



## Small Signal Transistors U.S Specifications (Preferred Series) SOT-23 Case, 350mW (Continued on next page)

TYPE NO.	BV <sub>CBO</sub>	BV <sub>CEO</sub>	BV <sub>EBO</sub>	I <sub>CBO</sub> @ V <sub>CB</sub>	I <sub>CEV</sub> @ V <sub>CE</sub>	h <sub>FE</sub>		@ V <sub>CE</sub>	@ I <sub>C</sub>	V <sub>CE</sub> (SAT) @ I <sub>C</sub>		C <sub>ob</sub>	f <sub>T</sub>	NF	t <sub>off</sub>
	(V)	(V)	(V)	(nA)	(V)	MIN	MAX	(V)	(mA)	(V)	(mA)	(pF)	(MHz)	(dB)	(ns)
	MIN	MIN	MIN	MAX						MAX		MAX	MIN	MAX	MAX

### General Purpose Amplifiers/Switches

Devices are listed in order of descending breakdown voltage.  
NPN

	CMPT8099	80	80	6.0	100	80	100	300	5.0	1.0	0.4	100	6.0	150	-	-
	CMPT2222A	75	40	6.0	10	60	100	300	10	150	1.0	500	8.0	300	4.0	285
E	CMPT2222AE	<b>100</b>	<b>45</b>	6.0	10	60	100	300	10	150	<b>0.5</b>	500	8.0	300	4.0	285
	CMPT3904	60	40	6.0	50*	30	100	300	1.0	10	0.3	50	4.0	300	5.0	250
E	CMPT3904E	60	40	6.0	50*	30	100	300	1.0		<b>0.2</b>	50	4.0	300	4.0	250
	CMPT4401	60	40	6.0	100*	35	100	300	1.0	150	0.75	500	6.5	250	-	255

### PNP

	CMPT8599	80	80	5.0	100	80	100	300	5.0	1.0	0.4	100	4.5	150	-	-
	CMPT2907A	60	60	5.0	10	50	100	300	10	150	1.6	500	8.0	200	-	100
E	CMPT2907AE	<b>90</b>	<b>60</b>	5.0	10	50	100	300	10	150	<b>0.7</b>	500	8.0	200	-	100
	CMPT3906	40	40	5.0	50*	30	100	300	1.0	10	0.4	50	4.5	250	4.0	300
E	CMPT3906E	<b>60</b>	<b>40</b>	<b>6.0</b>	50*	30	100	300	1.0	10	<b>0.2</b>	50	4.0	300	4.0	250
	CMPT4403	40	40	5.0	100*	35	100	300	2.0	150	0.75	500	8.5	200	-	255

### Saturated Switches

Devices are listed in order of descending f<sub>T</sub>.

#### NPN

	CMPT2369	40	15	4.5	400	20	40	120	1.0	10	0.25	10	4.0	500	-	18
	CMPT3646	40	15	5.0	500**	20	15	-	1.0	300	0.5	300	5.0	350	-	28

#### PNP

	CMPT3640	12	12	4.0	10**	6.0	30	120	0.3	10	0.6	50	3.5	500	-	35
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### Low Noise Amplifiers

Devices are listed in order of ascending NF.

#### NPN

	CMPT5089	30	25	4.5	50	15	400	1,200	5.0	0.1	0.5	10	4.0	50	2.0	-
	CMPT930	45	45	5.0	10	45	100	300	5.0	0.01	1.0	10	8.0	30	3.0	-
	CMPT992	120	120	5.0	-	-	200	800	6.0	1.0	0.3	10	3.0	50	3.0	-
	CMPT2484	60	60	6.0	10	45	250	-	5.0	1.0	0.35	1.0	6.0	-	3.0	-
	CMPT5088	35	30	4.5	50	20	300	900	5.0	0.1	0.5	10	4.0	50	3.0	-
	CMPT6428	60	50	6.0	10	30	250	650	5.0	0.1	0.6	100	3.0	100	3.0	-
	CMPT6429	55	45	6.0	10	30	500	1,250	5.0	0.1	0.6	100	3.0	100	3.0	-

