



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

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

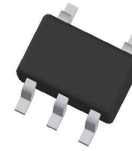
Email & Skype: info@chipsmall.com Web: www.chipsmall.com

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



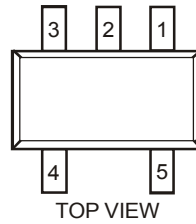
Features

- Epitaxial Planar Die Construction
- Surface Mount Package Suited for Automated Assembly
- Simplifies Circuit Design and Reduces Board Space
- **Lead Free/RoHS Compliant (Note 1)**
- **"Green" Device (Note 2)**

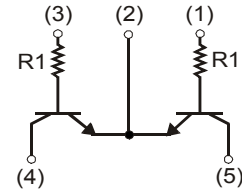


Mechanical Data

- Case: SOT-353
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminal Connections: See Diagram
- Terminals: Finish – Matte Tin Annealed Over Alloy 42 Leadframe. Solderable per MIL-STD-202, Method 208
- Marking Information: See Page 2
- Ordering Information: See Page 2
- Weight: 0.006 grams (approximate)



SOT-353



Schematic and Pin Configuration

Maximum Ratings @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Collector-Base Voltage	V _{CB0}	50	V
Collector-Emitter Voltage	V _{CEO}	50	V
Emitter-Base Voltage	V _{EBO}	5	V
Collector Current	I _C	100	mA

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation @T _A = 25°C (Note 3)	P _D	150	mW
Thermal Resistance, Junction to Ambient Air @T _A = 25°C (Note 3)	R _{θJA}	833	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +150	°C

Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Collector-Base Breakdown Voltage	V _{(BR)CBO}	50	—	—	V	I _C = 50μA, I _E = 0
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	50	—	—	V	I _C = 1mA, I _B = 0
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	5.0	—	—	V	I _E = 50μA, I _C = 0
Collector Cut-Off Current	I _{CBO}	—	—	0.5	μA	V _{CB} = 50V, I _E = 0
Emitter Cut-Off Current	I _{EBO}	—	—	0.5	μA	V _{EB} = 4V, I _C = 0
Collector-Emitter Saturation Voltage	V _{CE(SAT)}	—	—	0.3	V	I _C = 10mA, I _B = 1mA
DC Current Gain	h _{FE}	100	330	600	—	V _{CE} = 5V, I _C = 1mA
Gain-Bandwidth Product (Note 4)	f _T	—	250	—	MHz	V _{CE} = 10V, I _E = -5mA, f = 100MHz
Input Resistance	R ₁	7	10	13	kΩ	—

- 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; 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>.
 4. Characteristics of transistor. For reference only.

