

IC to 80 A . . . PT to 300 W . . . VCE to 170 V  
HOMETAXIAL-BASE N-P-N POWER TYPES

$I_C = 1.5$ A max. $P_T = 8.75$ W max. (TO-38) <sup>a</sup>	$I_C = 1.5$ A max. $P_T = 8.75$ W max. (TO-38) <sup>a</sup>	$I_C = 3.5$ A max. $P_T = 10$ W max. (TO-38) <sup>a</sup>	$I_C = 4$ A max. $P_T = 50$ W max. (TO-66) <sup>**</sup>	$I_C = 4$ A max. $P_T = 36$ W max. VERSAWATT (TO-220)	$I_C = 3$ A max. $P_T = 50$ W max. (TO-66) <sup>**</sup>	$I_C = 3$ A max. $P_T = 36$ W max. VERSAWATT (TO-220)	$I_C = 7$ A max. $P_T = 50$ W max. VERSAWATT (TO-220)	$I_C = 15$ A max. $P_T = 150$ W max. (TO-3)	$I_C = 16$ A max. $P_T = 75$ W max. VERSAWATT (TO-220)	$I_C = 10$ A max. $P_T = 150$ W max. (TO-3)	$I_C = 30$ A max. $P_T = 220$ W max. (TO-3)	$I_C = 16$ A max. $P_T = 250$ W max. (TO-3)	$I_C = 80$ A max. $P_T = 300$ W max. (Modified TO-3)
90 x 90 <sup>A</sup>	90 x 90	90 x 90	130 x 130	130 x 130	130 x 130	130 x 130	150 x 150	180 x 180	180 x 180	180 x 180	250 x 250	250 x 250	380 x 380
Family Designation													
2N1482	40349	2N5786	2N3054	2N5298	2N3441	2N6478	2N5496	2N3055	2N6103	2N3442	2N3771	2N3773	2N5578
<b>40347</b> $V_{CEV(sus)} = 60$ V $h_{FE} = 25-100$ @ 450 mA $f_T = 1.5$ MHz typ.  File No. 88 E	<b>40349</b> $V_{CEV(sus)} = 160$ V $h_{FE} = 30-125$ @ 150 mA $f_T = 1.5$ MHz typ.  File No. 88 E	<b>2N5786</b> $V_{CEV(sus)} = 45$ V $h_{FE} = 20-100$ @ 1.6 A $f_T = 1$ MHz min.  CT File No. 413 E	<b>40250</b> $V_{CEV(sus)} = 50$ V $h_{FE} = 25-100$ @ 1.5 A $f_T = 1.2$ MHz typ. $P_T = 29$ W  CT File No. 112	<b>2N5295</b> <b>2N5296</b> $V_{CEV(sus)} = 50$ V $h_{FE} = 30-120$ @ 1 A $f_T = 0.8$ MHz min.  CT File No. 322	<b>2N6263</b> $V_{CEV(sus)} = 130$ V $h_{FE} = 20-100$ @ 0.5 A $f_T = 1.2$ MHz typ. $P_T = 20$ W  File No. 529	<b>2N6477</b> $V_{CEV(sus)} = 130$ V $h_{FE} = 20-100$ @ 1 A $f_T = 0.8$ MHz min.  File No. 680	<b>2N5491</b> <b>2N5490</b> $V_{CEV(sus)} = 50$ V $h_{FE} = 20-100$ @ 2 A $f_T = 0.8$ MHz min.  