Case (Continued)



TYPE NO.	DESCRIPTION	V _{CBO} (V)	V _{CEO} (V) *V _{CER}	V _{EBO} (V)	I _{CBO} (μA) *I _{CEO} **I _{CES} ***I _{CEV} ****I _{CER}	@ V _{CB} (V)	h _{FE}		@ I _C (mA)	@ V _{CE} (V)	V _{CE(SAT)} (V)	@ I _C (mA)	f _T (MHz) *TYP	C _{ob} (pF) *TYP	t _{on} (ns) *TYP	t _{off} (ns) *TYP	NF (dB) *TYP
		MIN	MIN	MIN			MIN	MAX			MAX		MIN	MAX	MAX	MAX	MAX
BFX86	NPN AMPL/SWITCH	45	35	6.0	0.50	30	70	300	150	10	1.00	500	--	--	--	--	--
BFX87	PNP AMPL/SWITCH	50	50	4.0	0.50	50	40	--	150	10	0.40	150	100	12	60	150	--
BFX88	PNP AMPL/SWITCH	40	40	4.0	0.50	40	40	--	150	10	0.40	150	12	60	150	--	--
BFX98	NPN AMPL/SWITCH	150	150	6.0	0.10	100	15	--	0.10	10	1.00	25	--	--	--	--	--
BFY50	NPN AMPL/SWITCH	80	35	6.0	0.05	60	30	--	150	10	1.00	1,000	60	12	--	--	--
BFY51	NPN AMPL/SWITCH	60	30	6.0	0.05	40	40	--	150	10	1.60	1,000	50	12	--	--	--
BFY52	NPN AMPL/SWITCH	40	20	6.0	0.05	30	60	--	150	10	1.6	1,000	50	12	--	--	--
BFY55	NPN AMPL/SWITCH	80	35	7.0	0.01	60	40	120	150	10	1.00	1,000	60	12	--	--	--
BFY56A	NPN AMPL/SWITCH	85	55	7.0	0.02**	50	40	120	150	1.0	1.00	1,000	60	25	225	800	--
BFY57	NPN AMPL/SWITCH	125	125	5.0	0.10	100	30	150	30	10	1.50	50	--	--	--	--	--
BFY63	NPN AMPL/SWITCH	30	15	4.0	0.05	20	20	120	50	5.0	0.30	50	--	--	--	--	--
BFY64	PNP AMPL/SWITCH	40	40	5.0	0.03**	25	80	--	10	10	0.50	150	200	10	50	120	--
BFY68A	NPN AMPL/SWITCH	60	25	5.0	0.075	30	75	--	10	10	1.50	150	--	--	--	--	--
BSS44	PNP AMPL/SWITCH	65	60	6.0	500**	60	40	--	2,000	2.0	1.00	5.0	80*	100	65*	450*	--
BSS46	PNP AMPL/SWITCH	85	80	6.0	500**	60	25	--	500	2.0	1.40	5.0	80*	100	65*	450*	--
BSV12	PNP AMPL/SWITCH	80	80	5.0	0.01	80	63	250	100	1.0	0.50	100	--	--	--	--	--
BSV15	PNP AMPL/SWITCH	40	40	5.0	0.10**	40	40	250	100	1.0	1.00	500	50	30	500	--	--
BSV16	PNP AMPL/SWITCH	60	60	5.0	0.10**	60	40	250	100	1.0	1.00	500	50	30	500	--	--
BSV17	PNP AMPL/SWITCH	90	80	5.0	0.10**	80	40	160	100	1.0	1.00	500	50	30	500	--	--
BSV64	NPN HIGH CURRENT	100	80	5.0	10	60	40	--	2,000	2.0	1.00	5.0K	100*	80	600	1,200	--
BSW65	NPN HIGH VOLTAGE	80	80	6.0	100	40	40	--	100	5.0	1.00	1,000	80*	35	300*	1,000*	--
BSW66	NPN HIGH VOLTAGE	100	100	6.0	100	50	40	--	100	5.0	1.00	1,000	80*	35	500*	1,000*	--
BSW67	NPN HIGH VOLTAGE	120	120	6.0	100	60	40	--	100	5.0	1.00	1,000	80*	35	500*	1,000*	--
BSW68	NPN HIGH VOLTAGE	150	150	6.0	100	75	40	--	100	5.0	1.00	1,000	80*	35	500*	1,000*	--
BSW68A	NPN AMPL/SWITCH	150	150	6.0	100	75	30	--	500	5.0	1.00	1,000	80*	35	500*	1,000*	--
BSX45	NPN AMPL/SWITCH	80	40	7.0	0.03**	60	40	250	100	1.0	1.00	1,000	50	25	--	--	3.5*
BSX46	NPN AMPL/SWITCH	100	60	7.0	0.03**	60	40	250	100	1.0	1.00	1,000	50	20	--	--	3.5*
BSX47	NPN AMPL/SWITCH	120	80	7.0	0.03**	80	40	160	100	1.0	0.90	500	50	15	--	--	3.5*
BSX59	NPN CORE DRIVER	70	45	5.0	0.50	40	30	90	500	1.0	1.00	1,000	250	10	35	60	--
BSX60	NPN CORE DRIVER	70	30	5.0	0.50	40	30	90	500	1.0	1.00	1,000	250	10	40	70	--
BSX61	NPN CORE DRIVER	70	45	5.0	0.50	40	30	90	500	1.0	1.30	1,000	250	10	50	100	--
BSX62	NPN HIGH CURRENT	60	40	5.0	0.10**	40	63	250	1,000	1.0	0.80	2,000	30	70	300	4.0*μs	--
BSX63	NPN HIGH CURRENT	80	60	5.0	0.10**	60	63	250	1,000	1.0	0.80	2,000	30	70	300	1,500	--
BSX64	NPN HIGH CURRENT	100	80	5.0	0.10**	80	63	160	1,000	1.0	0.80	2,000	30	70	300	1,500	--
BSX95	NPN AMPL/SWITCH	75	30	7.0	0.01	60	40	120	150	10	0.20	150	100	25	--	--	--
BSX96	NPN AMPL/SWITCH	75	30	7.0	0.01	60	100	300	150	10	0.20	150	100	25	--	--	--
BSY34	NPN AMPL/SWITCH	60	40	5.0	0.07	50	25	--	100	1.0	1.00	500	--	--	--	--	--
BSY51	NPN AMPL/SWITCH	60	25	5.0	0.10	30	40	120	150	10	0.80	150	100*	--	--	--	--

OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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

DESIGNER SUPPORT/SERVICES

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

- Free quick ship samples (2nd 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

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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Product End of Life Notification

PDN ID:	PDN01261
Notification Date:	7/25/23
Last Buy Date:	1/25/24
Last Shipment Date	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.**

Central Part Number	Suggested Replacement
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.centalsemi.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.

Mouser Electronics

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[BSW68A TIN/LEAD](#) [BSX64 TIN/LEAD](#)