



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!



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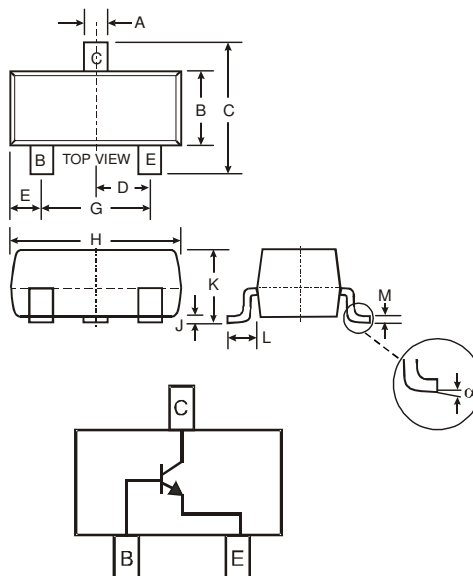


Features

- Epitaxial Planar Die Construction
- Complementary PNP Type Available (DP350T05)
- Ideal for Medium Power Amplification and Switching
- **Lead, Halogen and Antimony Free, RoHS Compliant "Green" Device (Notes 2, 3 and 4)**
- **Qualified to AEC-Q101 Standards for High Reliability**

Mechanical Data

- Case: SOT-23
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020D
- Terminal Connections: See Diagram
- Terminals: Finish — Matte Tin Finish annealed over Alloy 42 leadframe. Solderable per MIL-STD-202, Method 208
- Marking Information: K3S, See Page 3
- Ordering & Date Code Information: See Page 3
- Weight: 0.008 grams (approximate)



SOT-23		
Dim	Min	Max
A	0.37	0.51
B	1.20	1.40
C	2.30	2.50
D	0.89	1.03
E	0.45	0.60
G	1.78	2.05
H	2.80	3.00
J	0.013	0.10
K	0.903	1.10
L	0.45	0.61
M	0.085	0.180
α	0°	8°
All Dimensions in mm		

Maximum Ratings @T_A = 25°C unless otherwise specified

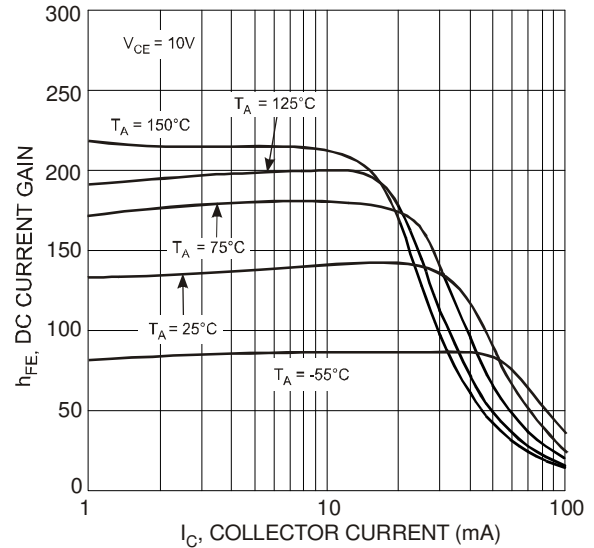
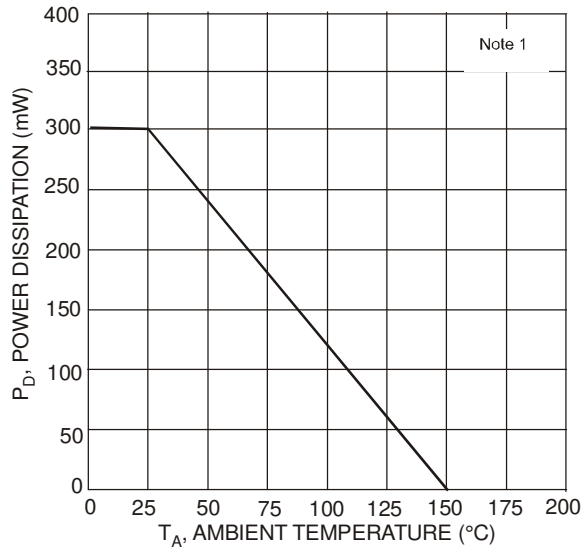
Characteristic	Symbol	Value	Unit
Collector-Base Voltage	V _{CBO}	350	V
Collector-Emitter Voltage	V _{CEO}	350	V
Emitter-Base Voltage	V _{EBO}	5.0	V
Continuous Collector Current	I _C	500	mA
Power Dissipation (Note 1)	P _D	300	mW
Thermal Resistance, Junction to Ambient (Note 1)	R _{θJA}	417	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +150	°C

