

**3DG100, 3DG102****NPN Silicon High Frequency Low Power Transistor****Features:**

1. Using epitaxy planar technology structure. High working frequency. Metallic packaging.
2. Small volume, light weight, easy installation.
3. Use for high frequency oscillation, high frequency small signal amplification, low power source adjustment circuit.
4. Quality Class: GS, G. Implementation of standards: QZJ840611

**TECHNICAL DATA:****(Ta = 25°C)**

Parameter name	Symbols	Unit	Specifications							
			3DG100				3DG102			
			A	B	C	D	A	B	C	D
Total Dissipation	$P_{tot}$	mW	100 (Ta=25°C)				100 (Ta=25°C)			
Max. Collector Current	$I_{CM}$	mA	20				20			
Junction Temperature	$T_{jm}$	°C	175							
Storage Temperature	$T_{stg}$	°C	-55~+175							
C-B Breakdown Voltage	$V_{(BR)CBO}$	V	30	40	30	40	30	40	30	40
			Ic=0.1mA							
C-E Breakdown Voltage	$V_{(BR)CEO}$	V	20	30	20	30	15	20	20	30
			Ic=0.1mA							
E-B Breakdown Voltage	$V_{(BR)EBO}$	V	$\geq 4 (I_E=0.1 \text{ mA})$							
C- Emitter Saturation Voltage Drop	$V_{CE(sat)}$	V	1.0 (Ic=10mA, Ib=1mA)				0.35(Ic=10mA, Ib=1mA)			
B- E Saturation Voltage Drop	$V_{BE(sat)}$	V	1.0 (Ic=10mA, Ib=1mA)				1.0 (Ic=10mA, Ib=1mA)			
C-B Leakage Current	$I_{CBO}$	uA	0.01(V <sub>CB</sub> =10V)				0.01(V <sub>CB</sub> =10V)			
C-E Leakage Current	$I_{CEO}$	uA	0.01(V <sub>CE</sub> =10V)				0.01(V <sub>CE</sub> =10V)			
E-B Leakage Current	$I_{EBO}$	uA	0.01(V <sub>EB</sub> =1.5V)				0.01(V <sub>EB</sub> =1.5V)			
DC Current Gain	$h_{FE}$		25~270 (V <sub>CE</sub> =10V, Ic=3mA)							
Transition frequency	$f_T$	MHz	150	150	300	300	150	150	700	700
			V <sub>CE</sub> =10V, Ic=3mA, f=100MHz				V <sub>CE</sub> =10V, Ic=3mA, f=100MHz			

**h<sub>FE</sub> Colored:**

Color	Orange	Yellow	Green	Blue	Purple	Gray
$h_{FE}$	25~40	40~55	55~80	80~120	120~180	180~270

**Outline and Dimensions:**