Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
OFF CHARACTERISTICS						
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-100	—	—	V	I_C = -100μA, I_E = 0
Collector-Emitter Breakdown Voltage (Note 5)	$V_{(BR)CEO}$	-60	—	—	V	I_C = -10mA, I_B = 0
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-6	—	—	V	I_E = -100μA, I_C = 0
Collector Cutoff Current	I_{CBO}	—	—	-50 -1	nA μA	V_{CB} = -80V, I_E = 0 V_{CB} = -80V, I_E = 0, T_A = 100°C
Emitter Cutoff Current	I_{EBO}	—	—	-10	nA	V_{EB} = - 6V, I_C = 0
ON CHARACTERISTICS (Note 5)						
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	— — — —	-20 -85 -155 -370	-50 -140 -210 -460	mV	I_C = -100mA, I_B = -10mA I_C = -1A, I_B = -100mA I_C = -2A, I_B = -200mA I_C = -5A, I_B = -500mA
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	—	-1080	-1240	mV	I_C = -5A, I_B = -500mA
Base-Emitter Turn-On Voltage	$V_{BE(ON)}$	—	-935	-1070	mV	I_{CE} = -5A, V_{CE} = -1V
DC Current Gain	h_{FE}	100 100 75 10	200 200 90 25	— 300 — —	—	I_C = -10mA, V_{CE} = -1V I_C = -2A, V_{CE} = -1V I_C = -5A, V_{CE} = -1V I_C = -10A, V_{CE} = -1V
SMALL SIGNAL CHARACTERISTICS						
Current Gain-Bandwidth Product	f_T	—	120	—	MHz	I_C = -100mA, V_{CE} = -10V, f = 50MHz
Output Capacitance	C_{obo}	—	74	—	pF	V_{CB} = -10V, f = 1MHz
SWITCHING CHARACTERISTICS						
Switching Times	t_{on} t_{off}	— —	82 350	— —	ns	I_C = -2A, I_{B1} = -200mA I_{B2} = +200mA, V_{CC} = -10V

