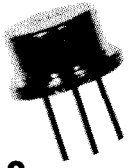


# germanium power transistors



## PNP TO-8

$I_{C(MAX)} = 3A$

$V_{CEO(SUS)} = 30 \text{ to } 100V$

Type #	$V_{CEO(SUS)}$ (Volts)	$V_{EBO}$ (Volts)	$h_{FE}$ @ $I_C/V_{CE}$ (Min-Max @ A/V)	$V_{CE(SAT)}$ @ $I_C/I_B$ (V @ A/A)	$V_{BE}$ @ $I_C/V_{CE}$ (V @ A/V)	$I_{CEV}$ @ $V_{CE}$ (mA @ V)	$P_D$ @ $T_C = 25^\circ C$ (Watts)	$\theta_{JC}$ ( $^\circ C/W$ )	$T_{J(MAX)}$ ( $^\circ C$ )	ft (KHz)	Generic Product	General Information
2N1183	20	20	20-60@.4/2	.3@.4/.04	1.5@.4/2	25 <sup>2</sup> @45	7.5	10	100	350	2N1183 Family. 3 Amp PNP Germanium Alloy Power Transistors. Case 101	General Purpose Power Switch and Amplifier. Consumer, Industrial, and Military Usage.
2N1183A	30	20	20-60@.4/2	.5@.4/.04	1.5@.4/2	25 <sup>2</sup> @60	7.5	10	100	500		
2N1183B	40	20	20-60@.4/2	.5@.4/.04	1.5@.4/2	25 <sup>2</sup> @80	7.5	10	100	500		
2N1184	20	20	40-120@.4/2	.3@.4/.04	1.5@.4/2	25 <sup>2</sup> @45	7.5	10	100	350		
2N1184A	30	20	40-120@.4/2	.5@.4/.04	1.5@.4/2	25 <sup>2</sup> @60	7.5	10	100	500		
2N1184B	40	20	40-120@.4/2	.5@.4/.04	1.5@.4/2	25 <sup>2</sup> @80	7.5	10	100	500		

NOTES:

<sup>2</sup>  $I_{CBO}$  @  $V_{CB}$  (mA @ V)



## PNP MS7 (spacesaver)

$I_{C(MAX)} = 3A$

$V_{CEO(SUS)} = 25 \text{ to } 65V$

Type #	$V_{CEO(SUS)}$ (Volts)	$V_{EBO}$ (Volts)	$h_{FE}$ @ $I_C/V_{CE}$ (Min-Max @ A/V)	$V_{CE(SAT)}$ @ $I_C/I_B$ (V @ A/A)	$V_{BE}$ @ $I_C/V_{CE}$ (V @ A/V)	$I_{CEV}$ @ $V_{CE}$ (mA @ V)	$P_D$ @ $T_C = 25^\circ C$ (Watts)	$\theta_{JC}$ ( $^\circ C/W$ )	$T_{J(MAX)}$ ( $^\circ C$ )	Generic Product	General Information
2N1755	25	30	30-75@.5/2	.7@3/3	1 <sup>3</sup> @3/3	3 <sup>2</sup> @40	28	2.5	95	2N1755 Family. 3 Amp PNP Germanium Alloy Power Transistors. Case 630	General Purpose Power Switch and Amplifier. Consumer, Industrial, and Military Usage.
2N1756	40	30	30-75@.5/2	.7@3/3	1 <sup>3</sup> @3/3	3 <sup>2</sup> @60	28	2.5	95		
2N1757	55	30	30-75@.5/2	.7@3/3	1 <sup>3</sup> @3/3	3 <sup>2</sup> @80	28	2.5	95		
2N1758	65	30	30-75@.5/2	.7@3/3	1 <sup>3</sup> @3/3	3 <sup>2</sup> @100	28	2.5	95		
2N1759	25	30	60-150@.5/2	.5@3/3	.8 <sup>3</sup> @3/3	3 <sup>2</sup> @40	28	2.5	95		
2N1760	40	30	60-150@.5/2	.5@3/3	.8 <sup>3</sup> @3/3	3 <sup>2</sup> @60	28	2.5	95		
2N1761	55	30	60-150@.5/2	.5@3/3	.8 <sup>3</sup> @3/3	3 <sup>2</sup> @80	28	2.5	95		
2N1762	65	30	60-150@.5/2	.5@3/3	.8 <sup>3</sup> @3/3	3 <sup>2</sup> @100	28	2.5	95		
2N2067	25	20	20-100@.5/14	.7@1/1	.7@.5/14	3 <sup>2</sup> @40	28	2.5	95		
2N2068	55	40	20-100@.5/14	.7@1/1	.7@.5/14	3 <sup>2</sup> @80	28	2.5	95		

