Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

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Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

NEW PRODUCT

DJT4030P

LOW $V_{CE(SAT)}$ PNP SURFACE MOUNT TRANSISTOR

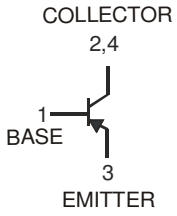
Features

- Ideally Suited for Automated Assembly Processes
- Complementary NPN Type Available (DJT4031N)
- Low Collector-Emitter Saturation Voltage
- Ideal for Medium Power Switching or Amplification Applications
- **Lead Free By Design/RoHS Compliant (Note 1)**
- **"Green" Device (Note 2)**

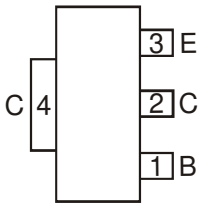
Mechanical Data

- Case: SOT-223
- Case Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020D
- Terminals: Finish — Matte Tin annealed over Copper leadframe (Lead Free Plating). Solderable per MIL-STD-202, Method 208
- Marking Information: See Page 4
- Ordering Information: See Page 4
- Weight: 0.115 grams (approximate)

Top View



Device Schematic



Pin Out Configuration

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}	-40	V
Emitter-Base Voltage	V_{EBO}	-6	V
Peak Pulse Current	I_{CM}	-5	A
Continuous Collector Current	I_C	-3	A
Base Current	I_B	-1	A

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 3) @ T_A = 25°C	P_D	1.2	W
Thermal Resistance, Junction to Ambient Air (Note 3) @ T_A = 25°C	$R_{\theta JA}$	104	°C/W
Power Dissipation (Note 4) @ T_A = 25°C	P_D	2	W
Thermal Resistance, Junction to Ambient Air (Note 4) @ T_A = 25°C	$R_{\theta JA}$	62.5	°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150	°C

Notes:
1. No purposefully added lead.
2. Diodes Inc.'s "Green" policy can be found on our website at http://www.diodes.com/products/lead_free/index.php.
3. Device mounted on FR-4 PCB with minimum recommended pad layout.
4. Device mounted on FR-4 PCB with 1 inch^2 copper pad layout.

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Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Conditions
OFF CHARACTERISTICS (Note 5)						
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-40	—	—	V	I_C = -100μA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-40	—	—	V	I_C = -10mA
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-6	—	—	V	I_E = -50μA
Collector-Base Cutoff Current	I_{CBO}	—	—	-100	nA	V_{CB} = -40V, I_E = 0
		—	—	-50	μA	V_{CB} = -40V, I_E = 0, T_A = 150°C
Emitter-Base Cutoff Current	I_{EBO}	—	—	-100	nA	V_{EB} = -6V, I_C = 0
ON CHARACTERISTICS (Note 5)						
DC Current Gain	h_{FE}	220	—	—	—	V_{CE} = -1V, I_C = -0.5A
		200	—	400		V_{CE} = -1V, I_C = -1A
		100	—	—		V_{CE} = -1V, I_C = -3A
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	—	—	-150	mV	I_C = -0.5A, I_B = -5mA
		—	—	-200		I_C = -1A, I_B = -10mA
		—	—	-500		I_C = -3A, I_B = -0.3A
Equivalent On-Resistance	$R_{CE(SAT)}$	—	—	167	mΩ	I_E = -3A, I_B = -0.3A
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	—	—	-1.0	V	I_C = -1A, I_B = -0.1A
Base-Emitter Turn-on Voltage	$V_{BE(ON)}$	—	—	-1.0	V	V_{CE} = -2V, I_C = -1A
SMALL SIGNAL CHARACTERISTICS						
Transition Frequency	f_T	—	150	—	MHz	V_{CE} = -10V, I_C = -100mA, f = 100MHz
Output Capacitance	C_{obo}	—	35	—	pF	V_{CB} = -10V, f = 1MHz
Input Capacitance	C_{ibo}	—	150	—	pF	V_{CB} = -5V, f = 1MHz
SWITCHING CHARACTERISTICS						
Turn-On Time	t_{on}	—	53	—	ns	V_{CC} = -10V, I_C = -2A, I_{B1} = -200mA
Delay Time	t_d	—	12	—	ns	
Rise Time	t_r	—	41	—	ns	
Turn-Off Time	t_{off}	—	180	—	ns	V_{CC} = -10V, I_C = -2A, I_{B1} = I_{B2} = -200mA
Storage Time	t_s	—	146	—	ns	
Fall Time	t_f	—	34	—	ns	

Notes: 5. Measured under pulsed conditions. Pulse width = 300μs. Duty cycle ≤2%.

