Elektronische Bauelemente

2SD2098

NPN Silicon

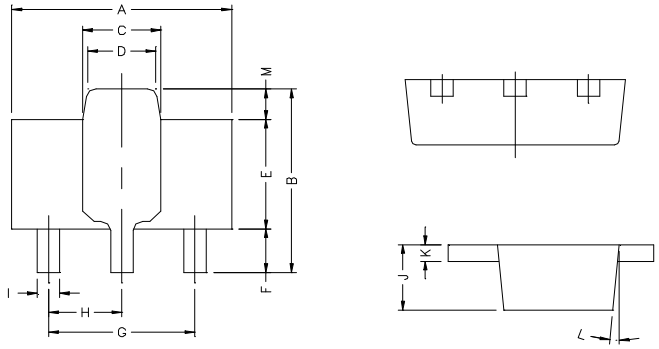
Epitaxial Planar Transistor

RoHS Compliant Product

SOT-89

Description

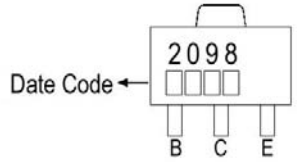
The 2SD2098 is an epitaxial planar type NPN silicon transistor.



Features

* Excellent DC Current Gain Characteristics
* Low Saturation Voltage, Typically $V_{CE(SAT)}$=0.25V At I_C/I_B=4A/0.1A

Marking :



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	4.4	4.6	G	3.00 REF.	
B	4.05	4.25	H	1.50 REF.	
C	1.50	1.70	I	0.40	0.52
D	1.30	1.50	J	1.40	1.60
E	2.40	2.60	K	0.35	0.41
F	0.89	1.20	L	5° TYP.	
			M	0.70 REF.	

Absolute Maximum Ratings at T_A=25°C

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	50	V
V_{CEO}	Collector-Emitter Voltage	20	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current (DC)	5	A
I_{CP}	Collector Current (Pulse)*1	10	A
P_D	Total Power Dissipation	0.5 (2.0*2)	W
T_J,T_{stg}	Junction and Storage Temperature	-55~+150	°C

*1: Single pulse, PW=10ms
*2: When mounted on a 40*40*0.7mm ceramic board

ELECTRICAL CHARACTERISTICS Tamb=25°C unless otherwise specified

Parameter	Symbol	Min	Typ.	Max	Unit	Test Conditions
Collector-Base Breakdown Voltage	BV_{CBO}	50	-	-	V	I_C=50μA,I_E=0
Collector-Emitter Breakdown Voltage	BV_{CEO}	20	-	-	V	I_C=1mA,I_B=0
Emitter-Base Breakdown Voltage	BV_{EBO}	6	-	-	V	I_E=50μA,I_C=0
Collector-Base Cutoff Current	I_{CBO}	-	-	0.5	uA	V_{CB}=40V,I_E=0
Emitter-Base Cutoff Current	I_{EBO}	-	-	0.5	uA	V_{EB}=5V,I_C=0
Collector Saturation Voltage	*V_{CE}(sat)	-	0.25	1	V	I_C=4A,I_B=0.1A
DC Current Gain	*h_{FE}	120	-	390		V_{CE}= 2 V, I_C=0.5 A
Gain-Bandwidth Product	fT	-	150	-	MHz	V_{CE}= 6 V, I_C=50mA,f=100MH$_Z$
Output Capacitance	Cob	-	30	-	pF	V_{CB}=20V, f=1MHz,I_E=0