- Notes:
1. Device mounted on FR-4 PCB, 1 inch x 0.85 inch x 0.062 inch; pad layout as shown on Diodes Inc. suggested pad layout document AP02001, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.
 2. No purposefully added lead. Halogen and Antimony Free.
 3. Diode's Inc.'s "Green" policy can be found on our website at http://www.diodes.com/products/lead_free/index.php.
 4. Product is manufactured with Green Molding Compound and does not contain Halogens or Sb₂O₃ Fire Retardants.

Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Max	Unit	Test Condition
OFF CHARACTERISTICS (Note 5)					
Collector-Base Breakdown Voltage	V _{(BR)CBO}	350	—	V	I _C = 100μA, I _E = 0
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	350	—	V	I _C = 1.0mA, I _B = 0
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	5.0	—	V	I _E = 10μA, I _C = 0
Collector Cutoff Current	I _{CBO}	—	50	nA	V _{CB} = 250V, I _E = 0
Collector Cutoff Current	I _{EBO}	—	50	nA	V _{CE} = 5V, I _C = 0
ON CHARACTERISTICS (Note 5)					
DC Current Gain	h _{FE}	20	—	—	I _C = 1.0mA, V _{CE} = 10V
		30	—		I _C = 10mA, V _{CE} = 10V
		30	200		I _C = 30mA, V _{CE} = 10V
		20	200		I _C = 50mA, V _{CE} = 10V
		15	—		I _C = 100mA, V _{CE} = 10V
Collector-Emitter Saturation Voltage	V _{CE(SAT)}	—	0.30	V	I _C = 10mA, I _B = 1.0mA
		—	0.35		I _C = 20mA, I _B = 2.0mA
		—	0.50		I _C = 30mA, I _B = 3.0mA
		—	1.0		I _C = 50mA, I _B = 5.0mA
Base-Emitter Saturation Voltage	V _{BE(SAT)}	—	0.75	V	I _C = 10mA, I _B = 1.0mA
		—	0.80		I _C = 20mA, I _B = 2.0mA
		—	0.90		I _C = 30mA, I _B = 3.0mA
Base-Emitter On Voltage	V _{BE(ON)}	—	2.0	V	I _C = 100mA, V _{CE} = 10V
SMALL SIGNAL CHARACTERISTICS					
Output Capacitance	C _{obo}	—	7.0	pF	V _{CB} = 20V, f = 1.0MHz, I _E = 0
Transition Frequency	f _T	50	—	MHz	V _{CE} = 10V, I _C = 20mA

Notes: 5. Short duration pulse test used to minimize self-heating effect.



