



FUKUCOM COMPANY LTD.

福 靈 有 限 公 司

FLAT P, 3/F., EVEREST INDUSTRIAL CENTRE, 396 KWUN TONG ROAD,
KWUN TONG, KOWLOON, HONG KONG.

TEL: 852-2790 0314 FAX: 852-2790 0206

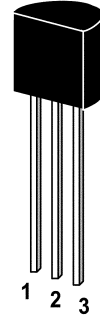
ST 2SD1616 / 2SD1616A

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

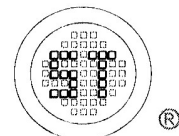
TO-92 Plastic Package

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 $\leq 50\%$



SEMTECH

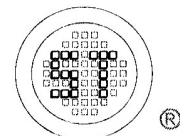
Dated : 07/12/2002

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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 $V_{CC}=10V, I_C=-100mA$ $I_{B1}=-I_{B2}=10mA$ $V_{BE(off)}=-2$ 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 $\leq 350\mu s$, Duty Cycle $\leq 2\%$ **SEMTECH**

Dated : 07/12/2002