

# 3DA1, 3DA2, 3DA4

## NPN Silicon High Frequency High Power Transistor



### Features:

1. Excellent second breakdown capacity. Good characteristic frequency.
2. Amplification factor of small current is great. Good voltage resistance.
3. Implementation of standards: GJB33 A-97. QZJ840611A, QZJ840611 only for 3DA1.
4. Use for analog computer power output, amplification of high frequency, middle frequency and low frequency, switching circuit.
5. Quality Class: JP, JT, JCT, GS, G, G+ for 3DA1. JP for 3DA2, 3DA4.

### TECHNICAL DATA:

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

Parameter name	Symbols	Unit	Specifications		
			3DA1	3DA2	3DA4
Total Dissipation ( $T_c \leq 75^\circ\text{C}$ )	$P_{\text{tot}}$	W	7.5	5	20
Max. Collector Current	$I_{\text{CM}}$	A	0.75	0.75	2.5
Junction Temperature	$T_{\text{jm}}$	$^\circ\text{C}$	175		
Storage Temperature	$T_{\text{stg}}$	$^\circ\text{C}$	-55~+175		
C-E Breakdown Voltage	$V_{(\text{BR})\text{CEO}}$	V	30~100 ( $I_c=4\text{mA}$ )	30~60 ( $I_c=1\text{mA}$ )	50~70 ( $I_c=5\text{mA}$ )
E-B Breakdown Voltage	$V_{(\text{BR})\text{EBO}}$	V	$\geq 4$ ( $I_E=4\text{mA}$ )	$\geq 4$ ( $I_E=1\text{mA}$ )	$\geq 4$ ( $I_E=5\text{mA}$ )
Collector- Emitter Saturation Voltage Drop	$V_{\text{CE}(\text{sat})}$	V	1.5	1.5	3
			$I_c=0.5\text{A}, I_B=0.1\text{A}$	$I_c=0.3\text{A}, I_B=0.06\text{A}$	$I_c=2.5\text{A}, I_B=0.5\text{A}$
Collector-Base Leakage Current	$I_{\text{CBO}}$	mA	1.0 ( $V_{\text{CB}}=20\text{V}$ )	0.5 ( $V_{\text{CB}}=20\text{V}$ )	
C-E Leakage Current	$I_{\text{CEO}}$	mA	1.0		
			$V_{\text{CE}}=20\text{V}$		
Emitter-Base Leakage Current	$I_{\text{EBO}}$	mA	2.0 ( $V_{\text{EB}}=2\text{V}$ )	1.0 ( $V_{\text{EB}}=2\text{V}$ )	
DC Current Gain	$h_{\text{FE}}$		$\geq 15$	$\geq 15$	$\geq 10$
			$V_{\text{CE}}=5\text{V}, I_c=0.3\text{A}$	$V_{\text{CE}}=5\text{V}, I_c=0.2\text{A}$	$V_{\text{CE}}=5\text{V}, I_c=0.75\text{A}$
Transition frequency	$f_{\text{T}}$	MHz	$\geq 50$	$\geq 100$	$\geq 50$
			$V_{\text{CE}}=5\text{V}, I_c=0.2\text{A}$ $f_o=10\text{ MHz}$		$V_{\text{CE}}=5\text{V}, I_c=0.5\text{A}$ $f_o=10\text{ MHz}$

### Outline and Dimensions: