

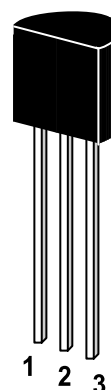
ST 2SD1616 / 2SD1616A

NPN Silicon Transistor

The 2SD1616 / 2SD1616A are designed for use in driver and output stages of AF amplifier general purpose application.

The transistor is subdivided into three groups R, O and Y, according to its DC current gain

On special request, these transistors can be manufactured in different pin configurations.

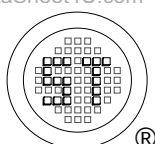


1. Emitter 2. Collector 3. Base

TO-92 Plastic Package
Weight approx. 0.19g

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

		Symbol	Value	Unit
Collector Base Voltage	2SD1616	V_{CBO}	60	V
	2SD1616A		120	
Collector Emitter Voltage	2SD1616	V_{CEO}	50	V
	2SD1616A		60	
Emitter Base Voltage		V_{EBO}	6	V
Collector Current (DC)		I_C	1	A
Collector Current (pulse) ¹⁾		I_C	2	A
Power Dissipation		P_{tot}	0.75	W
Junction Temperature		T_j	150	$^\circ\text{C}$
Storage Temperature Range		T_s	-55 to +150	$^\circ\text{C}$
1) $PW \leq 10\text{ms}$, Duty Cycle $\leq 50\%$				



ST 2SD1616 / 2SD1616A**Characteristics at $T_{amb}=25^{\circ}C$**

		Symbol	Min.	Typ.	Max.	Unit	
DC Current Gain ²⁾ at V _{CE} =2V, I _C =100mA		R	h _{FE}	135	-	270	-
		O	h _{FE}	200	-	400	-
		Y	h _{FE}	300	-	600	-
			h _{FE}	81	-	-	-
at V _{CE} =2V, I _C =1A							
Base Emitter Voltage ²⁾ at V _{CE} =2V ,I _C =50mA		V _{BE}	600		700	mV	
Collector Cutoff Current at V _{CB} =60V/120V		I _{CBO}	-	-	100	nA	
Emitter Cutoff Current at V _{EB} =6V		I _{EBO}	-	-	100	nA	
Collector Saturation Voltage ²⁾ at I _C =1A, I _B =50mA		V _{CE(sat)}	-	0.15	0.3	V	
Base Saturation Voltage ²⁾ at I _C =1A, I _B =50mA		V _{BE(sat)}	-	0.9	1.2	V	
Gain Bandwidth Product at V _{CE} =2V, I _C =-100mA		f _T	100	160	-	MHz	
Output Capacitance at V _{CB} =10V, f=1MHz		C _{OB}	-	19	-	pF	
Turn-on Time	at V _{CC} =10V, I _C =-100mA I _{B1} =-I _{B2} =10 mA V _{BE(off)} =-2 to 3 V	t _{on}	-	0.07	-	μs	
Storage Time		t _{stg}	-	0.95	-	μs	
Fall Time		t _f	-	0.07	-	μs	
2) Pulsed PW ≤ 350μs, Duty Cycle ≤ 2%							

