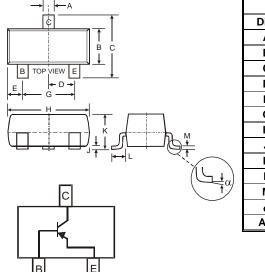


Features

- Epitaxial Planar Die Construction
- Complementary NPN Type Available (DN350T05)
- 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: K3U See Page 2
- Ordering & Date Code Information: See Page 2
- Weight: 0.008 grams (approximate)



	SOT-23							
Dim	Min	Max						
Α	0.37	0.51						
в	1.20	1.40						
С	2.30	2.50						
D	0.89	1.03						
Е	0.45	0.60						
G	1.78	2.05						
Н	2.80	3.00						
J	0.013	0.10						
К	0.903	1.10						
L	0.45	0.61						
М	0.085	0.180						
α	0°	8°						
All Dimensions in mm								

Maximum Ratings $@T_A = 25^{\circ}C$ unless otherwise specified

Characteristic	Symbol	DP350T05	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 (Note 1)	Ι _C	-500	mA
Power Dissipation (Note 1)	PD	300	mW
Thermal Resistance, Junction to Ambient (Note 1)	R _{0JA}	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.

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.

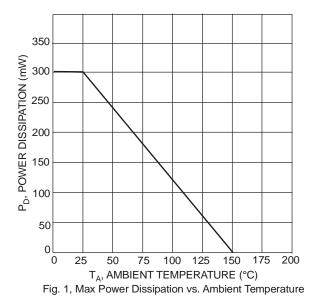
^{2.} No purposefully added lead. Halogen and Antimony Free.

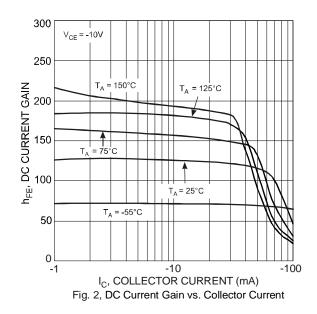


Electrical Characteristics @T_A = 25°C unless otherwise specified

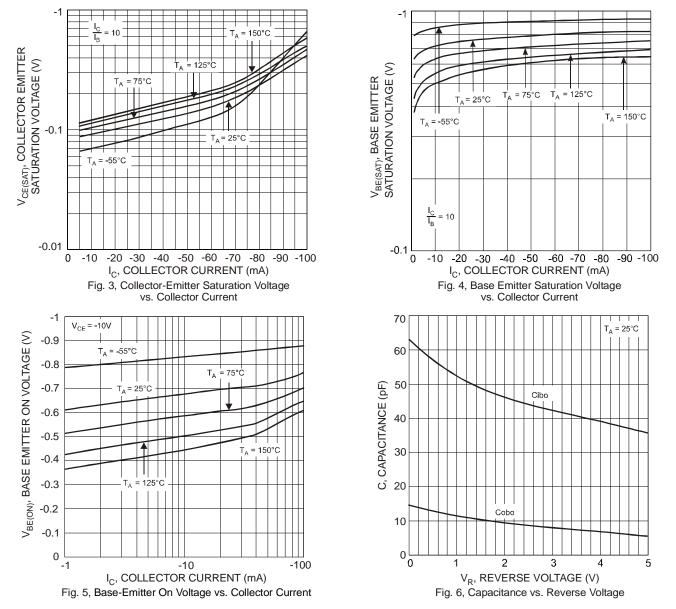
Characteristic	Symbol	Min	Max	Unit	Test Condition
OFF CHARACTERISTICS (Note 5)	Symbol	WIIII	WIAN	Onit	Test condition
Collector-Base Breakdown Voltage	V _(BR) CBO	-350	_	V	$I_{C} = -100 \mu A, I_{E} = 0$
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	-350	_	V	$I_{\rm C} = -1.0 {\rm mA}, I_{\rm B} = 0$
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	-5.0	_	V	$I_{E} = -10\mu A, I_{C} = 0$
Collector Cutoff Current	I _{CBO}		-50	nA	$V_{CB} = -200V, I_E = 0$
Collector Cutoff Current	I _{EBO}	_	-50	nA	$V_{CE} = -3.0V, I_{C} = 0$
ON CHARACTERISTICS (Note 5)				•	
		20	_		I _C = -1.0mA, V _{CE} = -10V
		30	_		$I_{C} = -10 \text{mA}, V_{CE} = -10 \text{V}$
DC Current Gain	h _{FE}	30	200		I _C = -30mA, V _{CE} = -10V
		20	200		$I_{C} = -50 \text{mA}, V_{CE} = -10 \text{V}$
		15	—		$I_{C} = -100 \text{mA}, V_{CE} = -10 \text{V}$
		_	-0.30		I _C = -10mA, I _B = -1.0mA
		_	-0.35	V	I _C = -20mA, I _B = -2.0mA
Collector-Emitter Saturation Voltage	V _{CE(SAT)}	_	-0.50	V	$I_{C} = -30 \text{mA}, I_{B} = -3.0 \text{mA}$
		_	-1.0		$I_{\rm C} = -50$ mA, $I_{\rm B} = -5.0$ mA
			-0.75		$I_{\rm C} = -10$ mA, $I_{\rm B} = -1.0$ mA
Base-Emitter Saturation Voltage	V _{BE(SAT)}	_	-0.85	V	$I_{\rm C} = -20$ mA, $I_{\rm B} = -2.0$ mA
	(,	_	-0.90		$I_{\rm C} = -30$ mA, $I_{\rm B} = -3.0$ mA
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.







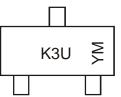


Ordering Information (Note 6)

Device	Packaging	Shipping
DP350T05-7	SOT-23	3000/Tape & Reel

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

Marking Information



 $\begin{array}{l} \mathsf{K3U} = \mathsf{Product Type Marking Code} \\ \mathsf{YM} = \mathsf{Date Code Marking} \\ \mathsf{Y} = \mathsf{Year ex: S} = 2005 \\ \mathsf{M} = \mathsf{Month ex: 9} = \mathsf{September} \end{array}$

Date Code Kev

Date Code Key	1						1					
Year	2005		2006	2007		2008	2009		2010	2011		2012
Code	S		Т	U		V	W		Х	Y		Z
			-		-							
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec



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