



2DB1182Q

32V PNP SURFACE MOUNT TRANSISTOR IN TO252

Features

- Epitaxial Planar Die Construction
- Low Collector-Emitter Saturation Voltage
- Ideally Suited for Automated Assembly Processes
- Ideal for Medium Power Switching or Amplification Applications
- "Lead Free", RoHS Compliant (Note 1)
- Halogen and Antimony Free. "Green" Device (Note 2)
- Qualified to AEC-Q101 Standards for High Reliability

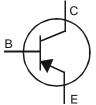
Mechanical Data

- Case: TO252
- Case Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Finish Matte Tin, Solderable per MIL-STD-202, Method 208
- Weight: 0.34 grams (approximate)

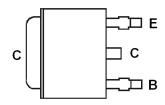
TO252







Device Schematic



Pin Out Configuration Top view

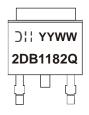
Ordering Information (Note 3)

Product	Marking	Reel size (inches)	Tape width (mm)	Quantity per reel
2DB1182Q-13	2DB1182Q	13 16		2,500

Notes:

- 1. No purposefully added lead
- 2. Diodes Inc's "Green" policy can be found on our website at http://www.diodes.com.
- 3. For packaging details, go to our website at http://www.diodes.com.

Marking Information



2DB1182Q = Product Type Marking Code

OH = Manufacturers' code marking

YYWW = Date Code Marking

YY = Last Digit of Year, (ex: 08 = 2008)

WW = Week Code (01 - 53)



Maximum Ratings @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Collector-Base Voltage	V _{CBO}	-40	V
Collector-Emitter Voltage	V _{CEO}	-32	V
Emitter-Base Voltage	V _{EBO}	-5	V
Continuous Collector Current	Ic	-2	А
Peak Pulse Collector Current	I _{CM}	-3	А

Thermal Characteristics @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Power Dissipation	P_{D}	10	W
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +150	°C

Electrical Characteristics @TA = 25°C unless otherwise specified

Characteristic	Symbol	Min	Тур	Max	Unit	Test Condition
OFF CHARACTERISTICS (Note 4)						
Collector-Base Breakdown Voltage	BV _{CBO}	-40			V	$I_C = -50\mu A, I_E = 0$
Collector-Emitter Breakdown Voltage	BV _{CEO}	-32	_	_	V	$I_C = -1 \text{mA}, I_B = 0$
Emitter-Base Breakdown Voltage	BV _{EBO}	-5	_	_	V	$I_E = -50\mu A, I_C = 0$
Collector Cutoff Current	I _{CBO}		_	-1	μΑ	$V_{CB} = -20V, I_{E} = 0$
Emitter Cutoff Current	I _{EBO}		_	-1	μΑ	$V_{EB} = -4V, I_{C} = 0$
ON CHARACTERISTICS (Note 4)						
Collector-Emitter Saturation Voltage	V _{CE(sat)}			-0.8	V	$I_C = -2A$, $I_B = -0.2A$
DC Current Gain	h _{FE}	120	_	270	_	$V_{CE} = -3V, I_{C} = -0.5A$
SMALL SIGNAL CHARACTERISTICS						
Current Gain-Bandwidth Product	f _T		110		MHz	$V_{CE} = -5V, I_{C} = -0.1A,$ f = 30MHz
Output Capacitance	C _{obo}	_	26		pF	V _{CB} = -10V, f = 1MHz

Notes: 4. Measured under pulsed conditions. Pulse width = 300μ s. Duty cycle $\leq 2\%$.

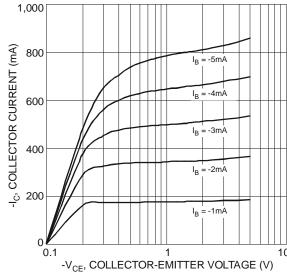


Fig. 1 Typical Collector Current vs. Collector-Emitter Voltage

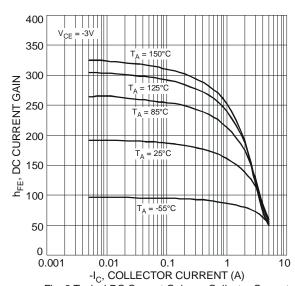


Fig. 2 Typical DC Current Gain vs. Collector Current



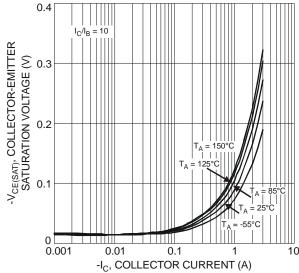


Fig. 3 Typical Collector-Emitter Saturation Voltage vs. Collector Current

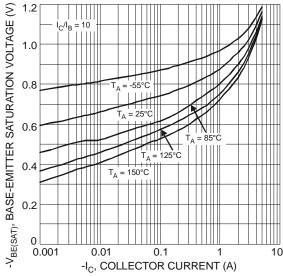


Fig. 5 Typical Base-Emitter Saturation Voltage vs. Collector Current

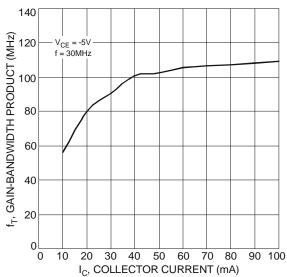


Fig. 7 Typical Gain-Bandwidth Product vs. Collector Current

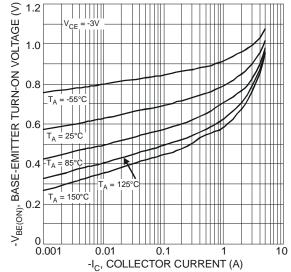
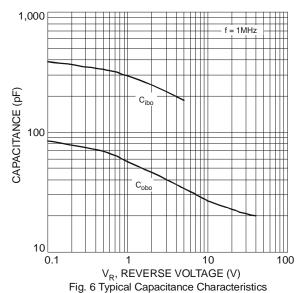
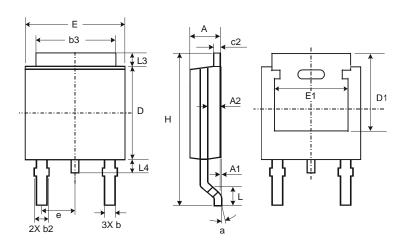


Fig. 4 Typical Base-Emitter Turn-On Voltage vs. Collector Current



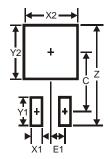


Package Outline Dimensions



TO252					
Dim	Min	Max	Тур		
Α	2.19	2.39	2.29		
A 1	0.00	0.13	0.08		
A2	0.97	1.17	1.07		
p	0.64	0.88	0.783		
b2	0.76	1.14	0.95		
b3	5.21	5.46	5.33		
c2	0.45	0.58	0.531		
D	6.00	6.20	6.10		
D1	5.21	_	_		
е	_	_	2.286		
Е	6.45	6.70	6.58		
E1	4.32	_	_		
Н	9.40	10.41	9.91		
L	1.40	1.78	1.59		
L3	0.88	1.27	1.08		
L4	0.64	1.02	0.83		
а	0°	10°	_		
All Dimensions in mm					

Suggested Pad Layout



Dimensions	Value (in mm)		
Z	11.6		
X1	1.5		
X2	7.0		
Y1	2.5		
Y2	7.0		
С	6.9		
E1	2.2		



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