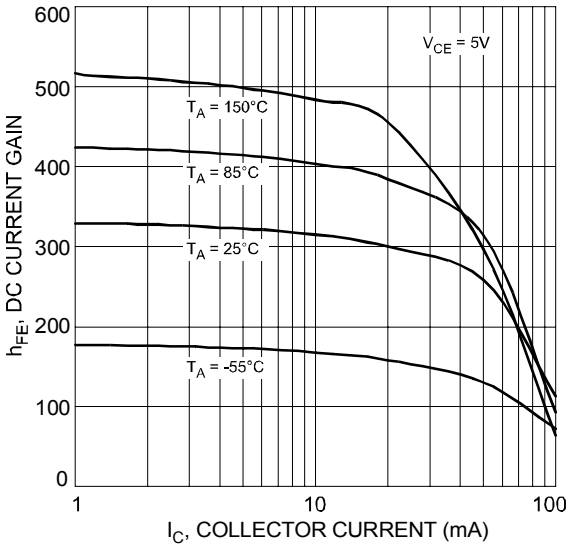


Fig. 1 Typical DC Current Gain vs. Collector Current

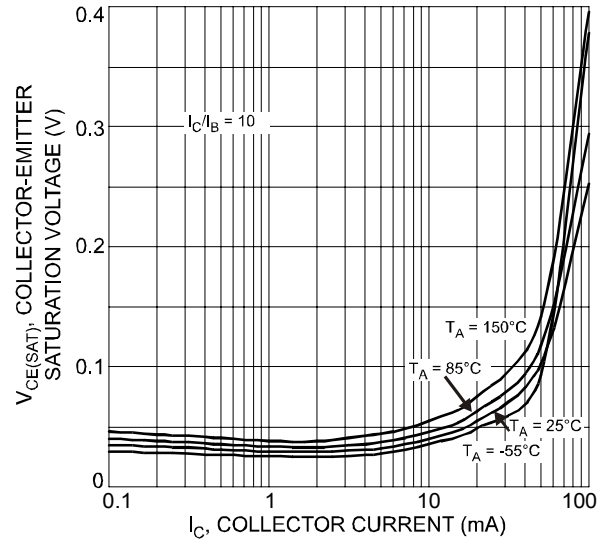


Fig. 2 Typical Collector-Emitter Saturation Voltage vs. Collector Current

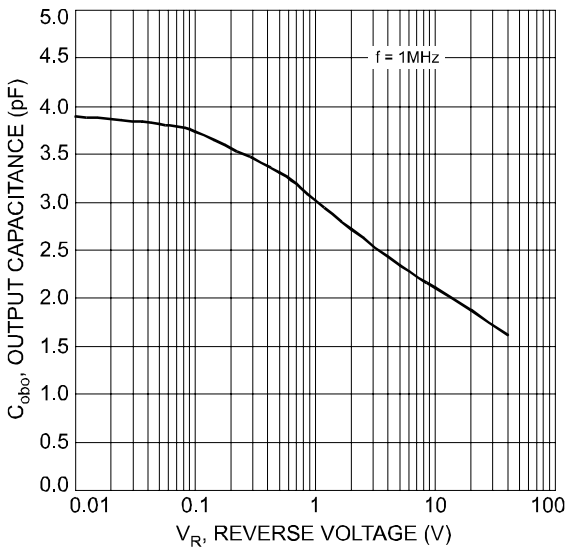


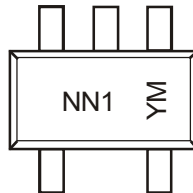
Fig. 3 Typical Output Capacitance Characteristics

Ordering Information (Note 5)

Device	Packaging	Shipping
UMG4N-7	SOT-353	3000/Tape & Reel

Notes: 5. For packaging details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

Marking Information



NN1 = Product Type Marking Code
 YM = Date Code Marking
 Y = Year ex: U = 2007
 M = Month ex: 9 = September

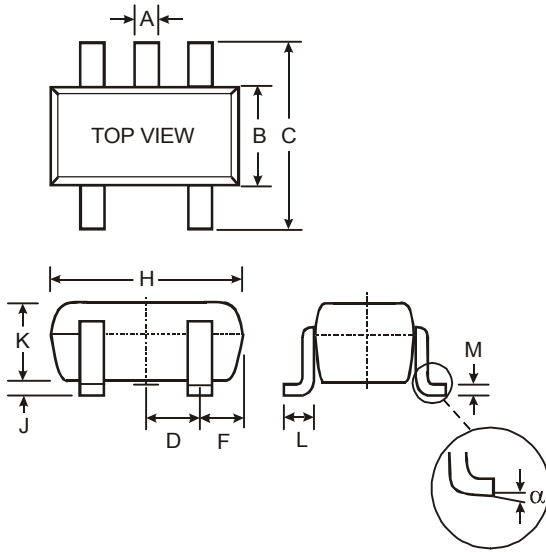
Date Code Key

Year	2007	2008	2009	2010	2011	2012
Code	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

Package Outline Dimensions

NEW PRODUCT



SOT-353		
Dim	Min	Max
A	0.10	0.30
B	1.15	1.35
C	2.00	2.20
D	0.65 Nominal	
F	0.30	0.40
H	1.80	2.20
J	—	0.10
K	0.90	1.00
L	0.25	0.40
M	0.10	0.25
α	0°	8°
All Dimensions in mm		

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