

SELECTION TABLES TO NPN JAN QUALIFIED POWER TRANSISTORS

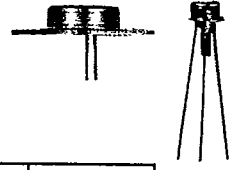


TABLE A

I_c Max	0.5A	0.75A	1.0A	1.5A	3.0A	4.0A	5.0A	6.0A			
Package	TO-57	TO-5	TO-53	TO-5	TO-5	TO-8	TO-66	TO-53	TO-61	TO-3	
Rated Collector To Emitter Voltage (V _{CEO})	40V			2N1479 2N1481		2N1483 2N1485				2N1487 2N1489	
	45V										
	50V										
	55V				2N1480 2N1482		2N1484 2N1486				2N1488 2N1490
	60V		2N1714 2N1716	2N389		2N3418 2N3420		2N3766			
	65V										
	70V										
	75V										
	80V	2N1047A 2N1049A		2N424		2N3419 2N3421		2N3767	2N1722	2N1724	
	90V										
	100V		2N1715 2N1717								
	120V	2N1048A 2N1050A									
MIN h_{FE} @ I_c	12 @ 0.5A 2N1047, 2N1048A 30 @ 0.5A 2N1049A, 2N1050A	20 @ 0.2A 2N1714, 2N1715 40 @ 0.2A 2N1716, 2N1717	15 @ 1.0A	20 @ 0.2A 2N1479, 2N1480 35 @ 0.2A 2N1481, 2N1482	20 @ 1.0A 2N3418, 2N3419 40 @ 1.0A 2N3420, 2N3421	20 @ 0.75A 2N1483, 2N1484 35 @ 0.75A 2N1485, 2N1486	40 @ 0.5A	20 @ 2.0A		15 @ 1.5A 2N1487, 2N1488 25 @ 1.5A 2N1489, 2N1490	
V _{CE(SAT)} @ I_c	7.5V @ 0.5A	2.0V @ 0.2A	5.0V @ 1.0A 10.0V @ 1.0A	1.4V @ 0.2A	0.25V @ 1.0A	2V @ 0.75A 2N1483, 2N1484 0.75V @ 0.75A 2N1485, 2N1486	1.0V @ 0.5A	1.0V @ 2.0A		3.0V @ 1.5A 2N1487, 2N1488 1.0V @ 1.5A 2N1489, 2N1490	

TABLE B

I_c Max	7.0A	7.5A	10.0A			20.0A	25.0A	30.0A	50.0A			
Package	TO-66	TO-82	TO-3	TO-36	TO-61	TO-3	TO-3	TO-3	TO-3			
Rated Collector To Emitter Voltage (V _{CEO})	50V			2N2015	2N2812							
	60V		2N3715					2N5302	2N5685			
	65V			2N2016								
	70V				2N2814							
	75V	2N3879				2N5039						
	80V		2N3716				2N5303		2N5686			
	90V					2N5038		2N5671				
	100V		2N1016B					2N6338	2N6274			
	120V							2N5672				
	140V											
	150V		2N1016C					2N6341	2N6277			
200V		2N1016D										
MIN h_{FE} @ I_c	12 @ 4A	20 @ 2A	10 @ 5A	15 @ 5A	40 @ 5A	20 @ 10A 2N5039 20 @ 12A 2N5038	15 @ 10A	30 @ 10A	15 @ 15A	20 @ 15A	15 @ 25A	30 @ 20A
V _{CE(SAT)} @ I_c	1.2V @ 4A	2.5V @ 5A	1.0V @ 5A	1.25V @ 5A	0.5V @ 5A	1V @ 10A 2N5039 1V @ 12A 2N5038	1.5V @ 10A	1.0V @ 10A	1.0V @ 15A	0.75V @ 15A	1.0V @ 25A	1.2V @ 20A