<sup>2</sup>  $I_{CBO}$  @  $V_{CB}$  (mA @ V)

<sup>3</sup>  $V_{BE(SAT)}$  @  $I_C/I_B$  (V @ A/A)

## PNP TO-3



$I_{C(MAX)} = 3 \text{ to } 25A$

$V_{CEO(SUS)} = 20 \text{ to } 100V$

Type #	NPN Complement	$V_{CEO(SUS)}$ (Volts)	$V_{EBO}$ (Volts)	$h_{FE}$ @ $I_C/V_{CE}$ (Min-Max @ A/V)	$V_{CE(SAT)}$ @ $I_C/I_B$ (V @ A/A)	$V_{BE}$ @ $I_C/V_{CE}$ (V @ A/V)	$I_{CEV}$ @ $V_{CE}$ (mA @ V)	$P_D$ @ $T_C = 25^\circ C$ (Watts)	$\theta_{JC}$ ( $^\circ C/W$ )	$T_{J(MAX)}$ ( $^\circ C$ )	ft (KHz)	Generic Product	General Information	
2N176		30( $V_{CE}$ )	10	>25@.5/2	.4@3/3	1.5@2/2	3 <sup>2</sup> @30	90	0.8	100	2N301 Family. 3 Amp PNP Germanium Alloy Power Transistors. Case 280	General Purpose Power Switch and Amplifier. Consumer, Industrial, and Military Usage.		
2N297A		40	10	40-100@.5/2	1@2/2	1.5@2/2	3 <sup>2</sup> @60	85	1.0	110				
2N301		50	10	50-165@1/2	.75@5/5	1.1@.5/2	5 <sup>2</sup> @1/2	50	1.5	100				
2N301A		50	10	50-165@1/2	.5@5/5	1.1@.5/2	5 <sup>2</sup> @30	50	1.5	100				
2N1291	2N1292	30( $V_{CES}$ )	15	>40@.5/2	1@1/1	.9@.5/2	1.5 <sup>2</sup> @35	20	3.0	85				
2N1293	2N1294	60( $V_{CES}$ )	15	>40@.5/2	1@1/1	1.1@.5/2	1.5 <sup>2</sup> @60	20	3.0	85				
2N1295	2N1296	80( $V_{CES}$ )	15	>40@.5/2	1@1/1	1.2@.5/2	1.5 <sup>2</sup> @80	20	3.0	85				
2N1297	2N1298	100( $V_{CES}$ )	15	>40@.5/2	1@1/1	1.2@.5/2	1.5 <sup>2</sup> @100	20	3.0	85				
2N2137 <sup>S</sup>		20	15	30-60@.5/2	.5@2/2	1.2 <sup>2</sup> @2/2	2 <sup>2</sup> @30	62.5	1.2	100				
2N2138 <sup>S</sup>		30	25	30-60@.5/2	.5@2/2	1.2 <sup>2</sup> @2/2	2 <sup>2</sup> @45	62.5	1.2	100				
2N2139 <sup>S</sup>		45	30	30-60@.5/2	.5@2/2	1.2 <sup>2</sup> @2/2	2 <sup>2</sup> @60	62.5	1.2	100				
2N2140 <sup>S</sup>		60	40	30-60@.5/2	.5@2/2	1.2 <sup>2</sup> @2/2	2 <sup>2</sup> @75	62.5	1.2	100				
2N2141 <sup>S</sup>		65	45	30-60@.5/2	.5@2/2	1.2 <sup>2</sup> @2/2	2 <sup>2</sup> @90	62.5	1.2	100				
2N2142 <sup>S</sup>		20	15	50-100@.5/2	.5@2/2	1.2 <sup>2</sup> @2/2	2 <sup>2</sup> @30	62.5	1.2	100				
2N2143 <sup>S</sup>		30	25	50-100@.5/2	.5@2/2	1.2 <sup>2</sup> @2/2	2 <sup>2</sup> @45	62.5	1.2	100				
2N2144 <sup>S</sup>		45	30	50-100@.5/2	.5@2/2	1.2 <sup>2</sup> @2/2	2 <sup>2</sup> @60	62.5	1.2	100				
2N2145 <sup>S</sup>		60	40	50-100@.5/2	.5@2/2	1.2 <sup>2</sup> @2/2	2 <sup>2</sup> @75	62.5	1.2	100				
2N2146 <sup>S</sup>		65	45	50-100@.5/2	.5@2/2	1.2 <sup>2</sup> @2/2	2 <sup>2</sup> @90	62.5	1.2	100				
