

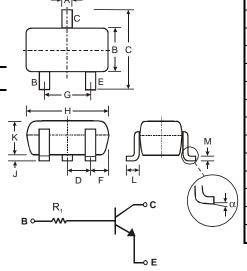
Features

- **Epitaxial Planar Die Construction**
- Complementary PNP Types Available (DDTA)
- Built-In Biasing Resistor, R1 only
- Lead Free/RoHS Compliant (Note 2)
- "Green" Device, Note 3 and 4

Mechanical Data

- Case: SC-59
- Case Material: Molded Plastic, "Green" Molding Compound, Note 4. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Solderable per MIL-STD-202, Method 208
- Lead Free Plating (Matte Tin Finish annealed over Copper leadframe).
- Terminal Connections: See Diagram
- Marking Information: See Diagrams & Page 3
- Ordering Information: See Page 3
- Weight: 0.008 grams (approximate)

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



SC-59							
Dim Min Max							
Α	0.35	0.50					
В	1.50	1.70					
С	2.70	3.00					
D	0.95						
G	1.90						
н	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 Din	nensions	in mm					

SCHEMATIC DIAGRAM

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)	$R_{ heta JA}$	625	°C/W	
Operating and Storage Temperature Range	T _j , T _{STG}	-55 to +150	°C	

Notes:

- Mounted on FR4 PC Board with recommended pad layout at http://www.diodes.com/datasheets/ap02001.pdf
- No purposefully added lead.
- Diodes Inc.'s "Green" policy can be found on our website at http://www.diodes.com/products/lead_free/index.php.

 Product manufactured with Date Code 0627 (week 27, 2006) and newer are built with Green Molding Compound. Product manufactured prior to Date Code 0627 are built with Non-Green Molding Compound and may contain Halogens or Sb2O3 Fire Retardants.

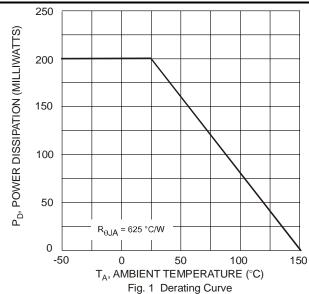


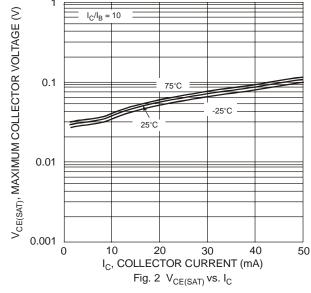
Electrical Characteristics @T_A = 25°C unless otherwise specified

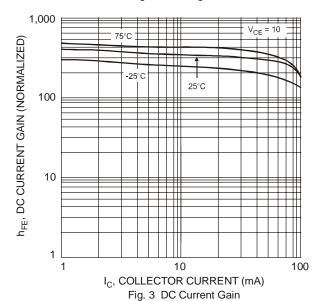
Characteristic	Symbol	Min	Тур	Max	Unit	Test Condition		
Collector-Base Breakdown Voltage	BV _{CBO}	50	_		V	$I_C = 50\mu A$		
Collector-Emitter Breakdown Voltage	BV _{CEO}	50	_		V	$I_C = 1mA$		
Emitter-Base Breakdown Voltage	BV _{EBO}	5	_	_	V	$I_E = 50\mu A$		
Collector Cutoff Current	I _{CBO}	_	_	0.5	μА	$V_{CB} = 50V$		
Emitter Cutoff Current	I _{EBO}	_	_	0.5	μА	V _{EB} = 4V		
Collector-Emitter Saturation Voltage	V _{CE(sat)}	_	_	0.3	V	$ \begin{aligned} & _{C/I_B} = 10 \text{mA}/1 \text{mA} & \text{DDTC113TKA} \\ & _{C/I_B} = 5 \text{mA}/0.5 \text{mA} & \text{DDTC123TKA} \\ & _{C/I_B} = 2.5 \text{mA}/.25 \text{mA} & \text{DDTC143TKA} \\ & _{C/I_B} = 1 \text{mA}/.1 \text{mA} & \text{DDTC114TKA} \\ & _{C/I_B} = 5 \text{mA}/0.5 \text{mA} & \text{DDTC124TKA} \\ & _{C/I_B} = 2.5 \text{mA}/.25 \text{mA} & \text{DDTC144TKA} \\ & _{C/I_B} = 1 \text{mA}/0.1 \text{mA} & \text{DDTC115TKA} \\ & _{C/I_B} = .5 \text{mA}/.05 \text{mA} & \text{DDTC125TKA} \end{aligned} $		
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⊤	_	250	_	MHz	$V_{CE} = 10V, I_{E} = -5mA,$ f = 100MHz		

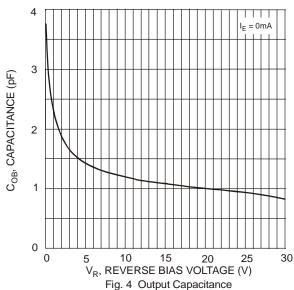
^{*} Transistor - For Reference Only

Typical Curves - DDTC114TKA

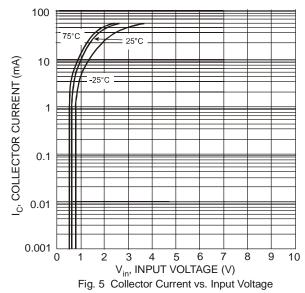


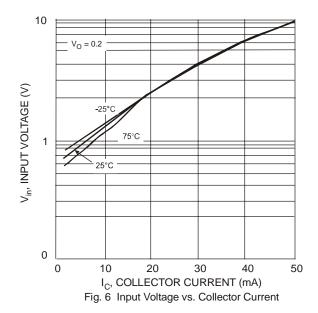










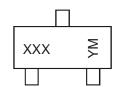


Ordering Information (Note 4 & 5)

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

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

Marking Information



XXX = Product Type Marking Code, See Table on Page 1

YM = Date Code Marking Y = Year ex: T = 2006

M = Month ex: 9 = September

Date Code Key

 Paic Code Rey													
Year	2002	2003	200	4 20	05	2006	20	007	2008	2009	2010	2011	2012
Code	Ν	Р	R	9	3	Т	Į	U	V	W	Χ	Υ	Z
Month	Jan	Feb	Mar	Apr	May	Jı	un	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5		6	7	8	9	0	N	D

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