

GERMANIUM SMALL SIGNAL TRANSISTORS

PRO ELECTRON TYPES

Type	Polar- ity	V_{CBO} V Max	V_{EBO} V Max	V_{CE} V Max		I_{CBO} @ V_{CB} V μA Max	h_{FE} Min Max	@ I_C mA	Cob pf Max	f _{ab} MHz Min	Pack Outline	Power Dissipation @ 25°C mW	
ACY33	P	32	10	32		10	10	75-250	300	100	1.0	TO-1	1,000
ACY34	P	30	10	10		30	12	20-40	1 ¹	40	1.0 ²	TO-1	200
ACY35	P	30	10	10		30	12	30-75	1 ¹	40	1.0 ²	TO-1	200
ACY36	P	32	10	16		30	12	30-90	80	40	1.0 ²	TO-1	200
ACY38	P	15	9					75-	1 ¹		5.0	TO-5	150
ACY39	P	110	12	40		6	10	50-150	300	40	1.0 ¹	TO-5	260
ACY40	P	32	12	18		6	10	30-70	300	40	1.0 ¹	TO-5	260
ACY41	P	32	12	18		6	10	50-250	300	40	1.0 ¹	TO-5	260
ACY44	P	50	12	30		6	10	40-120	300	40	1.0 ¹	TO-5	260
ASY26	P	30	20	15		30	7	30-80	20	16	4.0	TO-5	150
ASY27	P	25	20	15		25	7	50-150	20	16	6.0	TO-5	150
ASY28	N	30	20	15		5	3.0	30-80	20	16	4.0	TO-5	150
ASY29	N	25	20	15		5	3.0	50-150	20	16	10.0	TO-5	150
ASY48	P	64	16	45				30-150	100	40	1.2 ²	TO-1	900
ASY70	P	32	16	30				30-150	100	40	1.5 ²	TO-1	900
ASY76	P	40	10	32		10	10	25-130	300	60	0.5	TO-5	300
ASY77	P	60	10	60		10	10	25-130	300	60	0.5	TO-5	300
ASY80	P	40	20	40		10	10	60-165	50	60	0.7	TO-5	300
ASY81	P	60	25	35		60	15	30-100	100	25	2.0	TO-5	200
OC65	P	10	10	10		4.5	12	30-	4	40	1.0 ¹	TO-1	25
OC66	P	10	10	10		4.5	12	50-	4	40	1.0 ¹	TO-1	25
OC70	P	30	10	10		4.5	13	20-40	0.5 ¹	40	1.0 ¹	TO-1	125
OC71	P	30	10	10		4.5	13	41-	1.0 ¹	40	1.0 ¹	TO-1	125
OC72	P	32	10	16		10	10	45-120	10	40	1.0 ¹	TO-1	125
OC73	P	32	20	16		4.5	6	30-65	0.5 ¹	40	1.0 ¹	TO-1	125
OC74	P	20	5			9	20	60-150	50	40	1.0 ¹	TO-1	220
OC75	P	30	10	10		4.5	14	60-130	3 ¹	40	1.0 ¹	TO-1	125
OC76	P	32	10	16		10	10	45-	10	40	1.0 ¹	TO-1	125
OC77	P	60	10	15		10	10	45-	10	40	1.0 ¹	TO-1	125
OC78	P	20	10			10	10	20-	125	40	1.0 ¹	TO-1	200
OC81N	P	32	10			10	10	50-250	50	40	1.0 ¹	TO-1	200
OC83N	P	32	10	20		10	10	40-200	300	40	1.0 ¹	TO-1	220
OC84N	P	32	10	20		10	10	50-160	300	40	1.0 ¹	TO-1	220

¹hfe

²typical

Type		V_{CBO} V Max	V_{EBO} V Max	V_{CE} V Max		I_{CBO} @ V_{CB} V μA Max	h_{FE} Typical	@ I_C mA	C_{ob} pf Max	f_{ab} MHz Min	Pack Outline	Power Dissipation @ 25°C mW
------	--	-----------------------	-----------------------	----------------------	--	--	---------------------	---------------	-----------------------	------------------------	-----------------	--------------------------------------