CT File No. 353	<b>2N6371</b> $V_{CEV(sus)} = 50$ V $h_{FE} = 15-60$ @ 8 A $f_T = 1$ MHz typ. $P_T = 117$ W  CT File No. 607	<b>2N6102</b> <b>2N6103</b> $V_{CEV(sus)} = 45$ V $h_{FE} = 15-60$ @ 8 A $f_T = 0.8$ MHz min. $I_C = 16$ A max.  File No. 485	<b>2N4347</b> $V_{CEV(sus)} = 140$ V $h_{FE} = 15-60$ @ 2 A $f_T = 0.8$ MHz typ. $P_T = 100$ W  CT File No. 528	<b>2N6257</b> $V_{CEV(sus)} = 45$ V $h_{FE} = 15-75$ @ 8 A $f_T = 0.6$ MHz min. $P_T = 150$ W $I_C = 20$ A  File No. 525	<b>2N4348</b> $V_{CEV(sus)} = 140$ V $h_{FE} = 15-60$ @ 5 A $f_T = 0.7$ MHz typ. $P_T = 120$ W $I_C = 10$ A  CT File No. 526	<b>2N5575</b> $V_{CEV(sus)} = 50$ V $h_{FE} = 10-40$ @ 60 A $f_T = 0.4$ MHz min.  File No. 359
<b>40348</b> $V_{CEV(sus)} = 90$ V $h_{FE} = 30-125$ @ 300 mA $f_T = 1.5$ MHz typ.  88 E		<b>2N5785</b> $V_{CEV(sus)} = 65$ V $h_{FE} = 20-100$ @ 1.2 A $f_T = 1$ MHz min.  CT 413 E	<b>2N6260</b> $V_{CEV(sus)} = 50$ V $h_{FE} = 20-100$ @ 1.5 A $f_T = 0.8$ MHz min. $P_T = 29$ W  527	<b>2N5297</b> <b>2N5298</b> $V_{CEV(sus)} = 70$ V $h_{FE} = 20-80$ @ 1.5 A $f_T = 0.8$ MHz min.  CT 322	<b>2N3441</b> $V_{CEV(sus)} = 150$ V $h_{FE} = 25-100$ @ 0.5 A $f_T = 1.2$ MHz typ. $P_T = 25$ W  CT 529	<b>2N6478</b> $V_{CEV(sus)} = 150$ V $h_{FE} = 25-100$ @ 1 A $f_T = 0.8$ MHz min.  680	<b>2N5495</b> <b>2N5494</b> $V_{CEV(sus)} = 50$ V $h_{FE} = 20-80$ @ 3 A $f_T = 0.8$ MHz min.  CT 353	<b>2N6253</b> $V_{CEV(sus)} = 55$ V $h_{FE} = 20-70$ @ 3 A $f_T = 0.8$ MHz min. $P_T = 115$ W  524	<b>2N6098</b> <b>2N6099</b> $V_{CEV(sus)} = 65$ V $h_{FE} = 20-80$ @ 4 A $f_T = 0.8$ MHz min. $I_C = 10$ A max.  485	<b>2N3442</b> $V_{CEV(sus)} = 160$ V $h_{FE} = 20-70$ @ 3 A $f_T = 0.8$ MHz typ. $P_T = 117$ W  528	<b>2N3771</b> $V_{CEV(sus)} = 45$ V $h_{FE} = 15-60$ @ 15 A $f_T = 0.8$ MHz min. $P_T = 150$ W $I_C = 30$ A  525	<b>2N3773</b> $V_{CEV(sus)} = 160$ V $h_{FE} = 15-60$ @ 8 A $f_T = 0.7$ MHz typ. $P_T = 150$ W $I_C = 16$ A  526	<b>2N5578</b> $V_{CEV(sus)} = 70$ V $h_{FE} = 10-40$ @ 40 A $f_T = 0.4$ MHz min.  359
