Maximum Ratings @T_A = 25°C unless otherwise specified

Characteristic		Symbol	Value	Unit
Supply Voltage, (3) to (2)		V_{CC}	-50	V
Input Voltage, (1) to (2)	DDTA123EKA DDTA143EKA DDTA114EKA DDTA124EKA DDTA144EKA DDTA115EKA	V_{IN}	+10 to –12 +10 to –30 +10 to –40 +10 to –40 +10 to –40 +10 to -40	V
Output Current	DDTA123EKA DDTA143EKA DDTA114EKA DDTA124EKA DDTA144EKA DDTA115EKA	I_O	-100 -100 -50 -30 -100 -20	mA
Output Current	All	I_C (Max)	-100	mA
Power Dissipation		P_d	200	mW
Thermal Resistance, Junction to Ambient Air (Note 1)		$R_{\theta JA}$	625	°C/W
Operating and Storage Temperature Range		T_j, T_{STG}	-55 to +150	°C

Notes:
1. Mounted on FR4 PC Board with recommended pad layout at http://www.diodes.com/datasheets/ap02001.pdf.
2. No purposefully added lead.
3. Diodes Inc.'s "Green" policy can be found on our website at http://www.diodes.com/products/lead_free/index.php.
4. 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	Typ	Max	Unit	Test Condition
Input Voltage		$V_{I(off)}$	-0.5	-1.1	—	V	V_{CC} = -5V, I_O = -100μA
		$V_{I(on)}$	—	-1.9	-3		V_O = -0.3V, I_O = -20mA, DDTA123EKA V_O = -0.3V, I_O = -20mA, DDTA143EKA V_O = -0.3V, I_O = -10mA, DDTA114EKA V_O = -0.3V, I_O = -5mA, DDTA124EKA V_O = -0.3V, I_O = -2mA, DDTA144EKA V_O = -0.3V, I_O = -1mA, DDTA115EKA
Output Voltage		$V_{O(on)}$	—	-0.1	-0.3	V	I_O/I_I = -10mA/-0.5mA, DDTA123EKA I_O/I_I = -10mA/-0.5mA, DDTA143EKA I_O/I_I = -10mA/-0.5mA, DDTA114EKA I_O/I_I = -10mA/-0.5mA, DDTA124EKA I_O/I_I = -10mA/-0.5mA, DDTA144EKA I_O/I_I = -5mA/-0.25mA, DDTA115EKA
Input Current	DDTA123EKA DDTA143EKA DDTA114EKA DDTA124EKA DDTA144EKA DDTA115EKA	I_I	—	—	-3.8 -1.8 -0.88 -0.36 -0.18 -0.15	mA	V_I = -5V
Output Current		$I_{O(off)}$	—	—	-0.5	μA	V_{CC} = -50V, V_I = 0V
DC Current Gain	DDTA123EKA DDTA143EKA DDTA114EKA DDTA124EKA DDTA144EKA DDTA115EKA	G_I	20 20 30 56 68 82	—	—	—	V_O = -5V, I_O = -20mA V_O = -5V, I_O = -10mA V_O = -5V, I_O = -5mA V_O = -5V, I_O = -5mA V_O = -5V, I_O = -5mA V_O = -5V, I_O = -5mA
Input Resistor (R_1) Tolerance		ΔR_1	-30	—	+30	%	—
Resistance Ratio		R_2/R_1	0.8	1	1.2	—	—
Gain-Bandwidth Product*		f_T	—	250	—	MHz	V_{CE} = -10V, I_E = 5mA, f = 100MHz

