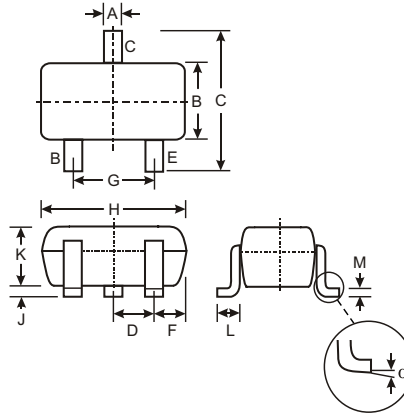


Features

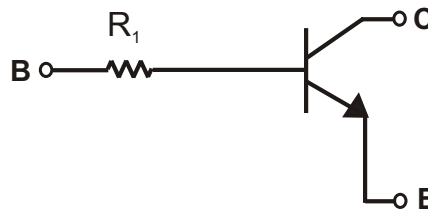
- Epitaxial Planar Die Construction
- Complementary PNP Types Available (DDTA)
- Built-In Biasing Resistor, R1 only
- Also Available in Lead Free Version

Mechanical Data

- Case: SC-59, Molded Plastic
- Case material - UL Flammability Rating 94V-0
- Moisture sensitivity: Level 1 per J-STD-020A
- Terminals: Solderable per MIL-STD-202, Method 208
- Also Available in Lead Free Plating (Matte Tin Finish). Please see Ordering Information, Note 3, on Page 2
- Terminal Connections: See Diagram
- Marking: Date Code and Marking Code (See Diagrams & Page 2)
- Weight: 0.008 grams (approx.)
- Ordering Information (See Page 2)



SC-59		
Dim	Min	Max
A	0.35	0.50
B	1.50	1.70
C	2.70	3.00
D	0.95	
G	1.90	
H	2.90	3.10
J	0.013	0.10
K	1.00	1.30
L	0.35	0.55
M	0.10	0.20
α	0°	8°
All Dimensions in mm		



SCHMATIC DIAGRAM

P/N	R1 (NOM)	MARKING
DDTC113TKA	1K Ω	N01
DDTC123TKA	2.2K Ω	N03
DDTC143TKA	4.7K Ω	N07
DDTC114TKA	10K Ω	N12
DDTC124TKA	22K Ω	N16
DDTC144TKA	47K Ω	N19
DDTC115TKA	100K Ω	N23
DDTC125TKA	200K Ω	N25

Maximum Ratings @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Collector-Base Voltage	V _{CBO}	50	V
Collector-Emitter Voltage	V _{CEO}	50	V
Emitter-Base Voltage	V _{EBO}	5	V
Collector Current	I _C (Max)	100	mA
Power Dissipation	P _d	200	mW
Thermal Resistance, Junction to Ambient Air (Note 1)	R _{θJA}	625	°C/W
Operating and Storage and Temperature Range	T _j , T _{STG}	-55 to +150	°C

Note: 1. Mounted on FR4 PC Board with recommended pad layout at <http://www.diodes.com/datasheets/ap02001.pdf>.

Electrical Characteristics @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Collector-Base Breakdown Voltage	BV _{CBO}	50	—	—	V	I _C = 50μA
Collector-Emitter Breakdown Voltage	BV _{CEO}	50	—	—	V	I _C = 1mA
Emitter-Base Breakdown Voltage	BV _{EBO}	5	—	—	V	I _E = 50μA
Collector Cutoff Current	I _{CBO}	—	—	0.5	μA	V _{CB} = 50V
Emitter Cutoff Current	I _{EBO}	—	—	0.5	μA	V _{EB} = 4V
Collector-Emitter Saturation Voltage	V _{CE(sat)}	—	—	0.3	V	I _C /I _B = 10mA/1mA DDTC113TKA I _C /I _B = 5mA/0.5mA DDTC123TKA I _C /I _B = 2.5mA/.25mA DDTC143TKA I _C /I _B = 1mA/.1mA DDTC114TKA I _C /I _B = 5mA/0.5mA DDTC124TKA I _C /I _B = 2.5mA/.25mA DDTC144TKA I _C /I _B = 1mA/0.1mA DDTC115TKA I _C /I _B = .5mA/.05mA DDTC125TKA
DC Current Transfer Ratio	h _{FE}	100	250	600	—	I _C = 1mA, V _{CE} = 5V
Input Resistor (R ₁) Tolerance	ΔR ₁	-30	—	+30	%	—
Gain-Bandwidth Product*	f _T	—	250	—	MHz	V _{CE} = 10V, I _E = -5mA, f = 100MHz