		<b>2N5784</b> $V_{CEV(sus)} = 80$ V $h_{FE} = 20-100$ @ 1 A $f_T = 1$ MHz min.  CT 413 E	<b>BDY 71</b> <b>2N3054</b> $V_{CEV(sus)} = 60$ V $h_{FE} = 80-200$ @ 0.5 A $f_T = 0.8$ MHz min. $P_T = 25$ W  CT 527	<b>2N5293</b> <b>2N5294</b> $V_{CEV(sus)} = 75$ V $h_{FE} = 30-120$ @ 0.5 A $f_T = 0.8$ MHz min.  CT 322	<b>2N6264</b> $V_{CEV(sus)} = 170$ V $h_{FE} = 20-60$ @ 1 A $f_T = 1.2$ MHz typ. $P_T = 50$ W  529		<b>2N5493</b> <b>2N5492</b> $V_{CEV(sus)} = 65$ V $h_{FE} = 20-100$ @ 2.5 A $f_T = 0.8$ MHz min.  CT 353	<b>2N3055</b> $V_{CEV(sus)} = 70$ V $h_{FE} = 20-70$ @ 4 A $f_T = 0.8$ MHz min. $P_T = 115$ W  CT 524	<b>2N6100</b> <b>2N6101</b> $V_{CEV(sus)} = 75$ V $h_{FE} = 20-80$ @ 5 A $f_T = 0.8$ MHz min. $I_C = 10$ A max.  485	<b>2N6262</b> $V_{CEV(sus)} = 170$ V $h_{FE} = 20-70$ @ 3 A $f_T = 0.8$ MHz min. $P_T = 150$ W  528	<b>2N3772</b> $V_{CEV(sus)} = 70$ V $h_{FE} = 15-60$ @ 10 A $f_T = 0.8$ MHz min. $P_T = 150$ W  CT 525	<b>2N6259</b> $V_{CEV(sus)} = 160$ V $h_{FE} = 15-60$ @ 8 A $f_T = 0.6$ MHz min. $P_T = 250$ W $I_C = 16$ A  526	
			<b>2N6261</b> $V_{CEV(sus)} = 85$ V $h_{FE} = 25-100$ @ 1.5 A $f_T = 0.8$ MHz min. $P_T = 50$ W  527				<b>2N5497</b> <b>2N5496</b> $V_{CEV(sus)} = 80$ V $h_{FE} = 20-100$ @ 3.5 A $f_T = 0.8$ MHz min.  CT 353	<b>2N6254</b> $V_{CEV(sus)} = 85$ V $h_{FE} = 20-70$ @ 5 A $f_T = 0.8$ MHz min. $P_T = 150$ W  524	<b>BD278</b> $V_{CEV(sus)} = 55$ V $h_{FE} = 15-75$ @ 4 A $f_T = 0.8$ MHz min. $I_C = 10$ A max.  668		<b>BDY29</b> $V_{CEV(sus)} = 85$ V $h_{FE} = 15-60$ @ 15 A $P_T = 220$ W  CT 525	<b>BDY37</b> $V_{CEV(sus)} = 150$ V $h_{FE} = 15-60$ @ 8 A $P_T = 150$ W  CT 526	
									<b>BD278A</b> $V_{CEV(sus)} = 55$ V $h_{FE} = 30$ min. @ 2 A  668				