* Transistor - For Reference Only

Typical Curves – DDTA143EKA

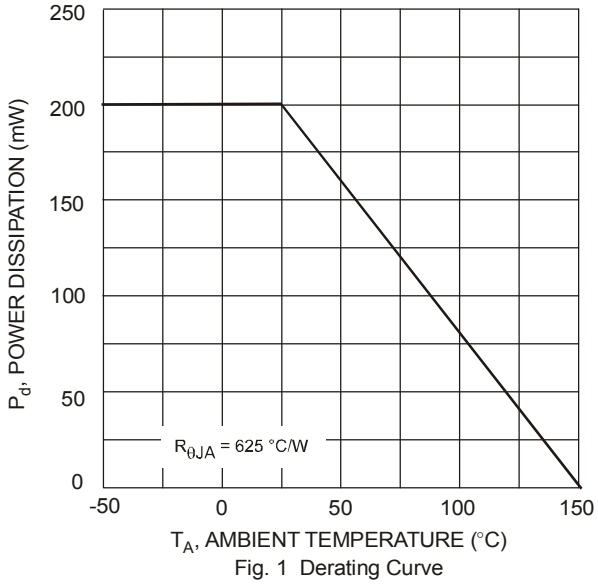


Fig. 1 Derating Curve

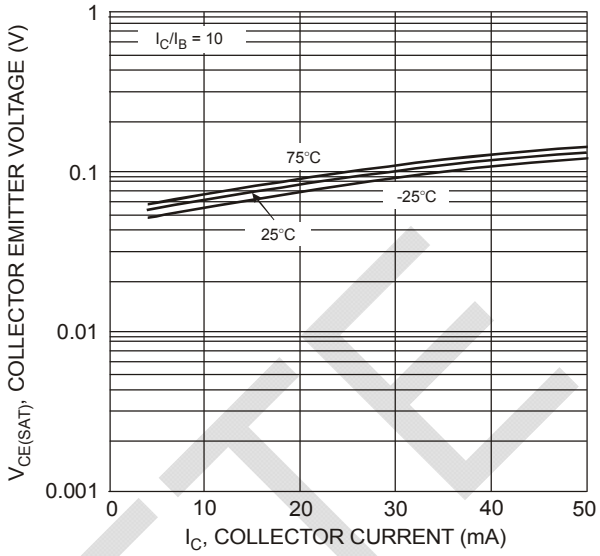


Fig. 2 $V_{CE(SAT)}$ vs. I_C

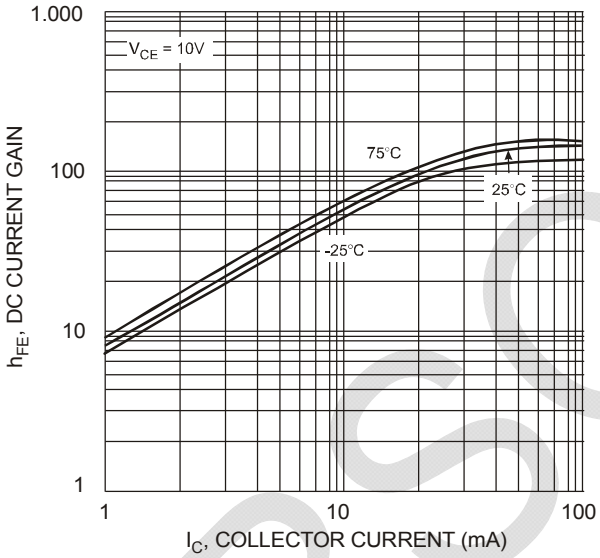


Fig. 3 DC Current Gain

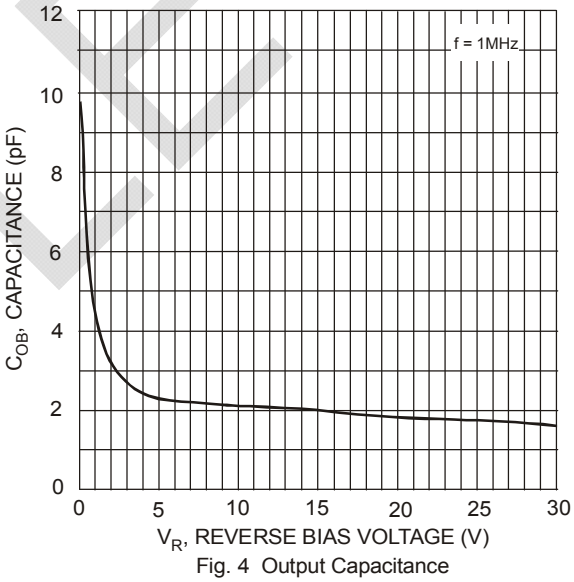


Fig. 4 Output Capacitance

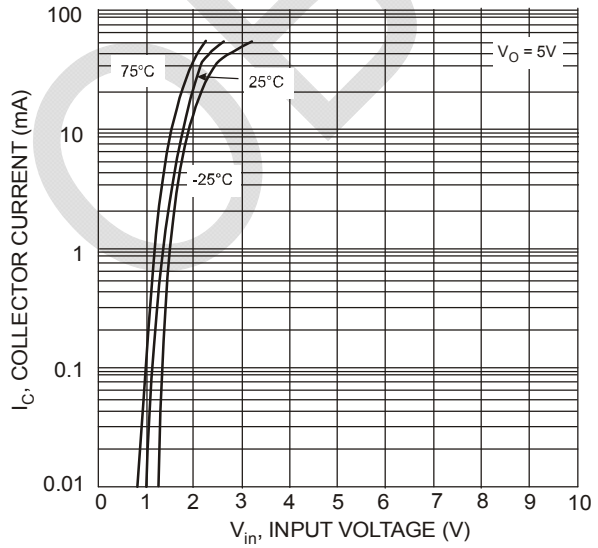


Fig. 5 Collector Current vs. Input Voltage

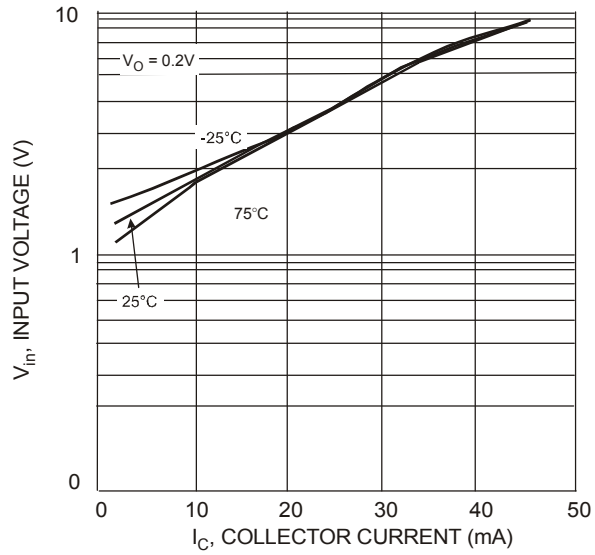


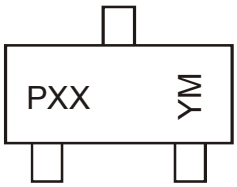
Fig. 6 Input Voltage vs. Collector Current

Ordering Information (Note 4 & 5)

Device	Packaging	Shipping
DDTA123EKA-7-F	SC-59	3000/Tape & Reel
DDTA143EKA-7-F	SC-59	3000/Tape & Reel
DDTA114EKA-7-F	SC-59	3000/Tape & Reel
DDTA124EKA-7-F	SC-59	3000/Tape & Reel
DDTA144EKA-7-F	SC-59	3000/Tape & Reel
DDTA115EKA-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



PXX = 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

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Code	N	P	R	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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2. support or sustain life and whose failure to perform when properly used in accordance with instructions for use provided in the labeling can be reasonably expected to result in significant injury to the user.

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