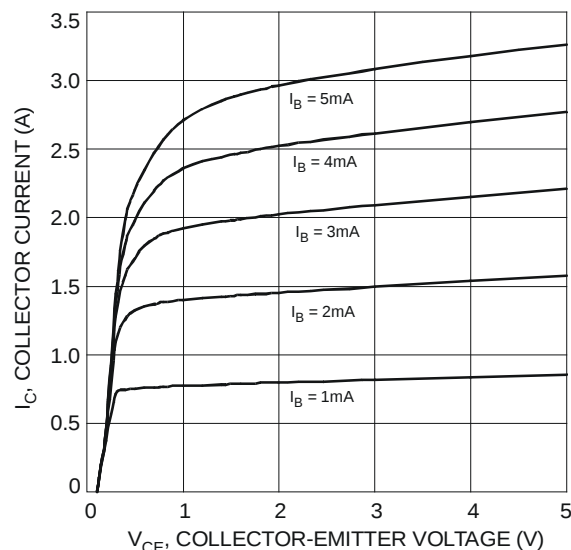
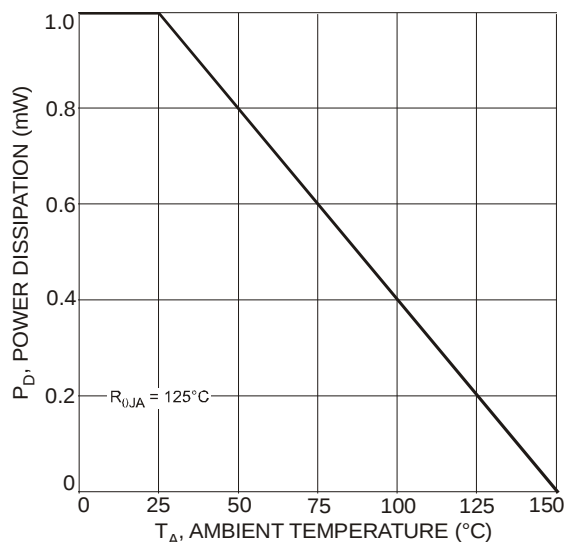


Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Off Characteristics						
Collector-Base Breakdown Voltage	V _{(BR)CBO}	20	—	—	V	I _C = 100μA, I _E = 0
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	20	—	—	V	I _C = 10mA, I _B = 0
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	5	—	—	V	I _E = 100μA, I _C = 0
Collector Cutoff Current	I _{CBO}	—	—	100	nA	V _{CB} = 16V, I _E = 0
Emitter Cutoff Current	I _{EBO}	—	—	100	nA	V _{EB} = 4V, I _C = 0
On Characteristics (Note 4)						
Collector-Emitter Saturation Voltage	V _{CE(SAT)}	—	0.04	0.10	V	I _C = 0.1A, I _B = 0.5mA
		—	0.18	0.50		I _C = 2A, I _B = 10mA
		—	0.24	0.45		I _C = 3A, I _B = 20mA
Base-Emitter Saturation Voltage	V _{BE(SAT)}	—	—	0.9	V	I _C = 1A, I _B = 10mA
Base-Emitter Turn-On Voltage	V _{BE(ON)}	—	—	0.9	V	V _{CE} = 2V, I _C = 1A
DC Current Gain	h _{FE}	500	—	—	—	V _{CE} = 2V, I _C = 0.1A
		400	—	—		V _{CE} = 2V, I _C = 2A
		150	—	—		V _{CE} = 2V, I _C = 6A
AC Characteristics						
Transition Frequency	f _T	150	—	—	MHz	V _{CE} = 5V, I _C = 50mA, f = 50MHz
Input Capacitance	C _{ibo}	—	230	—	pF	V _{EB} = 0.5V, f = 1MHz
Output Capacitance	C _{obo}	—	23	—	pF	V _{CB} = 10V, f = 1MHz
Switching Times	t _{on}	—	26	—	ns	V _{CC} = 10V, I _C = 500mA
	t _{off}	—	220	—	ns	I _{B1} = -I _{B2} = 50mA

Notes: 4. Pulse Test: Pulse width ≤300μs. Duty cycle ≤2.0%.