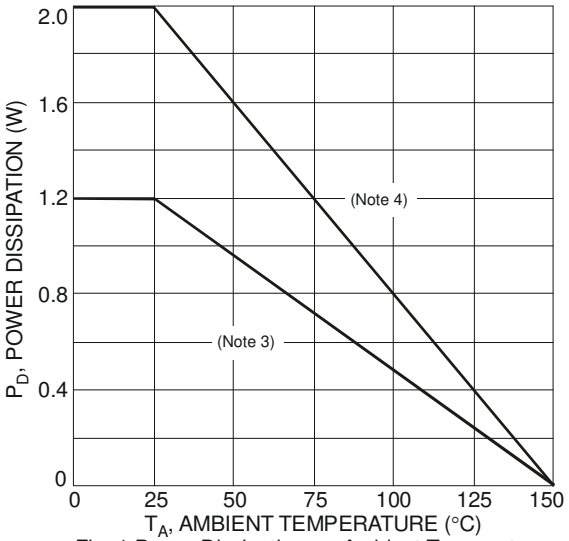

Fig. 1 Power Dissipation vs. Ambient Temperature

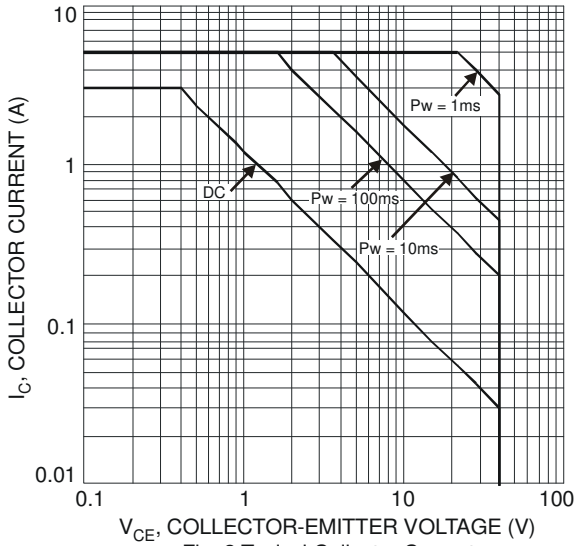

Fig. 2 Typical Collector Current vs. Collector-Emitter Voltage (Note 3)

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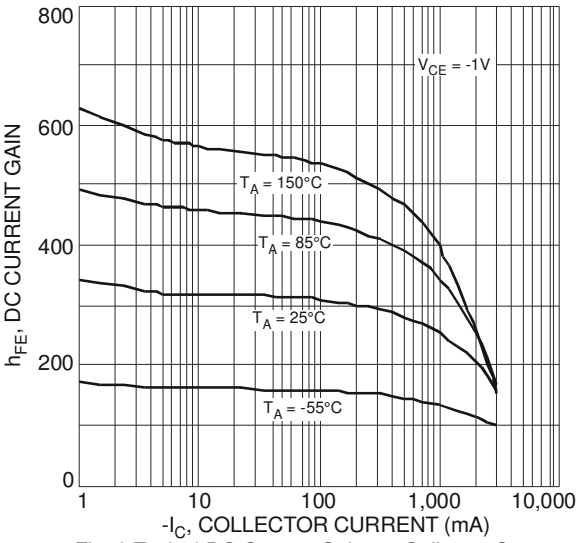