#### PNP

	CMPT5087	50	50	3.0	50	35	250	800	5.0	0.1	0.3	10	4.0	40	2.0	-
	CMPT5086	50	50	3.0	50	35	150	500	5.0	0.1	0.3	10	4.0	40	3.0	-

E ➤ Indicates Enhanced Specification Device

**BOLD** data indicates Enhanced Specification

**Central**<sup>™</sup>  
Semiconductor Corp.

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## Small Signal Transistors U.S Specifications (Preferred Series) SOT-23 Case, 350mW (Continued on next page)

TYPE NO.	BV <sub>CBO</sub>	BV <sub>CEO</sub> *BV <sub>CES</sub>	BV <sub>EBO</sub>	I <sub>CBO</sub> @ *I <sub>CEV</sub> @	V <sub>CB</sub> V <sub>CE</sub>	hFE		@ V <sub>CE</sub>	@ I <sub>C</sub>	V <sub>CE</sub> (SAT)	@ I <sub>C</sub>	C <sub>ob</sub>	f <sub>T</sub>	NF	t <sub>off</sub>
	(V)	(V)	(V)	(nA)	(V)	MIN	MAX	(V)	(mA)	(V)	(mA)	(pF)	(MHz)	(dB)	(ns)
	MIN	MIN	MIN	MAX						MAX		MAX	MIN	MAX	MAX

**High Current** Devices are listed in order of descending breakdown voltage.

### NPN

<b>E</b> ▶ CMPT3019	120	80	7.0	10	90	100	300	10	150	0.5	500	12	100	4.0	-
CMPTA06	80	80	4.0	100	80	100	-	1.0	100	0.25	100	-	100	-	-
<b>E</b> ▶ CMPT491E	80	60	5.0	100	60	200	600	5.0	500	0.2	500	10	150	-	-

### PNP

<b>E</b> ▶ CMPT4033	80	80	5.0	50	60	100	300	5.0	100	0.5	500	20	100	-	-
CMPTA56	80	80	4.0	100	80	100	-	1.0	100	0.25	100	-	50	-	-
<b>E</b> ▶ CMPT591E	80	60	5.0	100	60	200	600	5.0	500	0.2	500	10	150	-	-

**High Voltage** Devices are listed in order of descending breakdown voltage.

### NPN

<b>E</b> ▶ CMPTA46	450	450	6.0	100	400	50	200	10	10	0.5	50	7.0	20	-	-
CMPTA44	450	400	6.0	100	400	50	200	10	10	0.75	50	7.0	20	-	-
CMPT6517	350	350	5.0	50	250	30	200	10	30	1.0	50	-	40	-	-
CMPTA42	300	300	6.0	100	200	40	-	10	30	0.5	20	3.0	50	-	-
<b>E</b> ▶ CMPTA42E	<b>350</b>	<b>350</b>	6.0	250	200	<b>50</b>	-	10	30	<b>0.35</b>	50	6.0	<b>100</b>	-	-
CMPT5551	180	160	6.0	50	120	80	250	5.0	10	0.2	50	6.0	100	8.0	-

### PNP

<b>E</b> ▶ CMPTA96	450	450	6.0	100	400	50	200	10	10	0.5	50	7.0	20	-	-
CMPTA94	400	400	6.0	100	350	50	200	10	10	0.75	50	7.0	20	-	-
CMPT6520	350	350	5.0	50	250	30	200	10	30	1.0	50	-	40	-	-
CMPTA92	300	300	5.0	250	200	25	-	10	30	0.5	20	6.0	50	-	-
<b>E</b> ▶ CMPTA92E	<b>350</b>	<b>350</b>	<b>6.0</b>	250	200	<b>50</b>	-	10	30	<b>0.35</b>	50	6.0	<b>100</b>	-	-
CMPT5401	160	150	5.0	50	100	60	240	5.0	10	0.5	50	6.0	100	8.0	-