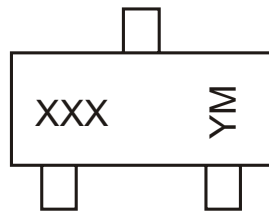
* Transistor - For Reference Only

Ordering Information

Device	Packaging	Shipping
DDTC113TKA-7	SC-59	3000/Tape & Reel
DDTC123TKA-7	SC-59	3000/Tape & Reel
DDTC143TKA-7	SC-59	3000/Tape & Reel
DDTC114TKA-7	SC-59	3000/Tape & Reel
DDTC124TKA-7	SC-59	3000/Tape & Reel
DDTC144TKA-7	SC-59	3000/Tape & Reel
DDTC115TKA-7	SC-59	3000/Tape & Reel
DDTC125TKA-7	SC-59	3000/Tape & Reel

- Notes:
- For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.
 - For Lead Free version (with Lead Free terminal finish) part number, please add "-F" suffix to part number above.
Example: DDTC125TKA-7-F.

Marking Information



XXX = Product Type Marking Code
See Sheet 1 Diagrams
YM = Date Code Marking
Y = Year ex: N = 2002
M = Month ex: 9 = September

Date Code Key

Year	2002	2003	2004	2005	2006	2007	2008	2009
Code	N	P	R	S	T	U	V	W

