

Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
OFF CHARACTERISTICS (Note 4)						
Collector-Base Breakdown Voltage	V _{(BR)CBO}	-15	—	—	V	I _C = -100μA, I _E = 0
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	-15	—	—	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}	—	—	-0.1	μA	V _{CB} = -10V, I _E = 0
Emitter Cutoff Current	I _{EBO}	—	—	-0.1	μA	V _{EB} = -4V, I _C = 0
ON CHARACTERISTICS (Note 4)						
Collector-Emitter Saturation Voltage	V _{CE(SAT)}	—	-0.08 -0.12 -0.22 -0.21	-0.15 -0.25 -0.45 -0.5	V	I _C = -0.5A, I _B = -2.5mA I _C = -1A, I _B = -5mA I _C = -2A, I _B = -10mA I _C = -3A, I _B = -50mA
Base-Emitter Saturation Voltage	V _{BE(SAT)}	—	—	-0.9	V	I _C = -1A, I _B = -5mA
Base-Emitter Turn-On Voltage	V _{BE(ON)}	—	-0.75	—	V	V _{CE} = -2V, I _C = -1A
DC Current Gain	h _{FE}	500 400 300 150	—	1500	—	V _{CE} = -2V, I _C = -10mA V _{CE} = -2V, I _C = -1A V _{CE} = -2V, I _C = -2A V _{CE} = -2V, I _C = -6A
AC CHARACTERISTICS						
Transition Frequency	f _T	100	—	—	MHz	V _{CE} = -5V, I _C = -50mA, f = 50MHz
Input Capacitance	C _{ibo}	—	245	—	pF	V _{EB} = -0.5V, f = 1MHz
Output Capacitance	C _{obo}	—	45	—	pF	V _{CB} = -10V, f = 1MHz
Switching Times	t _{on} t _{off}	— —	35 200	— —	ns ns	V _{CC} = -10V, I _C = -500mA, I _{B1} = -I _{B2} = -50mA