**E** ▶ Indicates Enhanced Specification Device

**BOLD** data indicates Enhanced Specification



## Small Signal Transistors U.S Specifications (Preferred Series) SOT-23 Case, 350mW

TYPE NO.	BV <sub>CB0</sub>	BV <sub>CEO</sub> *BV <sub>CES</sub>	BV <sub>EBO</sub>	I <sub>CBO</sub> @ *I <sub>CEV</sub> @	V <sub>CB</sub> V <sub>CE</sub>	h <sub>FE</sub>		@ V <sub>CE</sub>	@ I <sub>C</sub>	V <sub>CE</sub> (SAT) @ I <sub>C</sub>		C <sub>ob</sub>	f <sub>T</sub>	NF	t <sub>off</sub>
	(V) MIN	(V) MIN	(V) MIN	(nA) MAX	(V) MAX	MIN	MAX	(V)	(mA)	(V) MAX	(mA)	(pF) MAX	(MHz) MIN	(dB) MAX	(ns) MAX

### RF Oscillator Devices are listed in order of descending f<sub>T</sub>.

NPN															
CMPT5179	20	12	2.5	20	15	25	-	1.0	3.0	0.4	10	1.0	900	4.5	-
CMPTH10	30	25	3.0	100	25	60	-	10	4.0	0.5	4.0	0.7	650	-	-
CMPT918	30	15	3.0	10	15	20	-	1.0	3.0	0.4	10	1.7	600	6.0	-

PNP															
CMPTH81	20	20	3.0	100	10	60	-	10	5.0	0.5	5.0	0.85	600	-	-

### Darlington Devices are listed in order of descending h<sub>FE</sub>.

NPN															
CMPT6427	40	40	12	50	30	20,000	200,000	5.0	100	1.5	500	7.0	130	10	-
CMPTA14	30	30*	10	100	30	20,000	-	5.0	100	1.5	100	-	125	-	-
<b>E</b> > CMPTA14E	<b>40</b>	<b>40*</b>	10	<b>100</b>	40	<b>40,000</b>	-	5.0	100	<b>1.0</b>	100	-	125	-	-
CMPTA13	30	30*	10	100	30	10,000	-	5.0	100	1.5	100	-	125	-	-
CMPTA27	60	60*	10	100	50	10,000	-	5.0	100	1.5	100	-	125	-	-
CMPTA29	100	100*	12	100	80	10,000	-	5.0	100	1.5	100	8.0	125	-	-

PNP															
CMPTA64	30	30*	10	100	30	20,000	-	5.0	100	1.5	100	-	125	-	-
CMPTA63	30	30*	10	100	30	10,000	-	5.0	100	1.5	100	-	125	-	-
CMPTA77	60	60*	10	100	50	10,000	-	5.0	100	1.5	100	-	125	-	-

### Chopper Transistor

PNP															
CMPT404A	40	35	25	100	10	100	400	0.15	12	0.20	24	40†	-	-	-

**E** > Indicates Enhanced Specification Device

**BOLD** data indicates Enhanced Specification

Shaded areas indicate Darlington.