2N665		40	40	40-80@.5/2	.9@3/2	1.5@2/2	10 <sup>2</sup> @80		2.0	95			2N1529 Family. 5 Amp PNP Germanium Alloy Power Transistors. Case 280	General Purpose Power Switch and Amplifier. Consumer, Industrial, and Military Usage.
2N1529 <sup>S</sup>		20	20	20-40@3/2	1.5@3/3	1.7 <sup>3</sup> @3/3	20 <sup>2</sup> @40		0.8	100				
2N1530 <sup>S</sup>		30	30	20-40@3/2	1.5@3/3	1.7 <sup>3</sup> @3/3	20 <sup>2</sup> @60		0.8	100				
2N1531 <sup>S</sup>		40	40	20-40@3/2	1.5@3/3	1.7 <sup>3</sup> @3/3	20 <sup>2</sup> @80		0.8	100				
2N1532 <sup>S</sup>		50	50	20-40@3/2	1.5@3/3	1.7 <sup>3</sup> @3/3	20 <sup>2</sup> @100		0.8	100				
2N1533 <sup>S</sup>		60	60	20-40@3/2	1.5@3/3	1.7 <sup>3</sup> @3/3	20 <sup>2</sup> @120		0.8	100				
2N1534 <sup>S</sup>		20	20	35-70@3/2	1.2@3/3	1.5 <sup>3</sup> @3/3	20 <sup>2</sup> @40		0.8	100				
2N1535 <sup>S</sup>		30	30	35-70@3/2	1.2@3/3	1.5 <sup>3</sup> @3/3	20 <sup>2</sup> @60		0.8	100				
2N1536 <sup>S</sup>		40	40	35-70@3/2	1.2@3/3	1.5 <sup>3</sup> @3/3	20 <sup>2</sup> @80		0.8	100				
2N1537 <sup>S</sup>		50	50	35-70@3/2	1.2@3/3	1.5 <sup>3</sup> @3/3	20 <sup>2</sup> @100		0.8	100				
2N1538 <sup>S</sup>		60	60	35-70@3/2	1.2@3/3	1.5 <sup>3</sup> @3/3	20 <sup>2</sup> @120		0.8	100				
2N1539 <sup>S</sup>		20	20	50-100@3/2	.3@3/3	.7 <sup>3</sup> @3/3	20 <sup>2</sup> @40		0.8	100				
2N1540 <sup>S</sup>		30	30	50-100@3/2	.3@3/3	.7 <sup>3</sup> @3/3	20 <sup>2</sup> @60		0.8	100				
2N1541 <sup>S</sup>		40	40	50-100@3/2	.3@3/3	.7 <sup>3</sup> @3/3	20 <sup>2</sup> @80		0.8	100				
2N1542 <sup>S</sup>		50	50	50-100@3/2	.3@3/3	.7 <sup>3</sup> @3/3	20 <sup>2</sup> @100		0.8	100				
2N1543 <sup>S</sup>		60	60	50-100@3/2	.3@3/3	.7 <sup>3</sup> @3/3	20 <sup>2</sup> @120		0.8	100				
2N1544 <sup>S</sup>		20	20	75-150@3/2	.5@3/3	.5 <sup>3</sup> @3/3	20 <sup>2</sup> @40		0.8	100				
2N1545 <sup>S</sup>		30	30	75-150@3/2	.5@3/3	.5 <sup>3</sup> @3/3	20 <sup>2</sup> @60		0.8	100				
2N1546 <sup>S</sup>		40	40	75-150@3/2	.5@3/3	.5 <sup>3</sup> @3/3	20 <sup>2</sup> @80		0.8	100				
2N1547 <sup>S</sup>		50	50	75-150@3/2	.5@3/3	.5 <sup>3</sup> @3/3	20 <sup>2</sup> @100		0.8	100				
2N1548 <sup>S</sup>		60	60	75-150@3/2	.5@3/3	.5 <sup>3</sup> @3/3	20 <sup>2</sup> @120		0.8	100				

<sup>2</sup>  $I_{CBO}$  @  $V_{CB}$  (mA @ V)

<sup>3</sup>  $V_{BE(SAT)}$  @  $I_C/I_B$  (V @ A/A)

<sup>5</sup> The "A-Version" (e.g. 2N1529A) is also readily available. It's a high-reliability version of the "non-A Version."