PNP LOW POWER

2N217		35	12	25		10	10	50-	1 ¹	60	1 ²	TO-1	165
2N408		20	2.5	18		20	14	65-	50			TO-1	150
2N484		12				12	10	90-	1 ¹	12 ²	10	TO-5	150
2N519		15	10	15		0.5	2.0	25-	1 ¹	14 ²	0.5	TO-5	100
2N520		15	10	12		0.5	2.0	40-	1 ¹	14 ²	3.0	TO-5	100
2N520A		25	10	15		0.5	2.0	40-	1 ¹	14 ²	3.0	TO-5	150
2N522A		25	10	10		0.5	2.0	100-	1 ¹	14 ²	15.0	TO-5	150
2N1187		65	30	45		10	10	50-	1 ¹		1.0	TO-5	200
2N1188		60	30	45		10	10	100-	1 ¹		1.2	TO-5	200
2N1729		25	20	15		3	6	30-	100	20		TO-5	150
2N1731		30	25	30		3	6	40-	10	20	5.0	TO-5	150

Type		V_{CBO} V Max	V_{EBO} V Max	V_{CE} V Max		I_{CBO} @ V_{CB} V μA Max	h_{FE} Typical	@ I_C mA	C_{ob} pf Max	f_{ab} MHz Min	Pack Outline	Power Dissipation @ 25°C mW
------	--	-----------------------	-----------------------	----------------------	--	--	---------------------	---------------	-----------------------	------------------------	-----------------	--------------------------------------

NPN LOW POWER

2N166		6				6	5	32	1.0		5.0	R5	25
2N167		30	50	30		30	1.5		1.0		8.0	OV17	65
2N169A		25	25	25		25	5			2.4 ¹	5.0	OV17	55
2N356		20	20	18		20	5	30	1.0	14 ¹	3.0	TO-5	100

CASE OUTLINE DRAWINGS & DIMENSIONS

Technical drawing of a mechanical part showing front and top views with dimensions.

Front View Dimensions:

- Top width: .335
- Inner top width: .370
- Inner top width: .205
- Inner top width: .335
- Right side height: .260
- Right side height: .240
- Left side height: .008
- Left side height: .125
- Bottom left width: .019
- Bottom left width: .016
- Bottom right length: 1.50 MIN

Top View Dimensions:

- Top width: .200
- Right side width: .100
- Right side width: .029
- Right side width: .045
- Bottom left width: .034
- Bottom left width: .028
- Angle: 45°

Technical drawing of a 1/2-20 UNF-2A plug-in connector. The drawing shows a side view of the connector with various dimensions and labels. Key features include a hexagonal base with a central threaded hole, a central pin, and a side pin. Dimensions include: .100±.010 (hole diameter), .200±.010 (hole diameter), .437 (hole diameter), .510 MAX (height), .1500 MIN (height), .025±.003 (pin diameter), .445±.010 (height), .850 MAX (height), .035 MAX (height), .335 (height), and ±10-32 UNF 2A (thread). Labels A, B, C, D, and E point to specific features.

Technical drawing of a hex head bolt. The drawing includes a side view at the top and an end view at the bottom. Dimensions and tolerances are specified throughout.

Side View Dimensions:

- UNDERCUT 1.0" $\pm .010$
- Hex head height: $.500 \pm .015$ MAX.
- Thread length: 1.500 MIN.
- Thread pitch: 1/2-20 UNF 2A
- Thread diameter: $.025 \pm .003$
- Hex head diameter: $1.00 \pm .010$

End View Dimensions:

- Hex head diameter: $.875$ MAX.
- Hex head width: $.750 \pm .010$
- Thread diameter: $.100 \pm .010$
- Thread pitch: $.200 \pm .010$
- Thread length: $.875$ MAX.

Notes:

- NOTE 1: THREAD RELIEF IS .080 MAX. BY .430 DIA. NOMINAL.

Technical drawing of a mechanical part showing front and top views with dimensions.

Front View Dimensions:

- Top width: .875 MAX.
- Top thickness: .250
- Shoulder thickness: .450
- Base thickness: .560
- Base width: .500
- Base width at bottom: .581
- Internal hole diameter: .135 MAX.

Top View Dimensions:

- Overall width: 1.177
- Overall depth: 1.197
- Distance from center to hole center (horizontal): .655
- Distance from center to hole center (vertical): .675
- Radius of outer corner: 188 R MAX.
- Radius of inner corner: .525 MAX. RAD.
- Distance from center to hole center (horizontal) to hole edge: .210
- Distance from center to hole center (vertical) to hole edge: .151
- Distance from center to hole center (horizontal) to hole edge: .161
- Distance from center to hole center (vertical) to hole edge: .205
- Distance from center to hole center (horizontal) to hole edge: .275
- Distance from center to hole center (vertical) to hole edge: .420
- Distance from center to hole center (horizontal) to hole edge: .440

Technical drawing of the 2N3638 PNP silicon NPN transistor. The top view shows a cylindrical package with dimensions: 1.250 DIA MAX., 1.005 DIA MAX., .210 DIA MAX., .360 MAX., .500 DIA MAX., .375 DIA MAX., .312 DIA MAX., .210 DIA MAX., .610 DIA MAX., 10-32 UNF-2A, .137 DIA MAX., .123 DIA MAX., .140 DIA MAX., BASE, .345 R BASIC, and EMITTER.