## Transistors

### SOT-23 Case Proelectron Series 350mW (Continued)

TYPE NO.	DESCRIPTION	$V_{CB0}$	$V_{CE0}$	$V_{EB0}$	$I_{CB0} @ V_{CB}$		$h_{FE} @ V_{CE} @ I_C$		$V_{CE(SAT)} @ I_C$		$C_{ob}$ (pF)	$f_T$ (MHz)	NF (dB)	$t_{off}$ (ns)	MARK. CODE	SIMILAR LEADED DEVICES		
		MIN	MIN	MIN	MAX	MIN	MAX	MIN	MAX	MIN							MAX	
BCW60	NPN Low Noise	32*	32	5.0	20*	32	120	630	5.0	2.0	0.55	50	2.5	250	6.0	-	-	
BCW60A	NPN Low Noise	32*	32	5.0	20*	32	120	220	5.0	2.0	0.55	50	2.5	250	6.0	-	AA	
BCW60B	NPN Low Noise	32*	32	5.0	20*	32	180	310	5.0	2.0	0.55	50	2.5	250	6.0	-	AB	
BCW60C	NPN Low Noise	32*	32	5.0	20*	32	250	460	5.0	2.0	0.55	50	2.5	250	6.0	-	AC	
BCW60D	NPN Low Noise	32*	32	5.0	20*	32	380	630	5.0	2.0	0.55	50	2.5	250	6.0	-	AD	
BCW61	PNP Low Noise	32*	32	5.0	20*	32	120	630	5.0	2.0	0.55	50	4.5	180	6.0	-	-	
BCW61A	PNP Low Noise	32*	32	5.0	20*	32	120	220	5.0	2.0	0.55	50	4.5	180	6.0	-	BA	
BCW61B	PNP Low Noise	32*	32	5.0	20*	32	180	310	5.0	2.0	0.55	50	4.5	180	6.0	-	BB	
BCW61C	PNP Low Noise	32*	32	5.0	20*	32	250	460	5.0	2.0	0.55	50	4.5	180	6.0	-	BC	
BCW61D	PNP Low Noise	32*	32	5.0	20*	32	380	630	5.0	2.0	0.55	50	4.5	180	6.0	-	BD	
BCW65	NPN High Current	60	32	5.0	20	32	100	630	1.0	100	0.70	500	6.0	170	-	-	-	
BCW65A	NPN High Current	60	32	5.0	20	32	100	250	1.0	100	0.70	500	6.0	170	-	-	EA	
BCW65B	NPN High Current	60	32	5.0	20	32	160	400	1.0	100	0.70	500	6.0	170	-	-	EB	
BCW65C	NPN High Current	60	32	5.0	20	32	250	630	1.0	100	0.70	500	6.0	170	-	-	EC	
BCW66	NPN High Current	75	45	5.0	20	45	100	630	1.0	100	0.70	500	6.0	170	-	-	-	
BCW66F	NPN High Current	75	45	5.0	20	45	100	250	1.0	100	0.70	500	6.0	170	-	-	EF	
BCW66G	NPN High Current	75	45	5.0	20	45	160	400	1.0	100	0.70	500	6.0	170	-	-	EG	
BCW66H	NPN High Current	75	45	5.0	20	45	250	630	1.0	100	0.70	500	6.0	170	-	-	EH	
BCW67	PNP High Current	45	32	5.0	20	32	100	630	1.0	100	0.70	500	6.0	200	-	-	-	
BCW67A	PNP High Current	45	32	5.0	20	32	100	250	1.0	100	0.70	500	6.0	200	-	-	DA	
BCW67B	PNP High Current	45	32	5.0	20	32	160	400	1.0	100	0.70	500	6.0	200	-	-	DB	
BCW67C	PNP High Current	45	32	5.0	20	32	250	630	1.0	100	0.70	500	6.0	200	-	-	DC	
BCW68	PNP High Current	60	45	5.0	20	45	100	630	1.0	100	0.70	500	6.0	200	-	-	-	
BCW68F	PNP High Current	60	45	5.0	20	45	100	250	1.0	100	0.70	500	6.0	200	-	-	DF	
BCW68G	PNP High Current	60	45	5.0	20	45	160	400	1.0	100	0.70	500	6.0	200	-	-	DG	