Fig. 3 Typical DC Current Gain vs. Collector Current

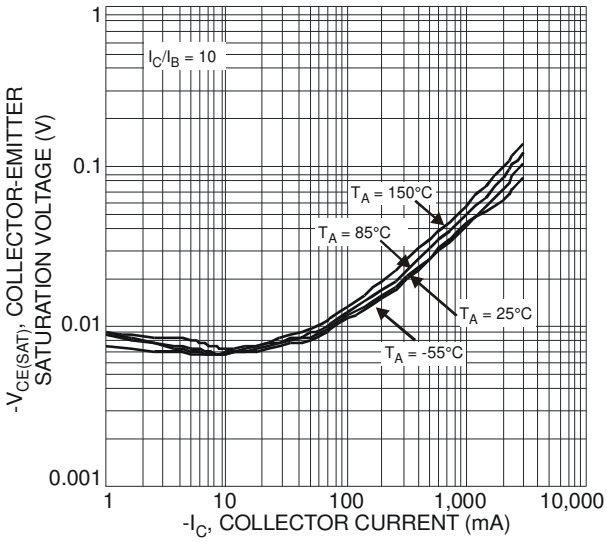

Fig. 4 Typical Collector-Emitter Saturation Voltage vs. Collector Current

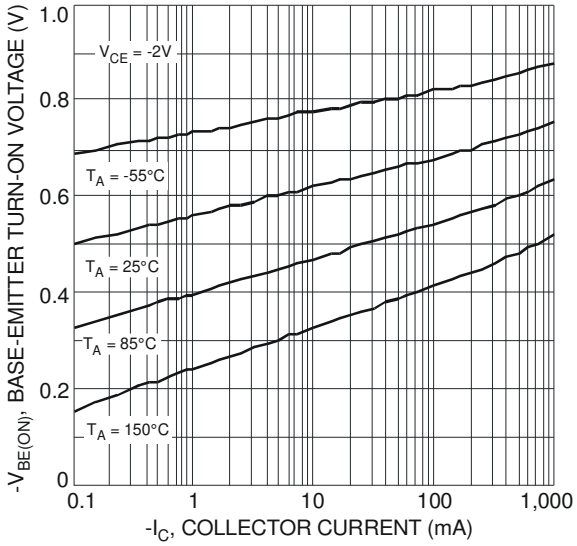

Fig. 5 Typical Base-Emitter Turn-On Voltage vs. Collector Current

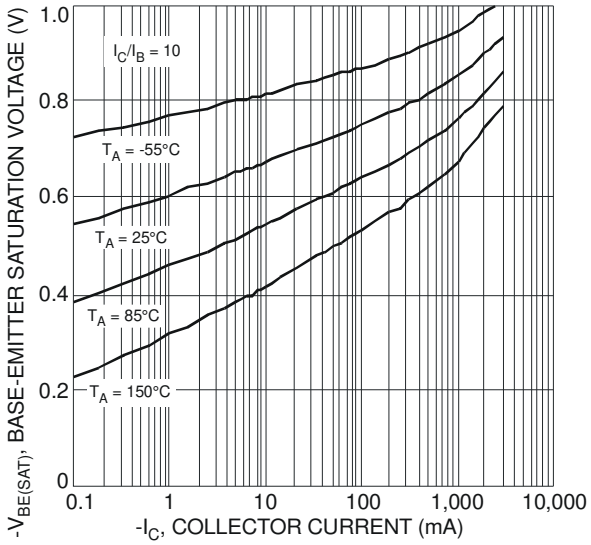

Fig. 6 Typical Base-Emitter Saturation Voltage vs. Collector Current

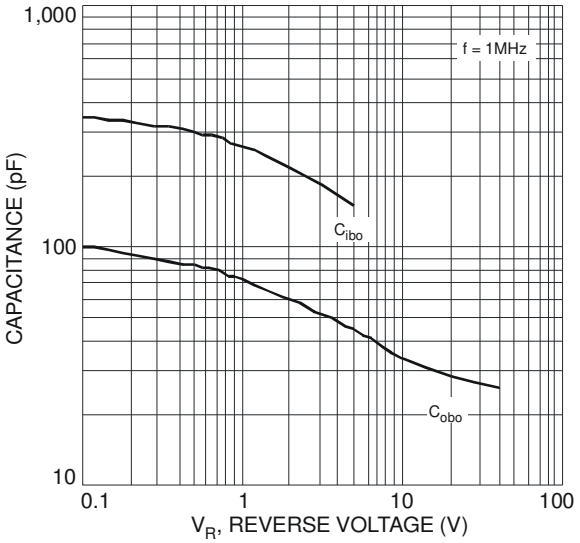

Fig. 7 Typical Capacitance Characteristics

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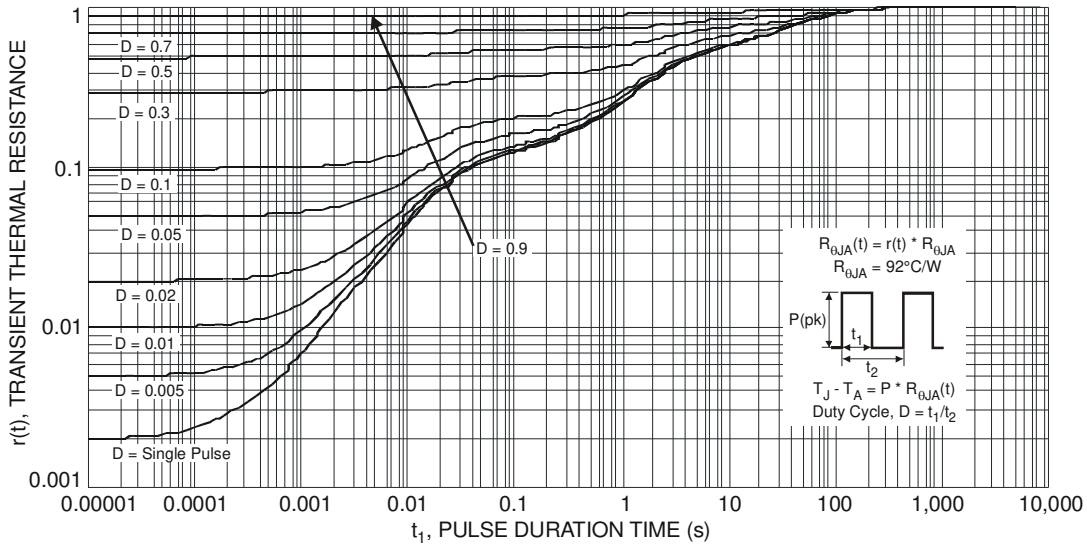


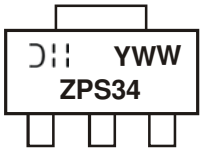
Fig. 8 Transient Thermal Response (Note 3)

Ordering Information (Note 6)

Part Number	Case	Packaging