CASE OUTLINE DRAWINGS & DIMENSIONS

Technical drawing of a 28-pin DIP package. The top view shows a circular package with a diameter of 550 (530) and four mounting holes labeled A, B, C, and D. The side view shows a package with a maximum height of 970 (930), a body diameter of 430 (415), and a mounting tab diameter of 725 (690). The package is labeled with "1 28 UNF-28 250 WIP FULL THREAD" and "SOLDER LUGS".

[illegible]

Technical drawing of the 1N4148 diode showing side and top views with dimensions.

Side View Dimensions:

- Top flange thickness: .25
- Threaded section length: .09
- Bottom flange thickness: .25
- Lead length: .53
- Lead diameter: .09 DIA. (3)
- Thread specification: 1-1/4 - 16UN - 2A
- Component: HEX NUT

Top View Dimensions:

- Hexagonal base width: .58
- Base thickness: .02
- Collector diameter: .29
- Emitter diameter: .29
- Base to emitter distance: 1.5
- Labels: BASE, COLLECTOR, EMITTER

The drawing shows a 2N4350 JFET with the following dimensions:

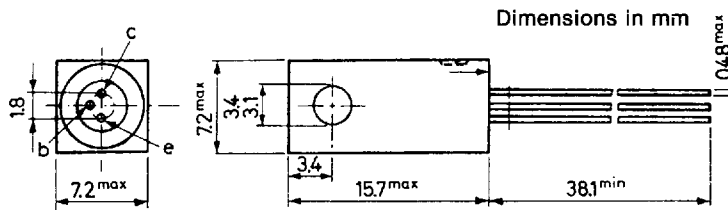
- Side View Dimensions:**
 - Gate lead thread: 3/8-24UNF-2A
 - Gate lead diameter: .093
 - Gate lead height: .82
 - Drain lead diameter: .09 DIA. (3)
 - Drain lead height: .72
 - Source lead diameter: 1.26 DIA.
 - Source lead height: .53
- Top View Dimensions:**
 - Emitter diameter: .02
 - Collector diameter: .29
 - Base diameter: .58

Technical drawing of the 8-32NC-2A plug gage. The drawing shows a top view and a side view. The top view is a circle with a diameter of .152. It has two threaded holes, each with a diameter of .054 and a depth of .107. The side view shows a plug with a diameter of .060 and a length of .250. The plug is labeled '8-32NC-2A'.

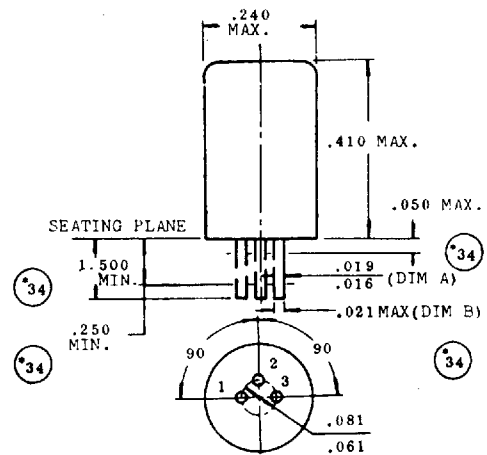
GERMANIUM POWER TRANSISTORS

CASE OUTLINE DRAWINGS & DIMENSIONS

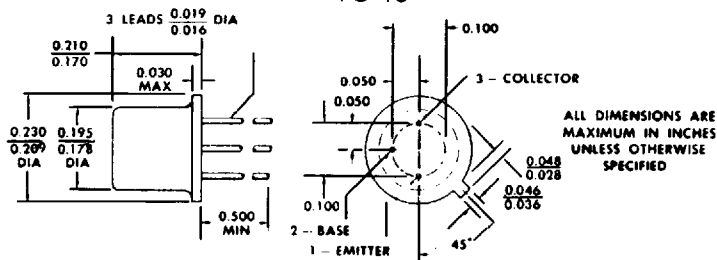
NS257



TO-1



TO-18



THE COLLECTOR IS ELECTRICAL CONTACT WITH THE CASE.

ALL JEDEC TO-18 DIMENSIONS AND NOTES ARE APPLICABLE.



GERMANIUM POWER DEVICES CORP.

300 Brickstone Square · York Street · P.O. Box 3065
Shawsheen Village Station · Andover, Massachusetts 01810
Telephone (508) 475-5982 · FAX (508) 470-1512

26

Printed in U.S.A.