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

TYPICAL CURVES - DDT114TKA

NEW PRODUCT

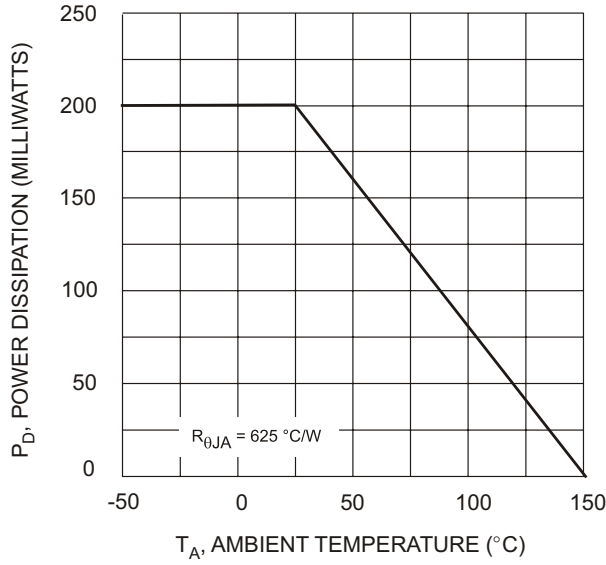


Fig. 1 Derating Curve

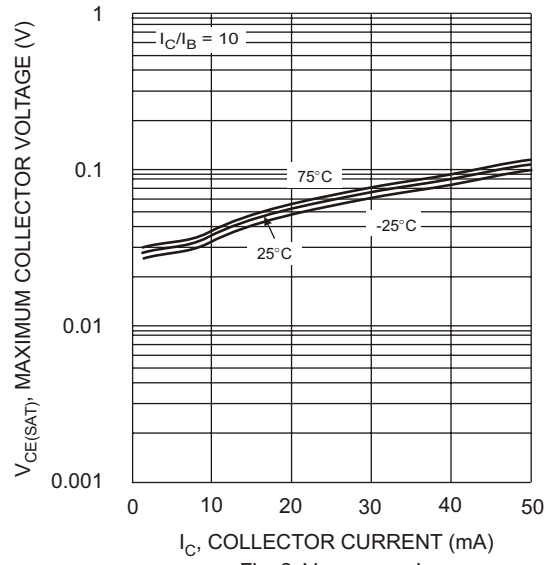


Fig. 2 $V_{CE(SAT)}$ vs. I_C

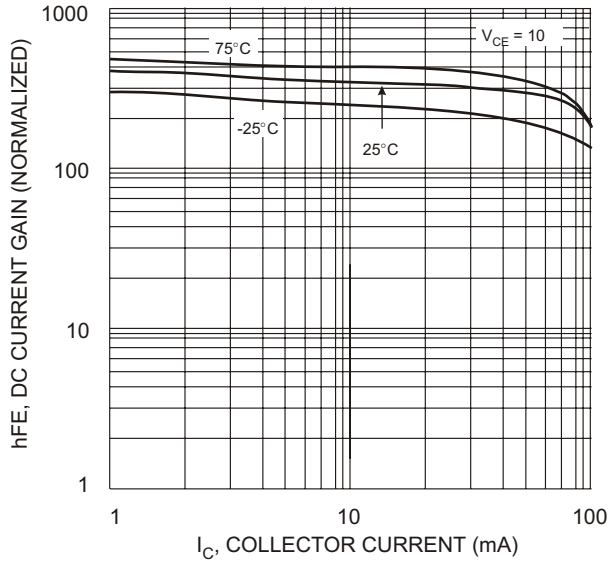


Fig. 3 DC Current Gain

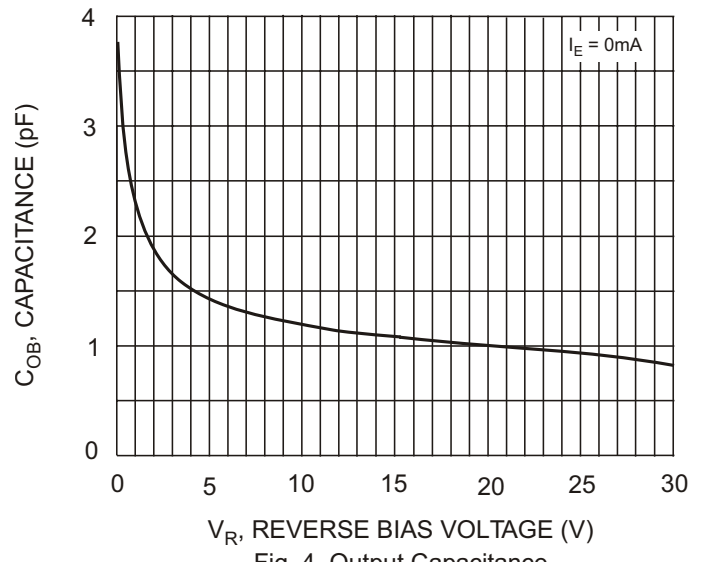


Fig. 4 Output Capacitance

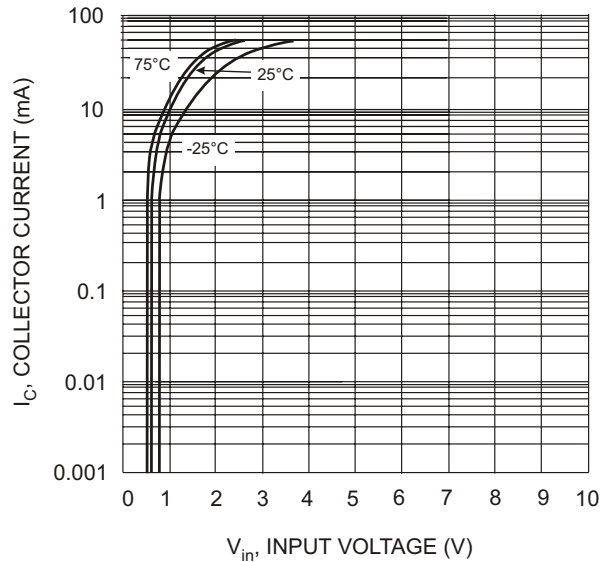


Fig. 5 Collector Current Vs. Input Voltage

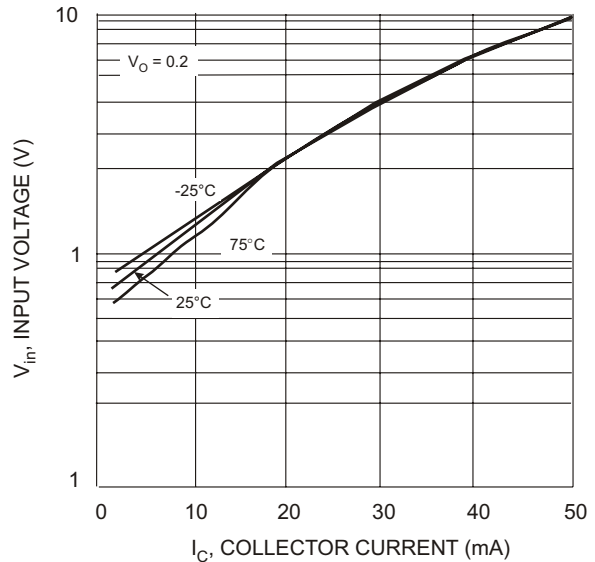


Fig. 6 Input Voltage vs. Collector Current



LittleDiode supplies new, hard to find or obsolete electronic components and semiconductors all over the world.

With over two million different components listed you are sure to find the part you need.

Feel free to visit us today at our online store:

LittleDiode.com

Looking forward to providing you with the best possible service.