TO-8 TO-5 TO-66 TO-53 TO-61 TO-63 TO-82 TO-36

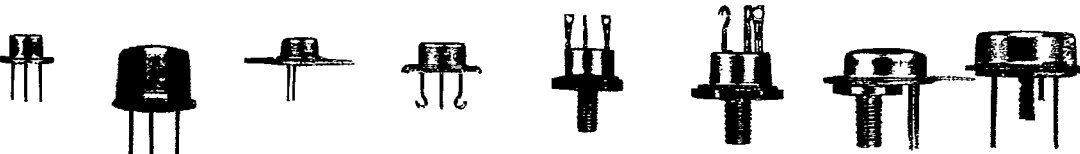


TABLE C

I_c Max	0.5A	1.0A	2.0A	3.5A	5.0A	8.0A	10.0A	20.0A
Package	TO-5	TO-5	TO-66	TO-3	TO-66	TO-3	TO-3	TO-63
Rated Collector To Emitter Voltage (V _{CEO})	200V							2N3846
	225V						2N6249*	
	250V	2N3440				2N6306		
	300V			2N3739		2N3584*	2N6250*	2N3847
	325V				2N3902			
	350V	2N3439				2N6308		
	375V						2N6251*	
	400V					2N3585*		
	450V		2N5097					
	500V				2N5157			
h_{FE} MIN. @ I_c	40@20mA	15@0.1A	40@0.1A	30@1.0A	25@1.0A	15@3.0A 12@3.0A 2N6308	10@10.0A 8@10.0A 6@10.0A	40@5.0A
V _{CE(SAT)} @ I_c	0.5V@50mA	0.5V@25mA	2.5V@0.25A	0.8V@1.0A	0.75V@1.0A	0.8V@3.0A 1.5V@3.0A 2N6308	1.5V@10.0A	0.75V@10.0A

*V_{CE}R Rating

How to use the selection table

Based on the application, determine the rated voltage and collector current required, including standard safety factors.

Locate the collector current to the right of the I_c Max column. Follow the column down to the desired voltage rating.

Select the proper device based on package requirements and listed electrical characteristics.

Note: there are other device characteristics such as switching speeds, leakage currents, that must be considered. For complete electrical characteristics, consult the factory.

**SELECTION TABLE
TO DARLINGTON
JAN QUALIFIED
POWER TRANSISTORS**

TABLE D

Polarity		NPN					PNP
I _c Max		5.0A		8.0A	10.0A	20.0A	8.0A
Package		TO-33	F-24	TO-66	TO-3	TO-3	TO-66
Rated Collector To Emitter Voltage (V _{CEO})	40V				2N6383		
	60V			2N6300	2N6384		2N6298
	80V	2N6350	2N6352	2N6301	2N6385	2N6283	2N6299
	100V					2N6284	
	150V	2N6351	2N6353				
h _{FE} MIN. @I _c		2000 @1.0A (2N6350 & 2N6353)		750 @4.0A	1000 @5.0A	750 @10.0A	750 @4.0A
		1000 @ 1.0A (2N6351 & 2N6353)					
V _{CE(SAT)} @I _c		1.5V @ 5.0A		2V @4.0A	2V @5.0A	2V @10.0A	2V @4.0A



TO-33



F-24



TO-66



TO-3

TABLE E

I _c Max	1.0A	2.0A	3.0A
Package	TO-66	TO-66	TO-5
Rated Collector To Emitter Voltage (V _{CEO})	40V		2N3867
	60V	2N3740	2N3868
	80V	2N3741	
	250V		2N6211*
	325V		2N6212*
	375V		2N6213*
	450V		
h _{FE} MIN. @I _c	30 @0.25A	10 @1.0A	25@2.5A 20@2.5A
V _{CE(SAT)} @I _c	0.6 @1.0A	1.4V@1.0A	1.3V @2.5A
		1.6V@1.0A	
		2.0V@1.0A	

*VCER Rating



TO-5



TO-66

**SELECTION TABLE
TO PNP JAN
QUALIFIED POWER
TRANSISTORS**