*Measured under pulse condition.Pulse width≦300μs, Duty Cycle≦2%

Classification of hFE

Rank	Q	R
Range	120~270	180~390

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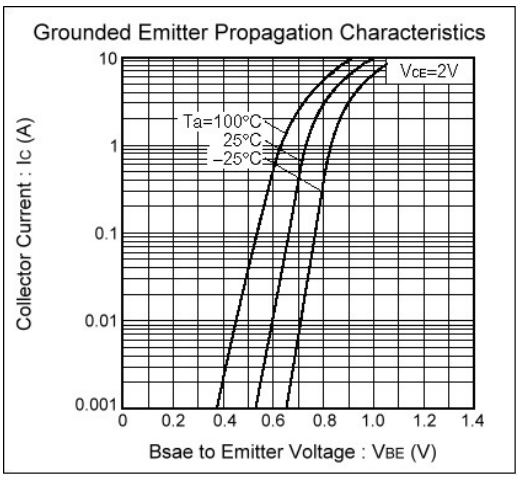
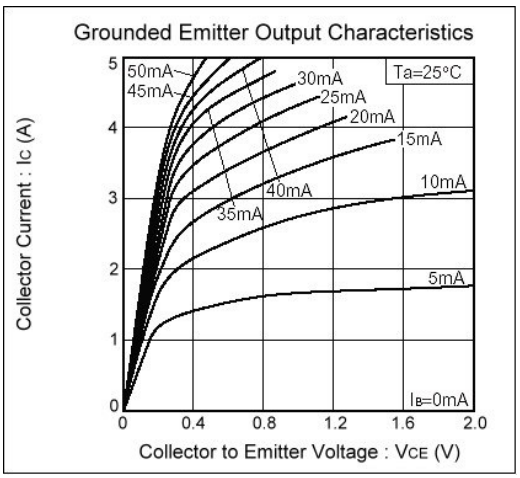
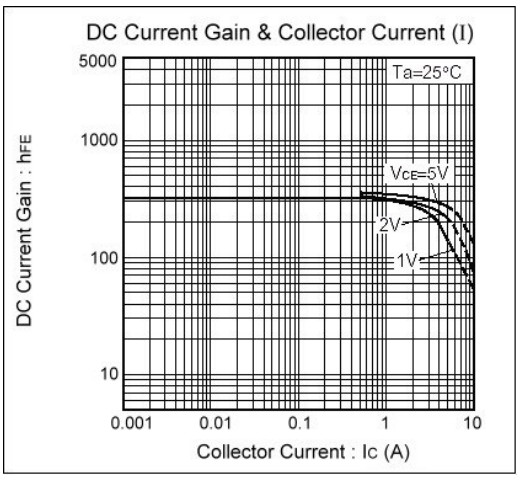
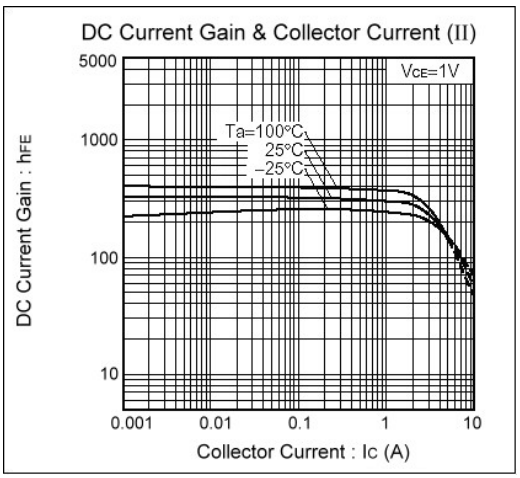
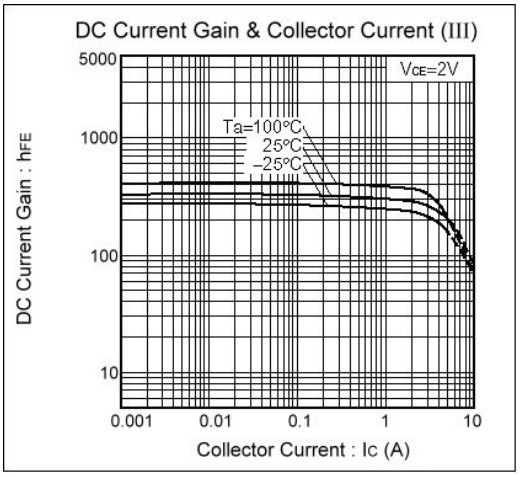
Characteristics Curve

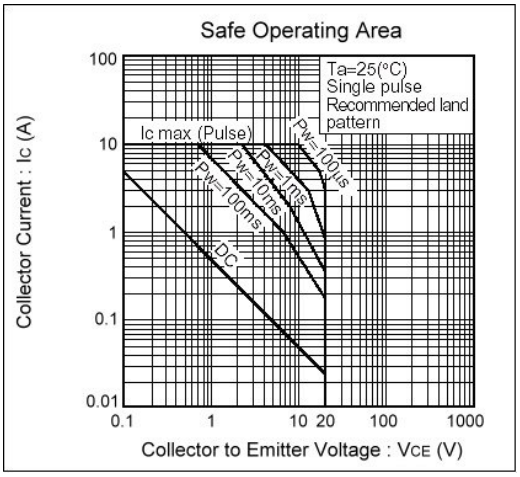












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