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

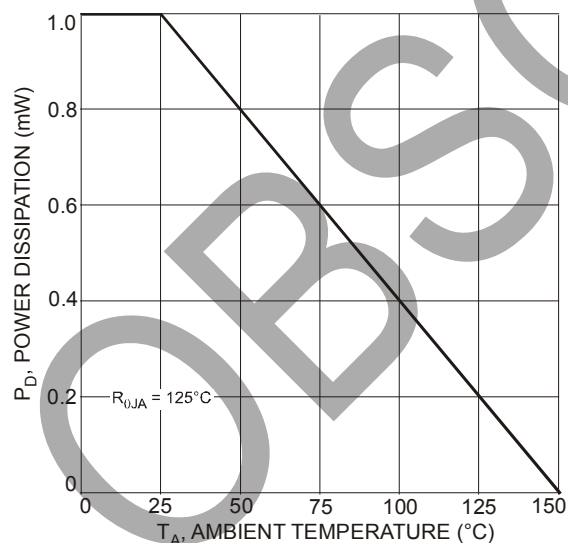


Fig. 1 Max Power Dissipation vs. Ambient Temperature

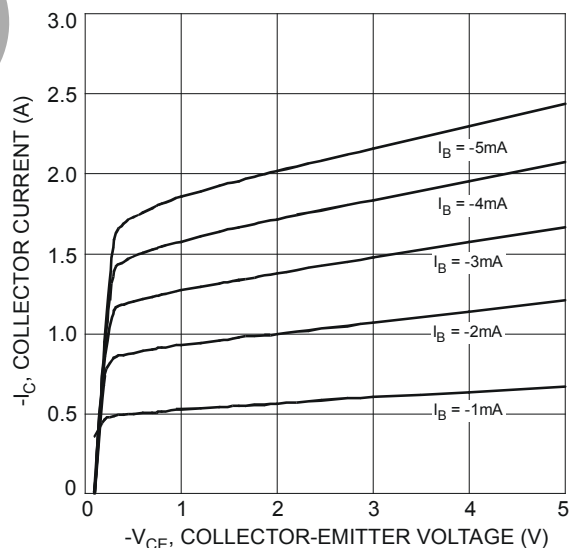


Fig. 2 Typical Collector Current vs. Collector-Emitter Voltage

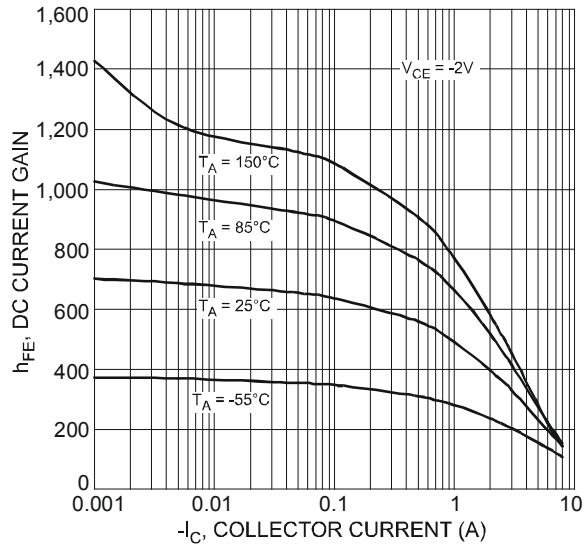


Fig. 3 Typical DC Current Gain vs. Collector Current

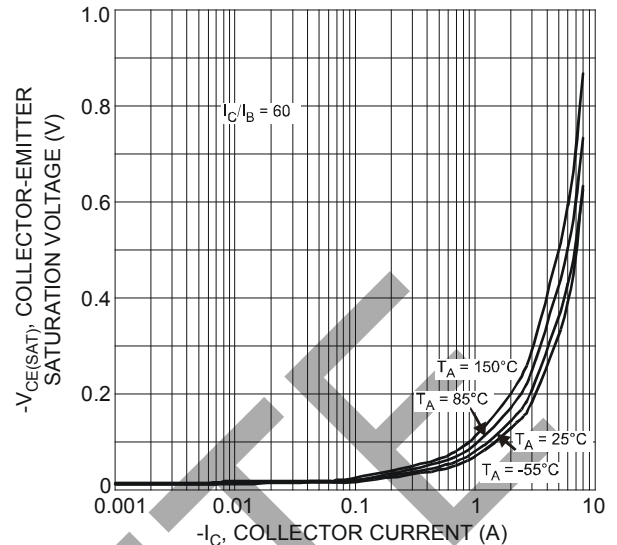


Fig. 4 Typical Collector-Emitter Saturation Voltage vs. Collector Current

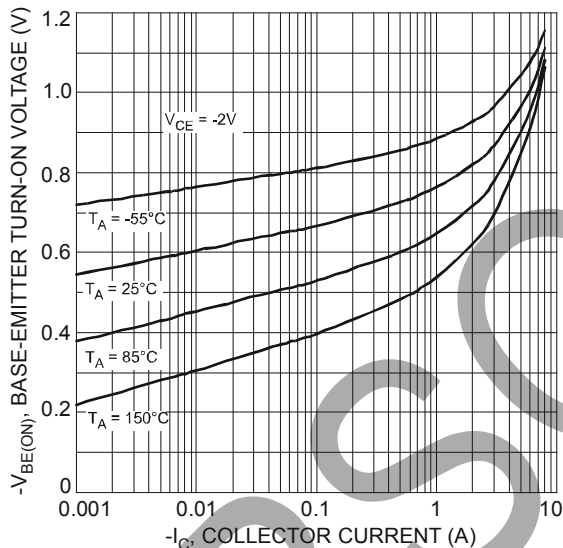


Fig. 5 Typical Base-Emitter Turn-On Voltage vs. Collector Current

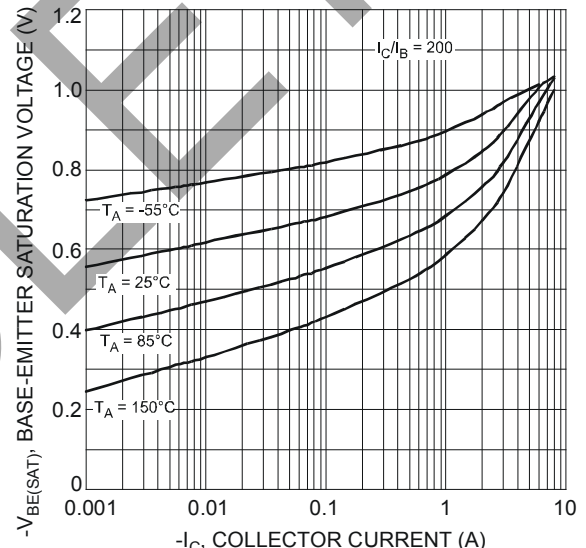


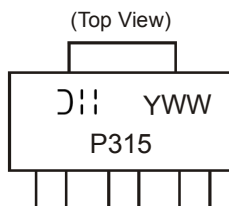
Fig. 6 Typical Base-Emitter Saturation Voltage vs. Collector Current

Ordering Information (Note 5)

Device	Packaging	Shipping
DPLS315E-13	SOT-223	2500/Tape & Reel

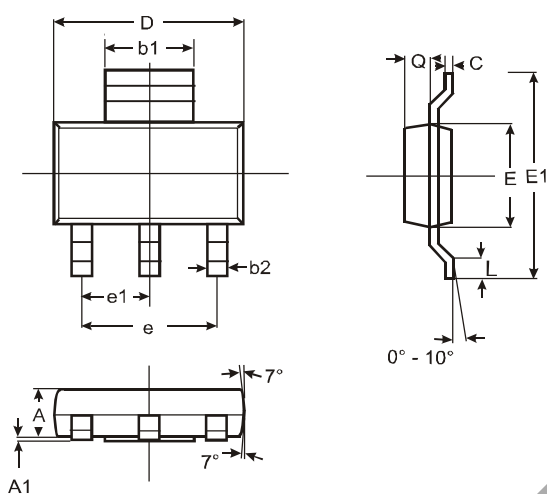
Notes: 5. For packaging details, please go to our website at <http://www.diodes.com/ap02007.pdf>.

Marking Information



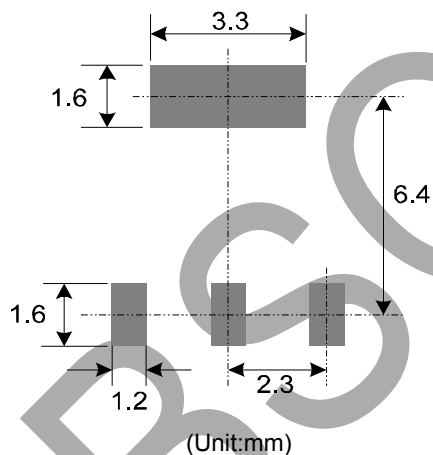
P315 = Product Type Marking Code
YWW = Date Code Marking
Y = Last digit of year ex: 7 = 2007
WW = Week code 01 - 52

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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