Notes: 5. Measured under pulsed conditions. Pulse width = 300μs. Duty cycle ≤2%

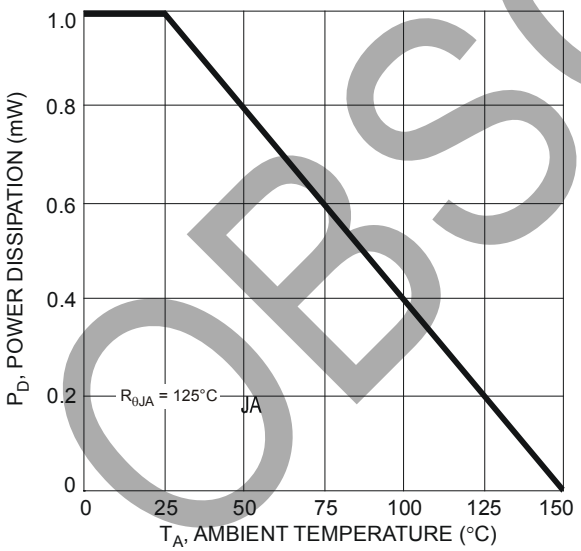


Fig. 1 Power Dissipation vs. Ambient Temperature

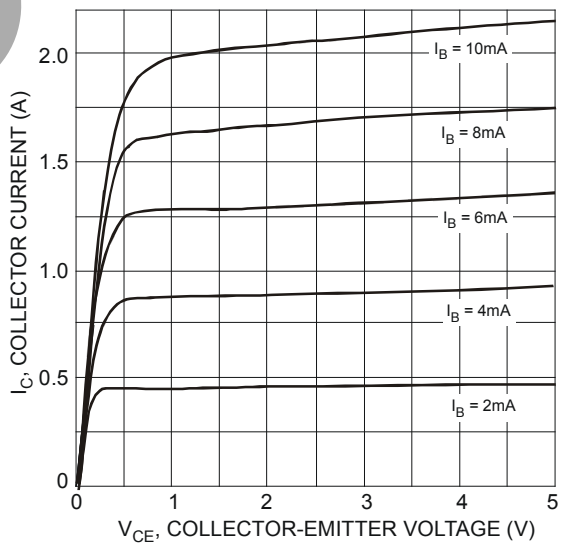


Fig. 2 Typical Collector Current vs. Collector-Emitter Voltage

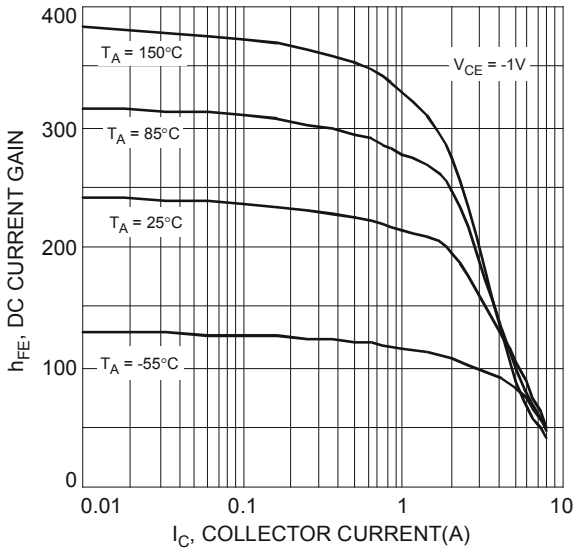


Fig. 3 Typical DC Current Gain vs. Collector Current

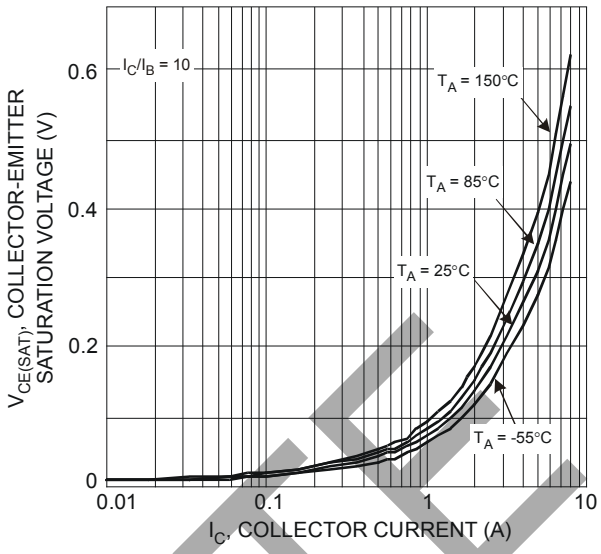


Fig. 4 Typical Collector-Emitter Saturation Voltage vs. Collector Current

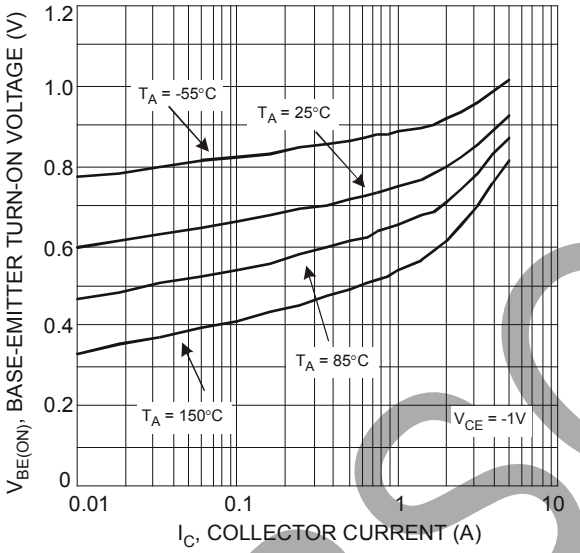


Fig. 5 Typical Base-Emitter Turn-On Voltage vs. Collector Current

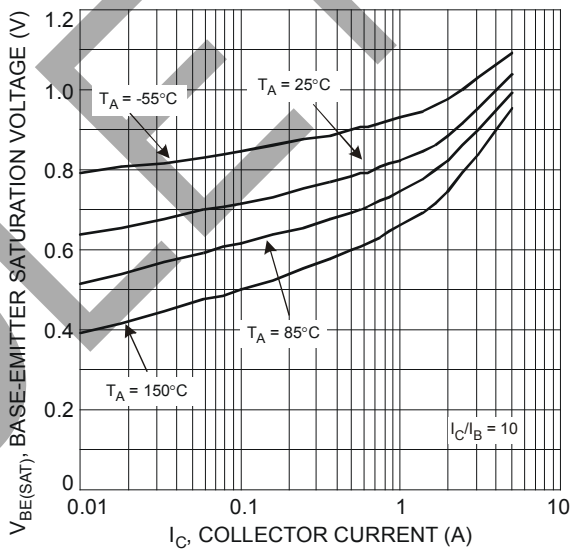


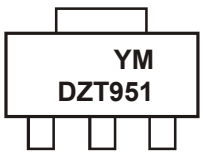
Fig. 6 Typical Base-Emitter Saturation Voltage vs. Collector Current

Ordering Information (Note 6)

Part Number	Case	Packaging
DZT951-13	SOT-223	2500/Tape & Reel

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

Marking Information



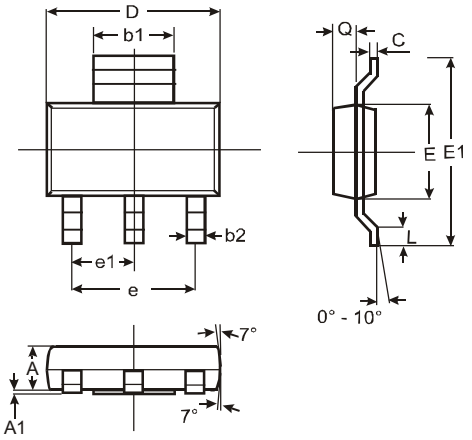
DZT951 = Product Type Marking Code
YM = Date Code Marking
Y = Year (ex: T = 2006)
M = Month (ex: 9 = September)

Date Code Key

Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Code	T	U	V	W	X	Y	Z	A	B	C

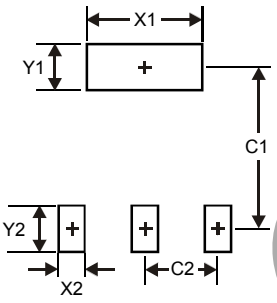
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D

Package Outline Dimensions



SOT-223			
Dim	**Min**	**Max**	**Typ**
A	1.55	1.65	1.60
A1	0.010	0.15	0.05
b1	2.90	3.10	3.00
b2	0.60	0.80	0.70
C	0.20	0.30	0.25
D	6.45	6.55	6.50
E	3.45	3.55	3.50
E1	6.90	7.10	7.00
e	—	—	4.60
e1	—	—	2.30
L	0.85	1.05	0.95
Q	0.84	0.94	0.89
All Dimensions in mm			

Suggested Pad Layout



Dimensions	Value (in mm)
X1	3.3
X2	1.2
Y1	1.6
Y2	1.6
C1	6.4
C2	2.3

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