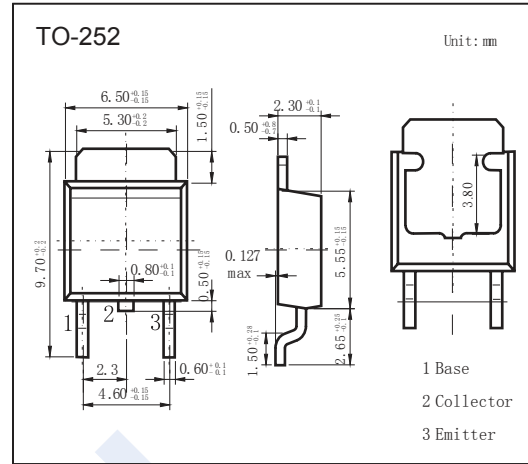


NPN Transistors

2SD1815



■ Features

- Low Collector-to-Emitter Saturation Voltage
- Fast Switching Speed
- High fr.
- Complementary to 2SB1215

■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V _{CB0}	120	V
Collector - Emitter Voltage	V _{CE0}	100	
Emitter - Base Voltage	V _{EB0}	6	
Collector Current - Continuous	I _c	3	A
Collector Power Dissipation	P _c	1	W
Junction Temperature	T _J	150	°C
Storage Temperature Range	T _{stg}	-55 to 150	

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V _{CB0}	I _c = 100 μA, I _E = 0	120			V
Collector- emitter breakdown voltage	V _{CE0}	I _c = 1 mA, I _B = 0	100			
Emitter - base breakdown voltage	V _{EB0}	I _E = 100 μA, I _C = 0	6			
Collector-base cut-off current	I _{CB0}	V _{CB} = 100 V, I _E = 0			1	μA
Emitter cut-off current	I _{EB0}	V _{EB} = 5 V, I _C = 0			1	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C = 1.5 A, I _B = 150 mA			0.4	V
Base - emitter saturation voltage	V _{BE(sat)}	I _C = 1.5 A, I _B = 150 mA			1.2	
DC current gain	h _{FE(1)}	V _{CE} = 5 V, I _C = 500 mA	70		400	
	h _{FE(2)}	V _{CE} = 5 V, I _C = 2 A	40			
Turn-on time	t _{on}	V _{CC} = 50 V, I _C = 1.5 A, I _{B1} = -I _{B2} = -0.15 A		100		ns
Storage Time	t _{stg}			900		
Fall Time	t _f			50		
Collector output capacitance	C _{ob}	V _{CB} = 10 V, I _E = 0, f= 1 MHz		25		pF
Transition frequency	f _T	V _{CE} = 10 V, I _C = 500 mA		180		MHz

■ Classification of h_{FE(1)}

Type	2SD1815-Q	2SD1815-R	2SD1815-S	2SD1815-T
Range	70-140	100-200	140-280	200-400