<sup>A</sup>Pellet size—values shown are edge dimensions in thousandths-of-an-inch (mils)

<sup>a</sup>Available with:  
a. flange for easy heat sinking  $R\theta_{JC} = 15^\circ$  C/W  
b. free-air radiator  $R\theta_{JA} = 40-50^\circ$  C/W

<sup>\*\*</sup>Available with free-air radiator  $R\theta_{JA} = 30^\circ$  C/W

File No. (e.g. File No. 88E), where shown, relates to the data bulletin.

CT—Complementary Type available, see matrix on Complementary-Pair Power Types.

DESCRIPTION

**2N3771 FAMILY [n-p-n] (silicon)**  
 $f_T = 0.8 \text{ MHz min}; P_T \text{ up to } 250 \text{ W max}$

$V_{CE0(sus)}$ V	$V_{CER(sus)}$ V	$V_{CEV(sus)}$ V	$h_{FE}$		$I_{CEV-mA}$			$V_{CE(sat)-V}$			$V_{BE-V}$		
			$I_C$ A	$V_{CE}$ V	Temp. °C	$V_{CE}$ V	$I_C$ A	$I_B$ A	$I_C$ A				
40	45	50	15-75	8	4	4	20	45	1.5	8	0.8	2.2	8
40	45	50	15-60	15	4	2	10 <sup>▲</sup>	50	2	15	1.5	2.7	15
60	70	80	15-60	10	4	5	10 <sup>▲</sup>	100	1.4	10	1	2.2	10
75	—	90	15-60	15	2	1 <sup>●</sup>	10 <sup>▲</sup>	100	1.2	15	1.5	3.5	30

▲ At  $V_{CE} = 30 \text{ V}$

—	90	—	35-100	4	4	0.5 <sup>●</sup>	2 <sup>●</sup>	80	0.8	4	0.4	1.2	4
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■ JAN & JAN TX types available. ●  $I_{CER}$

**2N TYPES**

- 2N6257 High-Current, General Purpose
- 2N3771<sup>■</sup> High-Current, General Purpose
- 2N3772<sup>■</sup> High-Current, General Purpose
- BDY29 High-Current, General Purpose

**AUDIO TYPES**

- 40411 Output, 70-W Class AB Amplifier

**2N TYPES**

- 2N4348 High-Current High Voltage, General Purpose
- 2N3773 High-Current High Voltage, General Purpose
- 2N6259 High-Current High Voltage, General Purpose
- BDY37 High-Current High Voltage, General Purpose

**2N3773 FAMILY [n-p-n] (silicon)**  
 $f_T = 0.7 \text{ MHz typ}; P_T \text{ up to } 250 \text{ W max}$

120	140	140	15-60	5	4	2	10	120	1	5	0.5	2	5
140	150	160	15-60	8	4	2	10	140	1.4	8	0.8	2.2	8
150	160	170	15-60	8	2	0.2	4	150	1	8	0.8	2	8
140	—	160	15-60	8	4	2 <sup>●</sup>	10 <sup>●</sup>	140	1.4	8	0.8	2.2	8

**2N3879 FAMILY [n-p-n] (silicon)**  
 $f_T = 60 \text{ MHz min}; P_T = 35 \text{ W max}$

50	65	—	50-200	0.5	5	4	4	100	2	4	0.5	2.5	4
75	90	—	20-80	4	5	4	4	100	1.2	4	0.4	1.8	4
—	75	—	10-100	4	1.2	10	10	100	1.2	4	0.4	1.9	4
90	110	—	15-60	3	2	5	10	110	1.5	3	0.3	2.5	3

**2N TYPES**

- 2N3878 Audio, Ultrasonic Amplifiers and RF
- 2N3879 High-Current High-Speed Switch
- 2N5202 High-Current High-Speed Switch
- 2N6500 High-Current High-Speed Switch

**AUDIO TYPES**

- 40364 Output, 20-W Class AB Amplifier

**OTHER TYPES**

- 40375 2N3878 with Heat Radiator\*

**2N TYPES**

- 2N4036 PNP Complement of 2N2102
- 2N4037 PNP Complement of 2N3053
- 2N4314 Low Cost, High Voltage

**2N4036 FAMILY [p-n-p] (silicon)**  
 $f_T = 60 \text{ MHz min}; P_T \text{ up to } 7 \text{ W max}$

●  $I_{CER}$

-65	-85	-85	40-140	-0.15	-10	-0.02 <sup>●</sup>	—	-60	-0.65	-0.15	-0.015	-1.1	-0.15
-40	-60	-60	50-250	-0.15	-10	-0.25 <sup>●</sup>	—	-60	-1.4	-0.15	-0.015	-1.5	-0.15
-65	-85	-85	50-250	-0.15	-10	-0.25 <sup>●</sup>	—	-60	-1.4	-0.15	-0.015	-1.5	-0.15