DJT4030P-13	SOT-223	2500/Tape & Reel

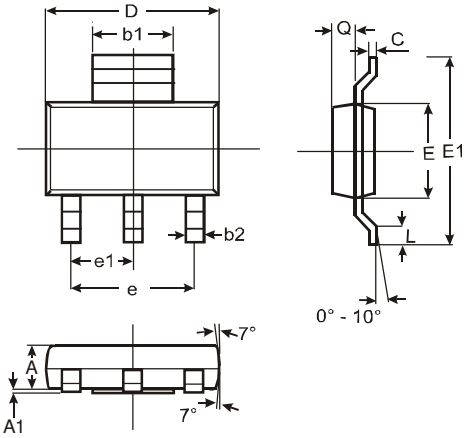
Notes: 6. For packaging details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.

Marking Information



ZPS34 = Product Type Marking Code
YWW = Date Code Marking
Y = Last digit of year (ex: 8 = 2008)
WW = Week code 01 - 52

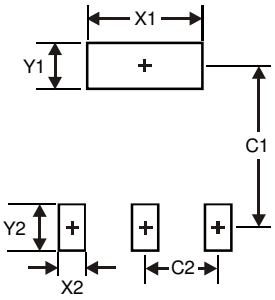
Package Outline Dimensions



SOT-223			
Dim	**Min**	**Max**	**Typ**
A	1.55	1.65	1.60
A1	0.010	0.15	0.05
b1	2.90	3.10	3.00
b2	0.60	0.80	0.70
C	0.20	0.30	0.25
D	6.45	6.55	6.50
E	3.45	3.55	3.50
E1	6.90	7.10	7.00
e	—	—	4.60
e1	—	—	2.30
L	0.85	1.05	0.95
Q	0.84	0.94	0.89
All Dimensions in mm			

NEW PRODUCT

Suggested Pad Layout



Dimensions	Value (in mm)
X1	3.3
X2	1.2
Y1	1.6
Y2	1.6
C1	6.4
C2	2.3