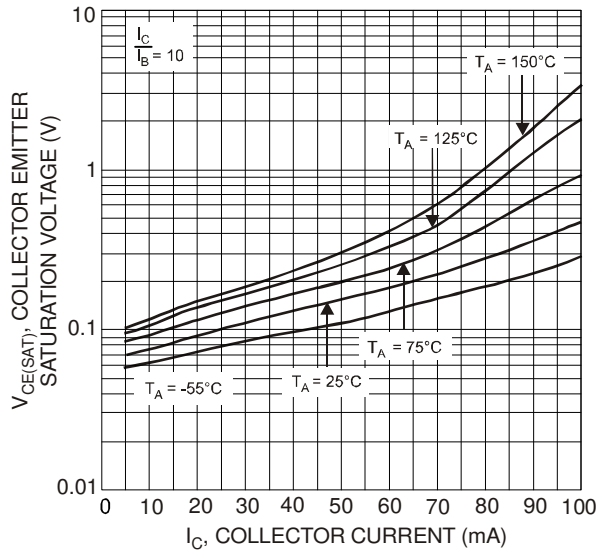


Fig. 3, Collector-Emitter Saturation Voltage vs. Collector Current

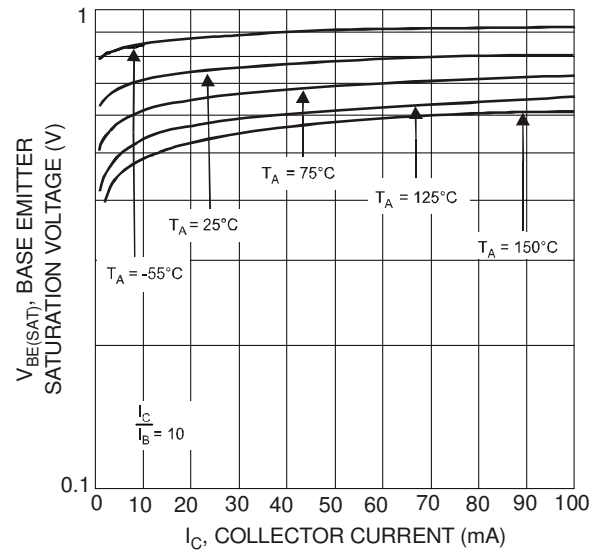


Fig. 4, Base-Emitter Saturation Voltage vs. Collector Current

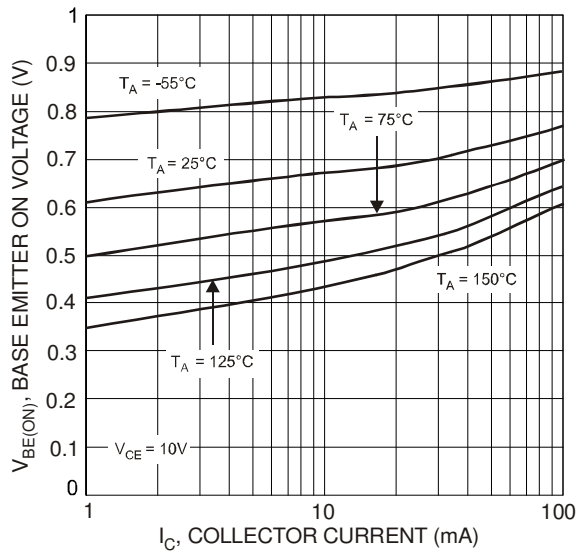


Fig. 5, Base-Emitter On Voltage vs. Collector Current

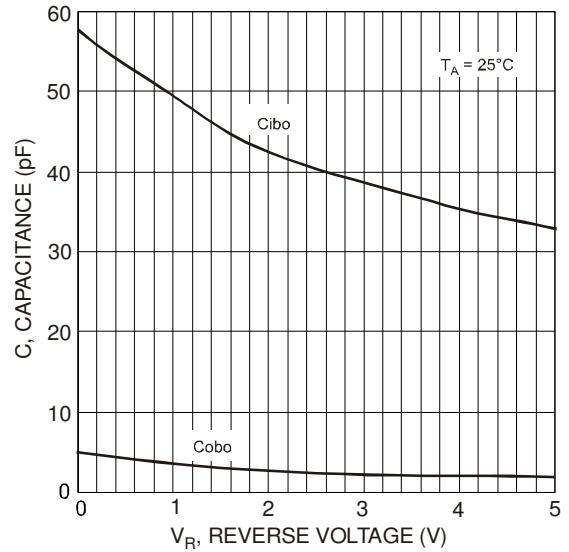


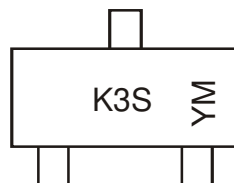
Fig. 6, Capacitance vs. Reverse Voltage

Ordering Information (Note 6)

Device	Packaging	Shipping
DN350T05-7	SOT-23	3000/Tape & Reel

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

Marking Information



K3S = Product Type Marking Code
 YM = Date Code Marking
 Y = Year ex: S = 2005
 M = Month ex: 9 = September

Date Code Key

Year	2005	2006	2007	2008	2009	2010	2011	2012
Code	S	T	U	V	W	X	Y	Z

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D



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