BCW68H	PNP High Current	60	45	5.0	20	45	250	630	1.0	100	0.70	500	6.0	200	-	-	DH	
BCW69	PNP Low Noise	50	45	5.0	100	20	120	260	5.0	2.0	0.30	10	4.5	150	10	-	H1	
BCW70	PNP Low Noise	50	45	5.0	100	20	215	500	5.0	2.0	0.30	10	4.5	150	10	-	H2	
BCW71	NPN Low Noise	50	45	5.0	100	20	110	220	5.0	2.0	0.25	10	2.5	300	10	-	K1	
BCW72	NPN Low Noise	50	45	5.0	100	20	200	450	5.0	2.0	0.25	10	2.5	300	10	-	K2	
BCW81	NPN Low Noise	50	45	5.0	100	20	420	800	5.0	2.0	0.25	10	2.5	300	10	-	K3	
BCW89	PNP Low Noise	80	60	5.0	100	20	120	260	5.0	2.0	0.30	10	4.5	150	10	-	H3	
BCX17	PNP High Current	50*	45	5.0	100	20	100	600	1.0	100	0.62	500	8.0	100	-	-	T1	
BCX18	PNP High Current	30*	25	5.0	100	20	100	600	1.0	100	0.62	500	8.0	100	-	-	T2	
BCX19	NPN High Current	50*	45	5.0	100	20	100	600	1.0	100	0.62	500	5.0	200	-	-	U1	
BCX20	NPN High Current	30*	25	5.0	100	20	100	600	1.0	100	0.62	500	5.0	200	-	-	U2	
BCX70	NPN Low Noise	45*	45	5.0	20*	45	120	630	5.0	2.0	0.55	50	2.5	250	6.0	-	-	
BCX70G	NPN Low Noise	45*	45	5.0	20*	45	120	220	5.0	2.0	0.55	50	2.5	250	6.0	-	AG	
BCX70H	NPN Low Noise	45*	45	5.0	20*	45	180	310	5.0	2.0	0.55	50	2.5	250	6.0	-	AH	
BCX70J	NPN Low Noise	45*	45	5.0	20*	45	250	460	5.0	2.0	0.55	50	2.5	250	6.0	-	AJ	
BCX70K	NPN Low Noise	45*	45	5.0	20*	45	380	630	5.0	2.0	0.55	50	2.5	250	6.0	-	AK	
BCX71	PNP Low Noise	45*	45	5.0	20*	45	120	630	5.0	2.0	0.55	50	4.5	180	6.0	-	-	
BCX71G	PNP Low Noise	45*	45	5.0	20*	45	120	220	5.0	2.0	0.55	50	4.5	180	6.0	-	BG	
BCX71H	PNP Low Noise	45*	45	5.0	20*	45	180	310	5.0	2.0	0.55	50	4.5	180	6.0	-	BH	
BCX71J	PNP Low Noise	45*	45	5.0	20*	45	250	460	5.0	2.0	0.55	50	4.5	180	6.0	-	BJ	
BCX71K	PNP Low Noise	45*	45	5.0	20*	45	380	630	5.0	2.0	0.55	50	4.5	180	6.0	-	BK	
BSR13	NPN AMPL/Switch	60	30	5.0	30	50	100	300	10	150	1.60	500	80*	250*	-	285	U7	2N2222A
BSR14	NPN AMPL/Switch	75	40	6.0	10	60	100	300	10	150	1.00	500	80*	300*	-	285	U8	2N2222A
BSR15	PNP AMPL/Switch	60	40	5.0	20	50	100	300	10	150	1.60	500	80*	200*	-	100	T7	2N2907A
BSR16	PNP AMPL/Switch	60	60	5.0	10	50	100	300	10	150	1.60	500	80*	200*	-	100	T8	2N2907A
BSR17	NPN AMPL/Switch	60	40	6.0	50†	30	50	150	1.0	10	0.30	50	40*	250*	-	225	U9	-
BSR17A	NPN AMPL/Switch	60	40	6.0	50†	30	100	300	1.0	10	0.30	50	40*	300*	-	250	U92	-
BSV52	NPN Sat Switch	20	12	5.0	100	10	40	120	1.0	10	0.40	50	40*	500	-	18	B2	2N2369A

\* $BV_{CES}$

$†I_{CES}$   
 $†I_{CEV}$

\*MAX \*MIN