

MICRO

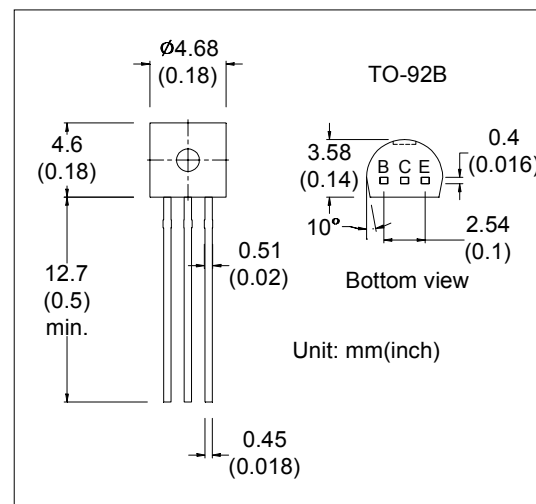
ELECTRONICS

2SD1616A

NPN
SILICON
TRANSISTOR

DESCRIPTION

2SD1616A is NPN silicon planar transistor designed for use in driver and output stages of AF amplifier, general purpose application.



ABSOLUTE MAXIMUM RATINGS

Collector-Emitter Voltage
Collector-Base Voltage
Emitter-Base Voltage
Collector Current Continuous
Total Power Dissipation @ $T_a=25^{\circ}\text{C}$
Operating & Storage Junction Temperature

V_{CE} 60V
 V_{CBO} 120V
 V_{EBO} 6V
 I_C 1A
 P_{tot} 0.65W
 T_j, T_{stg} -55 to +150°C

ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}\text{C}$)

PARAMETER	SYMBOL	MIN	MAX	UNIT	CONDITIONS
Collector Cutoff Current	I_{CBO}		100	nA	$V_{CB}=60\text{V}$ $I_E=0$
Emitter Cutoff Current	I_{EBO}		100	nA	$V_{EB}=6\text{V}$ $I_C=0$
D.C. Current Gain	H_{FE}^*	170	350		$V_{CE}=2\text{V}$ $I_C=100\text{mA}$
D.C. Current Gain	H_{FE}^*	45			$V_{CE}=2\text{V}$ $I_C=1\text{A}$
Base-Emitter Voltage	V_{BE}^*	600	700	mV	$V_{CE}=2\text{V}$ $I_C=50\text{mA}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}^*$		0.5	V	$I_C=1\text{A}$ $I_B=50\text{mA}$
Base-Emitter Saturation Voltage	$V_{BE(sat)}^*$		1.2	V	$I_C=1\text{A}$ $I_B=50\text{mA}$
Output Capacitance	C_{ob}	19	TYP.	pF	$V_{CB}=10\text{V}$ $I_E=0$
Gain Bandwidth Product	f_T	100		MHz	$V_{CE}=2\text{V}$ $I_C=100\text{mA}$
Turn-On Time	t_{on}	0.07	TYP.	μs	$V_{CC}=10\text{V}$ $I_C=100\text{mA}$
Storage Time	t_{stg}	0.95	TYP.	μs	$I_{B1}=-I_{B2}=10\text{mA}$
Fall Time	t_f	0.07	TYP.	μs	$V_{BE(off)}=-2$ to 3V

* Pulse test $PW \leq 350\mu\text{s}$, duty cycle $\leq 2\%$.



MICRO ELECTRONICS LTD.

G/F, 38 Hung To Road, Kwun Tong, Kowloon, Hong Kong.

Kwun Tong P.O. BOX 69477, Hong Kong. TEL: (852) 23430181 FAX: (852) 23410321

HOME PAGE: <http://www.microelectr.com.hk> E-MAIL ADDRESS: common@microelectr.com.hk