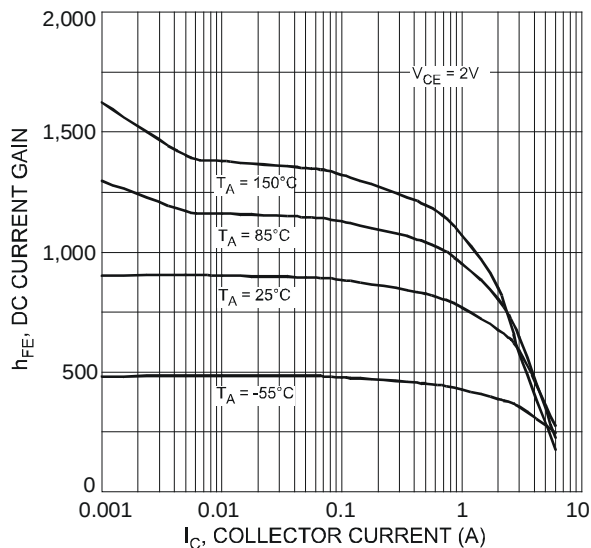


Fig. 3 Typical DC Current Gain vs. Collector Current

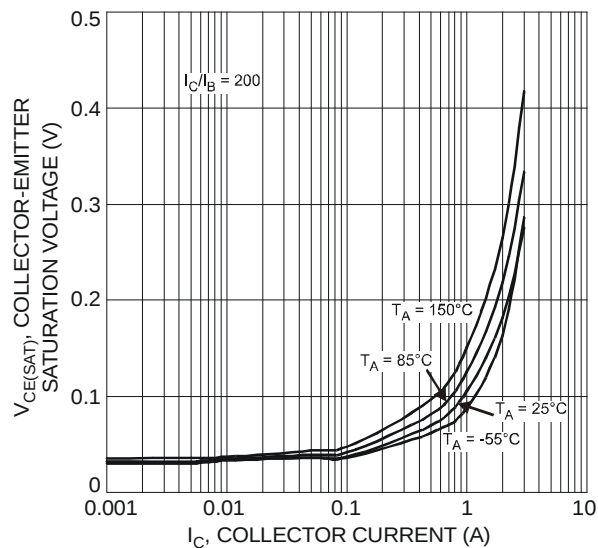


Fig. 4 Typical Collector-Emitter Saturation Voltage vs. Collector Current

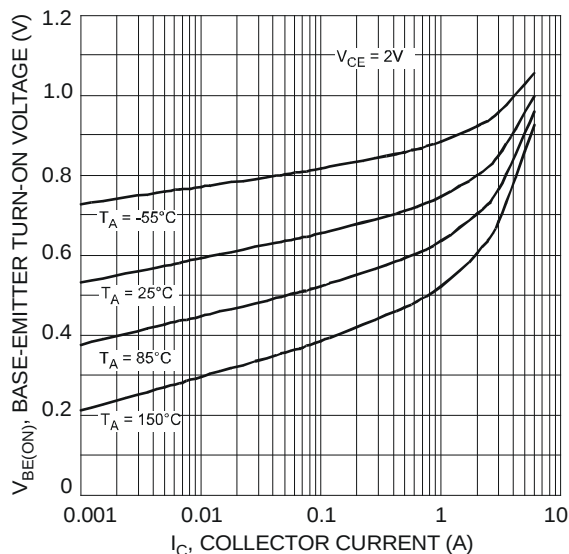


Fig. 5 Typical Base-Emitter Turn-On Voltage vs. Collector Current

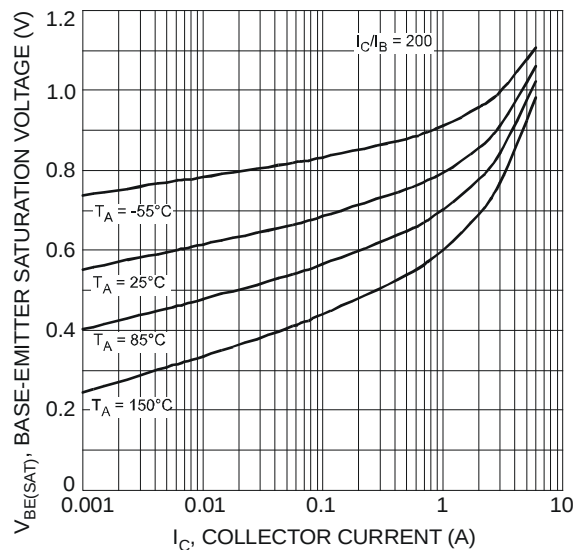


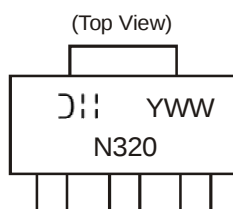
Fig. 6 Typical Base-Emitter Saturation Voltage vs. Collector Current

Ordering Information (Note 5)

Device	Packaging	Shipping
DNLS320E-13	SOT-223	2500/Tape & Reel

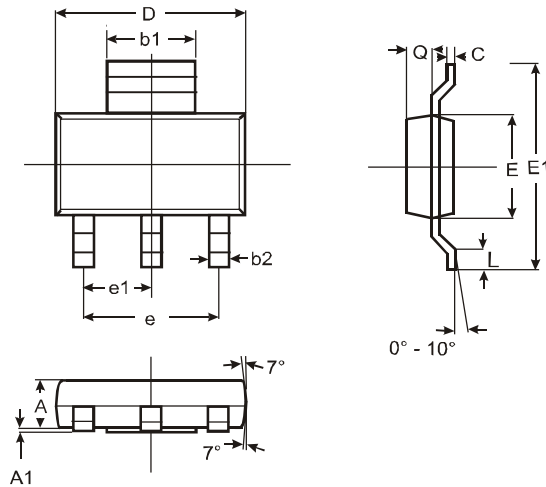
Notes: 5. For packaging details, go to our website at <http://www.diodes.com/ap2007.pdf>.

Marking Information



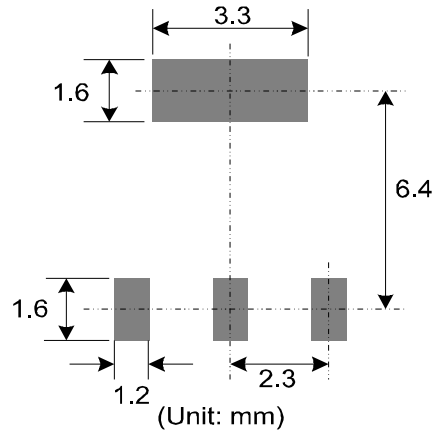
N320 = Product Type Marking Code
YWW = Date Code Marking
Y = Last digit of year ex: 7 = 2007
WW = Week code 01 - 52

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:



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