

RoHS Compliant Product

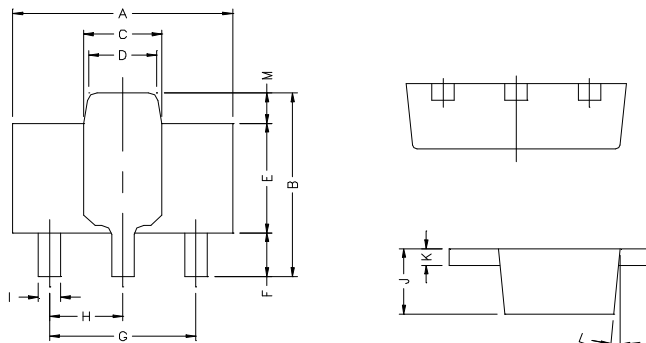
SOT-89

Description

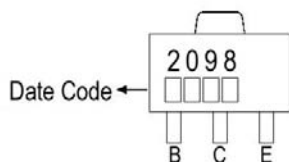
The 2SD2098 is an epitaxial planar type NPN silicon transistor.

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 $T_A=25^{\circ}C$

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	$^{\circ}C$

*1: Single pulse, $PW=10ms$

*2: When mounted on a $40*40*0.7mm$ ceramic board

ELECTRICAL CHARACTERISTICS $T_{amb}=25^{\circ}C$ unless otherwise specified

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

*Measured under pulse condition. Pulse width $\leq 300\mu s$, Duty Cycle $\leq 2\%$

Classification of h_{FE}

Rank	Q	R
Range	120~270	180~390

Characteristics Curve

